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Safe Virtual Space:
taking a practice turn in psychological safety, towards systemically viable and sustainable disability supports

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A dissertation submitted for the degree of
Doctor of Philosophy

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May 2024

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Declaration

I hereby declare that I have produced this manuscript without the prohibited assistance of any third parties and without making use of aids other than those specified.

The thesis work was conducted from October 2019 to May 2024 under the supervision of Professor Mac MacLachlan and Professor Deirdre Desmond in the Department of Psychology, Maynooth University. This research was conducted with the financial support of Science Foundation Ireland under Grant number 18/CRT/6222.

Maynooth, Ireland,
31st May 2024

Acknowledgement

In an autopoietic living system, there are many inter-subjective, synchronous and asynchonous inter-relationships that waft and weave through a 5 year PhD both in the face-to-face and virtual worlds, and many to thank.

I would like to acknowledge the guidance and support of my supervisors Professor Mac MacLachlan and Professor Deirdre Desmond.

I would also like to acknowledge the support of all my family, across time and space, those here and departed, but particularly Sean who has been patient throughout, and always an inspiration and a joy.

A profound thanks to Siobhan and Sarah from FreedomTech as well as all the brave innovators who frequent FreedomTech events. I would also like to thank my systems colleagues and friends, particularly my systems syster Barbara, who along with Helen, Bryan and Bob have provided ongoing comraderie and support.

A special thank you to the people who have picked up the pieces in different but significant ways along the path: Una, Anne O'D and Anne P, Susan, Sinead, Angela and her GoodTide Lighthouse, and not forgetting Maria, Ivy and Louise. Luis and James in the Advance team have been really supportive, and a special thanks goes to Ashley for technical support with Overleaf, to Ita and all the great PhD colleagues I met along the way.

Thanks also to my Social Presencing colleagues, particularly the JAM, and Allenna Leonard and Patrick Hoverstadt who offered insight on the feasibility of applying the Viable Systems Model in this context.

Most importantly, I would like to express gratitude to everyone who gave freely of their time and expertise for this research: it is hugely appreciated and I hope I have, and will do (!) done their contributions justice.

Abstract

Safe Virtual Space: taking a practice turn in psychological safety, towards systemically viable and sustainable disability supports

Digitisation presents opportunities and challenges for enhancing disability services. The onset of COVID-19 prompted a rapid move to virtual service provision. Many organisations encountered challenges with the digital divide, governance, internet access, technological skills or hardware. This systems research project explored the potential of virtual services as an alternative service model by exploring how some services in Ireland set up ad-hoc virtual supports, often despite poor digital literacy amongst staff and disabled people. The research developed a focus on safe virtual spaces as an emergent cross-cutting issue, supported through adaptive innovation.

Soft Systems Methodology was used to design the research as an iterative process across three cycles. The first cycle consisted of interviews with service providers and educators to understand experiences of taking services online. Themes generated using Reflexive Thematic Analysis (RTA) suggested that services acted as Complex Adaptive Systems. Notable findings included the transformation of traditional power dynamics, enhanced personal agency and psychological safety. The second cycle was designed as a World Café. Findings indicated that staff practices created the conditions for safe virtual environments where meaningful connections were possible. The concept of psychological safety – risk-taking and candour without retribution – was reframed as a practice-led, systemic construct to include embodied presence and meaningful connection, leading to a sense of mattering and belonging. The final study assessed the staff practices and systemic conditions that support safe virtual spaces. A real-time online Delphi survey was conducted with an international group of experts. The Viable Systems Model (VSM) was used to structure questions and analysis. The results sug-

gested that developing Safe Virtual Spaces requires integration with the identity and strategic governance processes within organisations. The research identifies a need for more attention to balancing current and future needs, as the demand for virtual services is expected to increase. Seven principles to inform the systemic design of safe virtual spaces are proposed. The research concluded that a focus on developing staff practices alongside appropriate governance is needed to create and sustain viable Safe Virtual Spaces, where a felt sense of safety forms the purpose of the space, within the context of service improvements that are more resilient to future volatility.

CHAPTER 1

Introduction to research

We bear the universe in our being as the universe bears us in its being. Berry, 1988

1.1 Chapter outline

The aim of this chapter is to introduce the research topic: the practices and governance structures that support the development of viable and sustainable virtual spaces for people with disabilities to meet and feel safe and meaningfully connected to others. In Section One, I first introduce the topic and the context in which virtual services developed by referring to both the international and Irish situation entering the pandemic. I then outline the aims and objectives of the research along with introducing Systems Research as the theoretical foundation for this project. The research limitations and proposed use of findings are also presented, followed by a brief outline of how this research project is organised by chapter. The chapter concludes with a personal reflexive piece on why this research topic is of personal as well as professional interest to me.

1.2 Introduction

It is important to learn about the conditions that support adaptive innovation in social care settings, particularly the role and potential of technology as the world becomes increasingly digitalised and the available financial and human resources diminish (Bignal, 2022). The disruption wrought by the COVID-19 pandemic is not unique in history but it was the first time that technology was deployed as the site of practice for many workplaces, health and

social services and as a way of sustaining human connection as well as business. As all aspects of society came to an abrupt standstill there was an urgent need to find alternative ways to support populations of disabled people who might also have complex health needs, or be socially isolated (Harrison et al., 2021) or live in circumstances that are unable to sustain them over an extended period, e.g., having elderly parents, or living in nursing homes or residential centres. The United Nations (UN) called for all countries to prioritise the protection of disabled people who were at a higher risk of contracting the virus and had a higher morbidity risk arising from it (Armitage & Nellums, 2020; Stróż et al., 2024). This made it a unique opportunity to research innovation in action. This research focuses on social care settings, and disability services, where, within weeks of the commencement of lockdown, virtual programmes mushroomed, taking day services, independent living programmes and college support services online, in initiatives that often started within frontline staff teams.

These instances of service adaptations were atypical in that other disability support services got "stuck" and either ceased to operate during this period or continued to run skeleton services for those with high support needs and unsustainable home environments. Online services offered a significant example of staff acting up and taking proactive action within the context of uncertainty and fear, alongside a lack of digital literacy or access to technology that could support online contact both within services and amongst disabled people. COVID-19 also prompted a recalibration of our collective sense of safety and what it meant to sustain meaningful connection with others when physical proximity was potentially life-threatening. The research presented here explores how staff initiated the change, created conditions for safe virtual spaces through practice, and how these spaces can be made viable and sustainable in the context of externally volatile operating conditions. The innovation is explored through an appreciative lens that situates the development of virtual services as a micro-level innovation with the potential to promote future resilience in disabled communities, in increasingly uncertain operating environments. The relevance of this research stretches beyond the pandemic and may inform future service delivery models both within and beyond disability settings.

1.2.1 Context

The pandemic was a global concern that affected everyone, but for disabled people it soon became clear that preexisting structural inequalities

would exacerbate the difficulties they faced. Within three weeks of the UN announcement of the pandemic, Armitage and Nellums cautioned in *The Lancet* that people living with disabilities would be less likely to access the supports they might need due to discriminatory laws and stigma that would lead to greater inequality across three main areas: public health messaging, interrupted service provision and the risk of severe disease due to co-occurring conditions (Armitage & Nellums, 2020). Their concerns were well-founded. Even though the UN Convention on the Rights of Persons with Disabilities (UN CRPD) made provision for equality of access to healthcare, amongst other provisions, it soon became clear that countries were unable to meet those obligations. An analysis of the extent to which 14 countries, including Ireland, developed policies that were aligned with the UN CRPD during the pandemic found that country responses fell short of their human rights obligations (Shikako et al., 2023). The global COVID-19 Disability Rights Monitor – a collaboration of several rights-based NGOS that collated accounts by people with disabilities of living through the first year of the pandemic – claims that policy-making at that time had a catastrophic effect and goes so far as to suggest that governmental responses were more detrimental to the lives of people with disabilities than the pandemic itself (Mladenov & Brennan, 2021). It points to systemic flaws that predate the pandemic including the fragility of community-based supports, but also points to the pathologising of disability as an individualised medical vulnerability that contributed to the development of those policies. Since then, a systematic review of studies of COVID-19-related mortality demonstrated that people with disabilities had twice the risk of dying from COVID-19 as those without disabilities, with an elevated risk for those with intellectual disabilities, especially Downs Syndrome (Kuper & Scherer, 2023). These studies indicate that disabled people entered the pandemic at a disadvantage and that government policies did not adequately make provision for their rights during the crisis, with detrimental consequences.

This disadvantage was critical as the digital divide acted as a second major source of structural and systemic exclusion during the pandemic. The UN CRPD commits governments to ensuring digital inclusion as a human right under Articles 19 (right to be included in the community) and 21 (freedom of expression and opinion). Additionally, the World Health Organisation (WHO) Global Strategy on Digital Health 2020–2025 encourages countries to develop ehealth strategies as part of a wider digital health ecosystem that includes digital literacy, information and communication technologies, as well as access to broadband equipment and the Internet that are more important as digital health becomes more prevalent. This includes assistive products, also

regarded as essential to the realisation of the United Nations Sustainable Development Goals (Boot et al., 2018; Layton et al., 2020; E. M. Smith et al., 2022). Assistive products are

> any product, including devices, equipment instruments and software, especially designed and produced or generally available, whose primary purpose is to maintain or improve an individual's functioning and independence and to facilitate participation. (WHO, n.d.)

Assistive Technology (AT) is an umbrella term covering the systems and services related to the delivery of assistive products and services which includes staff skillsets (WHO, n.d.). AT often serves as a gateway to internet access making it even more critical during the pandemic. However, recognition of the importance of AT had not translated into national policy before the pandemic (Darcy et al., 2019; Perfect et al., 2018) despite a strong lobby calling for adequate resourcing for products and services (Layton et al., 2020; R. O. Smith et al., 2018) , and recognition of its role in community living (Owuor et al., 2017) and third-level education (McNicholl et al., 2023). A lack of policy resulted in inequitable access to affordable and accessible technology and skills amongst both disabled people attending services and staff (Borgström et al., 2019; Caton & Chapman, 2016; D. D. Chadwick et al., 2013; Normand & Sallafranque-St-Louis, 2016; Seale, 2014). Internet access also formed a barrier to online participation prior to the pandemic in both high- and low-income countries (Layton et al., 2020; Scholz et al., 2017). This means that while many workplaces and public services harnessed technology to reestablish some form of stability in the first months of 2020, many people with disabilities and the services that supported them were locked out of the digital world.

1.2.2 Irish context

The Irish disability landscape informs this research and illustrates the tensions around service provision in a sector adjusting to a human rights framework, technology and professionalisation of the workforce before the pandemic. The Irish system for disability supports can be understood as a loose constellation of one-third state and two-thirds NGO actors, of different size, geography, focus and purpose, who together serve 643,000 people (HSE, 2020a). 18,000 people attend day services regularly, and many more access intermittent supports to manage their condition, attend college, work or live independently. Services entered the pandemic as relatively stable and pre-

dominantly face-to-face services, ill-prepared for disruption. The state, having ratified the UN CPRD in 2018, was just beginning its journey to reform the sector. The relationship between funders and organisations was complex with a recognition of mutual interdependence between the state and the NGO sector (Day et al., 2019) but also a growing recognition that reconfiguration of services was needed to match an increase in demand in more cost-effective ways (Collins et al., 2021). A staff competency framework focusing on skill mix over professional qualification (McHugh, 2020) was also under discussion. The proposed framework makes a shift in emphasis from focusing on work context to a reframing of the work as a relationship-based approach to planning and provision of care, protection, psychosocial and advocacy supports (CORU, 2019). Whilst social justice and human rights are emphasised in the framework, there is concern that practice is being decontextualised both from the individual setting and from the neoliberal political ideology informing the design of care services (McHugh, 2020). The need for a digitally enabled workforce able to capitalise on ehealth and technology is recognised within the Irish Health Service Executive HR strategy (HSE, 2019). The Irish competency framework for social care workers recognises the need to be able to apply digital literacy skills and communication technologies within the context of *Communication, Collaborative Practice and Teamworking* (CORU, 2019). AT was also increasingly recognised as a more effective way to support independent living and drive down costs of service provision by both policymakers (HSE, 2019) and advocates (O'Donnell et al., 2016).

However, neither staff skills nor AT provision had progressed by the time the pandemic arrived, with the result that digital literacy was poor amongst disabled people and staff alike (Walsh et al., 2020). This set the scene for a poor starting point for digital transformation in services when it was most needed. Disability supports were not regarded as essential services that needed to remain open during lockdown by the National Public Health Emergency Team (NPHET), which sent organisations scrambling to either justify exceptions to the rule or to close. In the weeks that followed, the nascent shoots of online offerings appeared and they proliferated within some organisations. Technology quickly became the medium through which contact was made and sustained. The virtual services that emerged formed a small part of the national response, and included synchronous (real-time) and asynchronous (pre-recorded) resources people could access in their own time. This research begins with a focus on these innovations, where staff initiated online programmes that grew to form substantial offerings over time.

1.3 Rationale for this research

I next outline the broad context and rationale for undertaking this research which then leads to clarifying the research focus. The first rationale is to conduct research that can be both relevant and responsive to the uncertain global conditions in which we live in. This is achieved by studying the innovation of virtual services using a systems-informed lens which can embrace complexity rather than reduce or simplify it. The second rationale is to give primacy to actions that promote innovation in service of sustaining human connection as ends rather than as a means to achieve some other goal. The research is also driven by an imperative to conduct research that can mitigate against future shocks to services, and contribute to understanding innovative staff practices by taking a systems lens to research that takes account of the complex times in which we live.

Developing an understanding of the conditions that can support online engagement to support the continuity of supports that sustain connection and well-being builds on two strong messages that emerged early in the pandemic: the first was a warning that people with disabilities must not be left behind (WHO, 2020) and the second was a call for transformation within disability services (HSE, 2020b). For some commentators, the pandemic was viewed as an opportunity to spur innovation and halt the progressive marketisation of healthcare, focusing on reintroducing democratic processes to health and policy-making (Bayram et al., 2020). Amongst others who focused on the risk posed to people with disabilities, there was an urgent call to uphold human rights and mitigate against increasing disparities in access to universal health coverage. This included an immediate acceleration of preparedness to ensure that people with disabilities would not be forgotten in the overall health response and recognition that this would require innovation and creativity (Armitage & Nellums, 2020). Throughout the pandemic, a growing body of research emphasised the need to be better prepared for future crises and include virtual spaces as an essential part of services (Bignal, 2022; E. M. Smith et al., 2022). Increasingly, the development of online offerings into the future is regarded as an integral part of the need to review staffing and funding (Trip et al., 2022) as well as improve access to technology, including Assistive Technology (McCausland et al., 2023; Puli et al., 2021).

Knowing that transformation is needed is one step towards sustainability, but knowing how to create the right conditions for fostering ethically informed innovation that can transform traditional service provision demands an investigation into the practices and governance arrangements to sup-

port versatility within services. Innovation is a term that encompasses the generation of new ideas and activities that can lead to a rupture between old and new ways of doing things (Bayram et al., 2020). It can be described as a multi-stage process whereby organisations transform ideas into new services or processes to advance the organisation (Baregheh et al., 2009). The pandemic offered a somewhat unique if unfortunate circumstance to study adaptive innovation in action and contribute to the knowledge eco-system as a researcher-narrator of a digital health innovation. Researcher narrators, according to Bayram et al., are important in the absence of digital health innovation policies to guard against "digitalism" which they define as an assumption that extreme digital connectivity is desirable in itself, without considering human rights and democratic practices (Bayram et al., 2020). This research was designed to learn about innovations driven by the imperative to sustain human contact through technology as distinct from digitalisation as a driving force, to inform how to create the conditions for human-centric innovation.

The third rationale for conducting this research with a systems approach stems from an understanding that sustaining services through a crisis of the magnitude of the pandemic, where a unique constellation of factors require immediate attention, is a complex task which requires a framing that is complexity-informed. Theorists such as Jackson suggest that the way complexity in systems is understood makes a huge difference to how we respond to crises such as the pandemic (Jackson, 2019). The pandemic itself can be described as a meta-wicked problem (Rittel & Webber, 1973), which gave rise to another wicked problem for disability support services, as the equilibrium in which they usually operated was disrupted with little clarity around how long the pandemic might last. "Wicked problem" is a term describing problem situations where there is no definitive definition of the problem, and no stopping rule to indicate what might halt it, or a clear solution about what to do. The pandemic created a huge level of uncertainty and precarity across all parts of society, and the problems posed for disabled populations are diverse and contextualised to each individual. Wicked problems are also characterised by their uniqueness and the idea that each solution is a one-shot operation, where getting it "wrong" could have detrimental long-term implications. Mental health and well-being were a concern not just for people accessing services (Lund et al., 2020), but also for their families, particularly where elderly parents were in caring roles (Wos et al., 2021), all of which made retaining connection in the absence of physical proximity a critical endeavour. This research seeks to understand the innovation of virtual services by embracing

the complexity of the situation facing services as they adapted and tailored responses to best serve the people attending services.

It can also be argued that we are already living amid the "future crises" that is referred to in current research on inclusive design of disability supports (Bignal, 2022; E. M. Smith et al., 2022). This research recognises the broader context of the world we are now living in that is characterised by many entangled and interconnected issues from which no one is immune, and which require a systemic response. We are now living in what can be characterised as a "polycrisis", a term inspired by the sociologist Edgar Morin and more recently adopted by the World Economic Forum to describe climate collapse, the loss of biodiversity, economic instability, inflation, inequality, poverty, hunger, risk of zoonotic spillovers causing pandemics and war (Søgaard Jørgensen et al., 2024). Ison and Straw argue that public policy persistently fails to address some of these issues due to an inability to accurately frame situations as "wicked problems" by treating them as though they were tame or attempting to prematurely "tame" them (R. Ison & Straw, 2020). An example is the Sustainable Development Goals, which treat each issue as distinct rather than indivisible (Klein et al., 2023). Wicked problems are symptomatic of other problems and the task of sustaining disability services is set within a backdrop of ongoing global disruption. This context highlights the ongoing importance of developing knowledge about digital innovation and must inform the framing of the research if we are to "future-proof" disability supports and services. Innovation requires responsibility for how we frame situations and situate them within the context of our current human situation and what it means to be human (R. L. Ison, 2023). If disability services are to be sustainable, there is a requirement for an acceleration of digital innovation that can form part of the response to withstand unexpected shocks, but this also calls for research that can embrace rather than reduce complexity.

A systems thinking framing can support both a more holistic understanding of how disability services operate as a complex interplay of different parts and an understanding of the complexity of developing virtual services. Systems thinking is useful for discerning an understanding of different perspectives on an issue, which are underlaid by different framings of what the problem to be addressed is. Different actors have different perspectives which influence their understanding of the starting point for disability services entering the pandemic. For example, the European Association of Service Providers emphasises the underfunding of disability services that led them to operate in survival mode prior to the pandemic, alongside a crisis in keeping staff due to poor pay (Bignal, 2022), while AT-focused researchers point to a lack of crit-

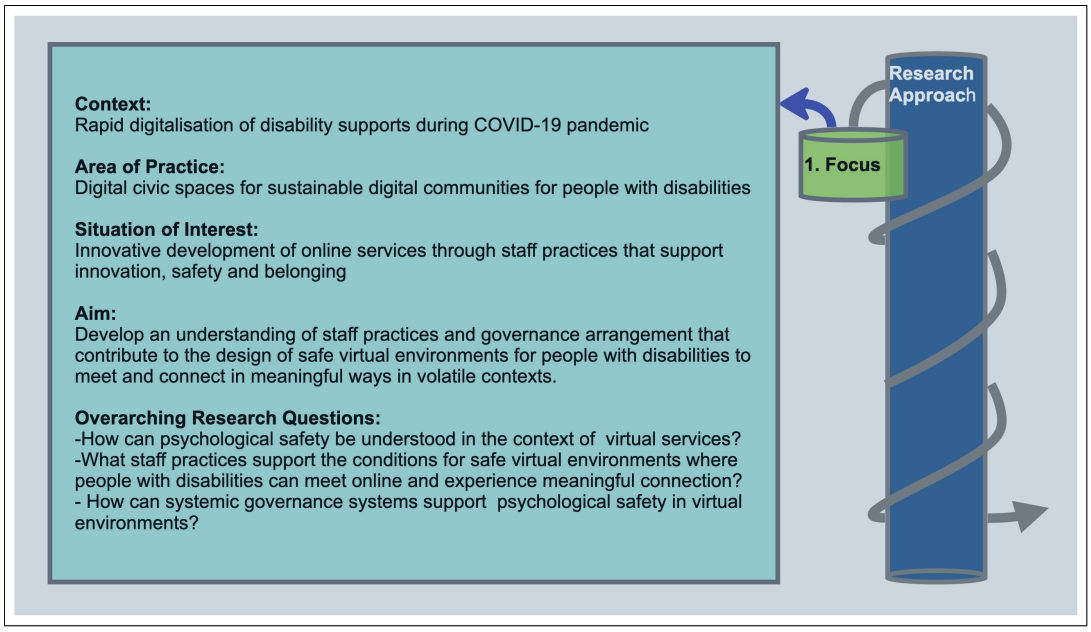

Figure 1.1: Research Focus

ical skills amongst people with disabilities, caregivers and service providers as contributing to insufficient emergency preparedness regarding AT services (E. M. Smith et al., 2022). Other researchers remind us that online engagement's benefits were established before the pandemic (Finn, 1999), but attitudes within organisations and exclusionary technology design leads to systemic exclusion from participation in mainstream culture (Darcy et al., 2019). All perspectives are valid and together they make a strong case for improving the access of people with disabilities to digital life, and inform how this research shifts from a broad range of concerns to a specific focus.

1.3.1 Research focus

The rapid digitalisation of disability supports during the pandemic sets the context for this research which leads to a specific focus on the following situation of interest: the innovative development of online services through staff practices that support innovation, safety and belonging. These guide the development of the aim of the research and research questions. The research focus is presented in Fig. 1.1. This diagram format is developed and is used throughout this research project to orientate the four qualitative research concerns. These are: deciding the focus, framing the research project, selection of methodologies and distilling research (Blaikie & Priest, 2019).

1.3.2 Research aims

The research aims to explore the staff practices and governance arrangements that contribute to designing safe virtual environments for people with disabilities to meet and connect in meaningful ways to mitigate risks to services in a volatile environment through a systems thinking lens. The aim is developed through a process of refinement of my general practice, which is a broad interest in developing digital civic spaces to support sustainable communities amongst people with disabilities, and distilled from the process of identifying a situation of interest to focus the research on. The COVID-19 pandemic presented an unanticipated opportunity to study the development of virtual services in real-time as a way of sustaining contact between people with disabilities and their support services.

1.3.3 Research questions

The research questions are guided by the aims and objectives and are presented here as a combined progression across three iterative research cycles. The overarching research questions that this research seeks to address are as follows:

1. **How can psychological safety be understood in the context of virtual services?**

2. **What staff practices support the conditions for psychologically safe virtual spaces where people with disabilities can meet online and experience meaningful connection?**

3. **How can systemic governance systems support psychological safety in Safe Virtual Spaces?**

1.3.4 Research framing

A brief introduction to the research framing and systems thinking is presented here, in advance of Chapter 3 which covers methodology, as it informs the systems approach to research. The systems approach represents a fundamental paradigmatic shift to approaching research and underpins the philosophical and methodological approaches taken. This is a qualitative research project, that could be described as a "big Q" approach to delineate it from a small "q" approach associated with positivist research which is concerned with reliability, avoiding bias and generalizability (Braun & Clarke,

2021; Kidder & Fine, 1987). While qualitative research can often be retrospective, this research is conducted as a real-time inquiry into the evolution of virtual disability services during the COVID-19 pandemic. In this way, it takes an appreciative approach (Cooperrider et al., 2008) to understanding innovation in action.

1.3.5 A Systems approach to research

Systems thinking is a term used to describe a transdisciplinary field of endeavour that began with Bogdanov in Russia and Bertalanffy in the USA, both of whom sought to work with whole systems and move away from a Cartesian approach to science (Hammond, 2017; Şenalp & Midgley, 2023). It evolved as an approach to qualitative research, inquiry and design comprised of many methodologies, methods and techniques characterised by a distinctive approach to understanding inter-relationships, engaging with multiple perspectives and making critical boundaries judgements. If social phenomena operate as wholes and behave systemically, then systems research must match that understanding with research that is theoretically and methodologically congruent with a worldview that shifts from a mechanistic worldview to a systems worldview (Jackson, 2019). A mechanistic worldview assumes that objective scientific knowledge can be produced and abstracted from one context to another, whereas a systems approach embraces the understanding that the researcher's worldview impacts the system being researched. Complexity approaches have been applied to health and education but have not managed to move sufficiently beyond description to influence policy and practice (A. Carroll, 2021; Kwamie, 2015; Kwamie et al., 2021; Ueland et al., 2021). This may be because many scholars promoting the use of complexity theory do so without attending to the paradigm shift that is needed to move beyond a positivist framing which is attached to a mechanistic worldview or explicit statement of the epistemological commitments being made (Klein et al., 2023). For example implementation science 3.0 recognises the value of complexity approaches (Albers et al., 2020), but does so from an understanding that a "mechanisms framing" can direct the "cogs and gears" of complex systems (Grant et al., 2024), which is essentially underpinned by an unquestioned engineering metaphor which assumes scientific control over living systems.

Similarly, advocates for systems thinking in disability services assume that a systems approach can be applied through finding leverage points for change without a commensurate commitment to also conducting research

systemically or giving explicit attention to researcher reflexivity (Holloway et al., 2018; Jesus et al., 2020). Finding a leverage point in a system, a small and often counterintuitive change, can tip the direction in which a system is moving and is critical to effective systems change (Meadows, 2008), but assuming leverage points can be identified objectively is misleading. Theoretical pluralism is to be welcomed within systems research to avoid the trap of assuming that one foundational theory can represent reality (Midgley & Ochoa-Arias, 2001), but systems research using systems as concepts has the potential to support a deeper inquiry into the situation being studied.

There are different ways in which the word "systems" can be understood. I have laid out some differences in Table 1.1. Distinguishing between systems as real-world entities and systems that are socially constructed marks a shift from a first-order to a second-order concept about what systems represent. Describing systems as real entities with an agreed definition of boundaries and interrelationships is described as a first-order approach (Flood, 2010) or a "hard" systems thinking approach which can often result in reifying "the system" (R. Ison, 2017). It offers descriptions, conveys attributes, characteristics and dynamics most often associated with systems engineering (Klein et al., 2023). A second-order framing makes different assumptions: firstly it assumes that the world is intuitively systemic and characterised by emergence and adaptation (Flood, 2010), but these systems cannot be described in their entirety, nor can researchers suppose with any authority to have an all-encompassing vantage point. This indicates a shift from ontological concerns with the nature of reality to epistemological concerns on the assumption that systems are social constructions and so the word is applied to the process of learning about how to inquire into problematic situations effectively rather than used to describe the world (P. Checkland & Poulter, 2020).

> The use of the word system is no longer applied to the world, it is instead applied to the process of our dealing with the world. It is this shift of systemicity (or systemness) from the world to the process of inquiry into the world which is the crucial intellectual distinction between the two fundamental forms of systems thinking, 'hard' and 'soft' (P. Checkland & Poulter, 2020)).

A systems approach also understands that interrelationships and interdependencies between different elements are dependent on personal perspectives which are always partial (Reynolds & Holwell, 2020). A systemic approach to research emphasises the context of the larger whole and drawing boundaries in consultation with other key stakeholders. A system as concept is consciously

framed in terms that make it a discernible "whole" that includes different entities acting towards a specific purpose. A well-boundaried system does not include absolutely everything but supports an actively considered shift from a broad range of concerns to a focused "system" which is constructed for the purpose of research. Constructing a system in this way requires reflexivity on the part of the researcher, in recognition that, as impartiality or objectivity is not possible, the personal Weltanschauung – or orientation towards the world – has a bearing on research (P. Checkland & Poulter, 2020; R. Ison, 2017). Together, both first and second-order systems thinking form a strong basis for systems research. Socially constructed systems act in ways that can be described as systemic and presumed to represent reality. This reflects the principle of systemicity which regards phenomena as a unified whole, wherein the individual attributes cannot be inferred from individual components (Letiche, 2019). Systemicity embodies the interconnectedness and interdependence of various elements within a system, emphasising the holistic view of systems as dynamic entities and how they interact, influence each other, and contribute to the system's overall behaviour and functioning, and it paves the way for systems research that can use systems ideas in distinct ways (see Table 1.1).

Constructs developed as a result of conducting systems research also reflect an understanding of the systemicity inherent in social phenomena and individual ways of being and doing. Constructs are abstract ideas created or defined to represent phenomena which can not be directly observed in a way that allows them to be understood and acted on. Systemically informed constructs may offer a way to address what psychologists acknowledge is a crisis in confidence in developing and measuring psychological constructs due to a lack of replicability (Peters & Crutzen, 2024). Organisations can exhibit unconscious patterning in behaviours not detected in constructs composed in psychology theory or traditional management approaches. For example, the perception that organisations are instrumental tools for achieving a particular purpose without consideration of self-organising patterns that create organisational coherence, or the tendency to regard issues as problems rather than opportunities to learn and innovate (Buckle, 2003), may constrain effective construct development. Consideration must be given to the systemic conditions that give rise to or inhibit learning and change in real-world contexts, in a way that moves beyond what Buckle describes as an over-reliance on positioning expertise and a tendency towards entrainment, that leads to unconscious behavioural alignment in prevailing systemic dynamics (Buckle, 2003). An understanding of systemicity can be used to inform the development of constructs by taking the following three orientations that

Table 1.1: Different understandings of 'systems'

Understanding of systems		
System	Nature of system	Research focus
System as content	Systemicity is assumed to be part of real-world phenomenon and the situation being researched is understood as a complex living system	Research focuses on understanding components and dynamics of a system (Varey, 2017)
System as concept	Systems are socially constructed with an epistemological or explanatory intent	Research focuses on creating boundaries around a perceived "whole" to refine research focus within a specific context. Research focuses on developing systemically informed ideas to concepts from other domains (Varey, 2017).
System as construct	Systems are generalisable from direct or indirect observation of social phenomena	Research focuses on developing systemic understandings and theoretical constructs to explain the nature of dynamic social phenomena

characterise a systems approach, namely understanding interrelationships, engaging with multiple perspectives and making critical boundary judgements (Williams & Hummelbrunner, 2010). This is depicted in Figure 1.2. The star in the middle indicates that the space for conducting research arises from consideration of all three concerns, which can lead to the development of constructs that reflect an understanding of the systemic nature of social phenomena.

1.3.6 Limitations of this research

This research has some limitations which have influenced some key design decisions about what to include and exclude for the research to be both viable and rigorous within the framing of a PhD thesis and to respond to the constraints imposed by the pandemic. The research was originally conceived of as Systemic Action Research (Burns, 2014) where the research could be co-produced with beneficiaries in line with the ethical commitment of systems research to create change with people involved in the situation. The pandemic

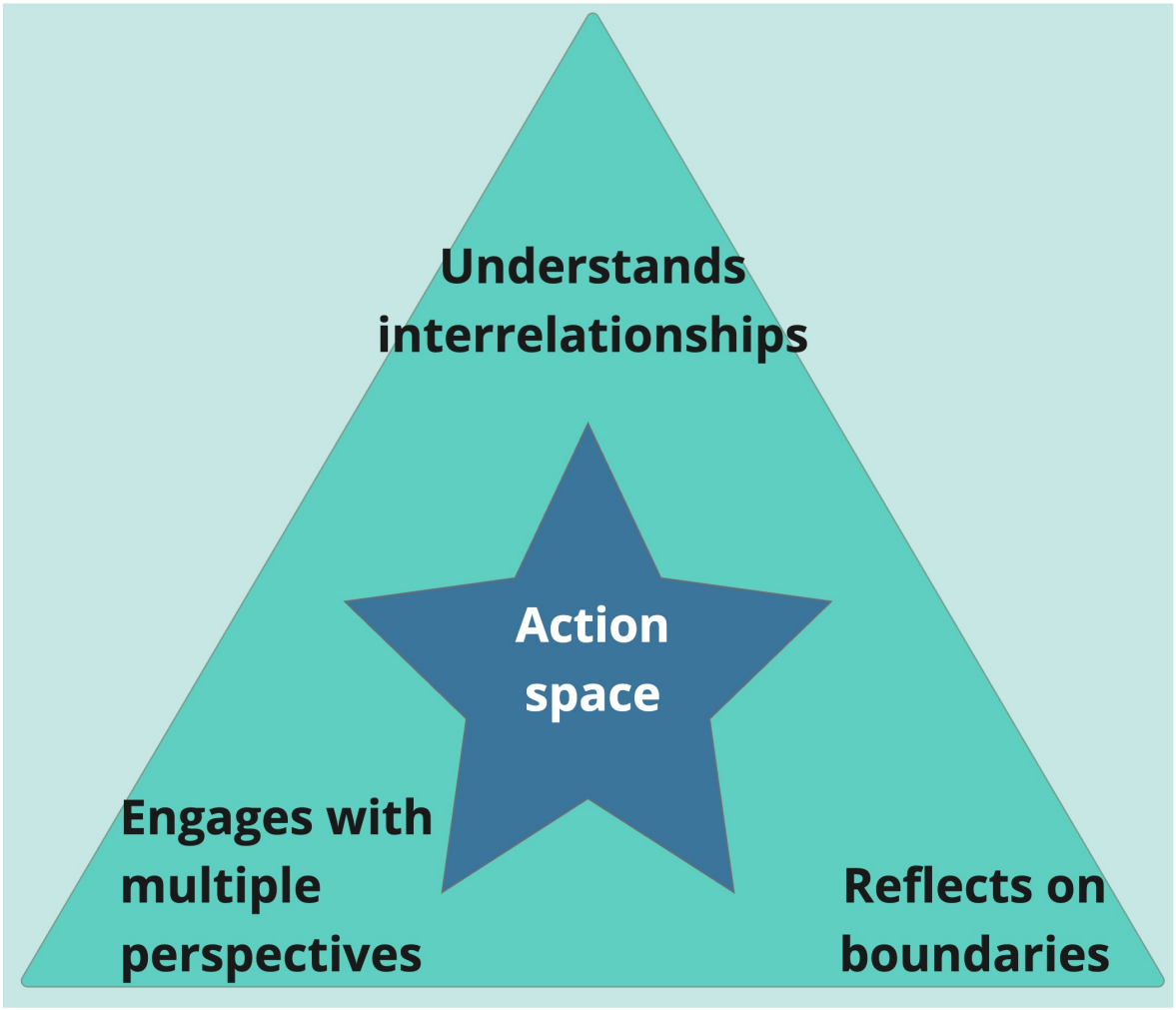

Figure 1.2: Interrelationships, multiple perspectives and critical boundary judgements

acted as a constraint to actualising this, and it may at the time have been unethical to attempt to do so as will be discussed in Chapter 3 on methodology. Time constraints, and conducting the entire research process remotely, as well as studying remotely, was also a limiting factor in this research. While it made the study possible, my family and I were also living through the pandemic during this research, and work, school and home all converged in one place, with additional caring responsibilities and bereavement also having an impact.

1.3.7 Contribution and specific use of findings

The key contribution this research makes to knowledge is to contribute to a nuanced understanding of the governance arrangements required for

viable and sustainable digital disability services that retains a strong focus on human-centric relational supports rather than technologically driven service delivery models. This is also about the democratisation of disability supports. The contribution is discussed in detail in Chapter 7. The findings will be used to inform and engage disability services, advocacy organisations and policy-makers about the value of safe virtual spaces in unstable environments, and how to design them and help resource staff or other facilitators to create the conditions necessary to design them so that they can be both stable and viable from a governance perspective. The findings will also be shared with organisations involved in FreedomTech's community of practice, many of whom participated in the research. It will also be shared with a wider group of research participant organisations not just in Ireland but in the EU, the UK and Australia. Dissemination will include website content, blog posts and academic papers. It will also include seminar presentations within the disability arena – both in terms of service provision, AT and in relation to the regulation of social care as well as the systems academic community.

1.4 How this thesis is organised

This thesis departs from the traditional format, where an introduction is followed by a literature review that identifies a gap in knowledge that is then explored empirically, with findings and discussion presented in sequence. As the research was conducted over a three year period, during which virtual services evolved and matured, it makes more sense to present the three research cycles as distinct research projects, each with its own methodology, and discussion. This is also in keeping with an iterative approach to systems research, where the outcome of one research cycle informs the input for the next. The exception is with the final research study, where the discussion is elaborated on in the final chapter. There are seven chapters and the focus of each is laid out as follows:

1.4.0.1 Chapter 2: Literature review

This chapter builds on the systems research approach outlined in Chapter 1, to create an understanding of how services innovated during the pandemic to develop virtual services. It presents three bodies of literature: complexity theory is applied to digital innovation, psychological safety is applied to online facilitation, and practice theory supports an understanding of the practices staff engage in to both construct and facilitate virtual services. Cur-

rent literature on virtual engagements and their benefits are explored alongside an analysis of why services have not sustained the adaptation despite its advantages, using complexity and social learning theory. The literature also focuses on the relational dynamic that supports effective online engagement supported by psychological safety, meaningful connection and belonging and staff presence. This relational dynamic may form a strong basis for understanding how virtual services retain a human-centric focus, and enhance agency amongst those attending. The literature on practice theory, specifically theories of practice architecture, is used to understand the dance between "being" and "doing" in the digital space. Together they lay a foundation for understanding the evolution and value of digital innovation in disability supports, facilitation practices and governance issues that contribute to setting the conditions for safe virtual spaces.

1.4.0.2 Chapter 3: Research methodology

This chapter outlines the overarching approach to designing this research across three sections. The first section presents the ontological and epistemological framing for the research, which subscribes to a Critical Realist approach that is commensurate with a systems research epistemology. A commitment is made to conduct multi-methodological research giving primacy to the situation in context, that can contribute to the real-world situation. The second section in this chapter explores the systems research practice skills needed to claim that this research is systems research. A commitment is made to attend to 1st person, 2nd person and 3rd person concerns associated with Action Research and systems research competencies through reflexive practice. The third section outlines the research questions, the overarching design process using Soft Systems Methodology, a problem structuring approach to researching complex situations, which is used to guide three iteratively designed research cycles. Research logistics are presented here including the following: timing, ethics, participants, data reduction and analysis approaches, as well as consideration of critical boundary decisions made throughout the research. The chapter concludes with a reflexive researcher statement on positionality.

1.4.0.3 Chapter 4: The Emergence of Virtual Services

This chapter presents the first research cycle which consists of interviews with 12 Irish service providers conducted in 2020 to understand the experience of taking disability services online. This cycle attends to the initial problem-

structuring phase associated with Soft Systems Methodology which focuses on constructing a better understanding of the experience of taking services online, in the absence of explicit policy guidance or digital skills. The interviews are analysed using Reflexive Thematic Analysis leading to eight themes that describe how virtual services are constructed (doing) and the quality of interaction in the space (being). The themes also describe the level of adaptation and innovation staff engage in that aligns with an understanding of how Complex Adaptive Systems behave. The discussion section concludes that technical know-how can be developed where the desire to sustain human connection is strong and there is an openness to adapt and learn. Staff also engage in enacted sense-making which requires a strong sense of presence, thus creating the conditions for psychological safety to support meaningful connections online.

1.4.0.4 Chapter 5: Psychological safety and Meaningful connection

Research cycle 2 investigates the conditions that give rise to psychological safety and a meaningful connection in virtual services. It also explores the staff practices that create the conditions for a felt sense of psychological safety. The research cycle is designed to gather diverse views on these two concepts from staff working in Virtual Services. The findings of an online World Cafe with twenty-one Irish service providers is presented and analysed using Reflexive Thematic Analysis and Theories of Practice Architectures. The research approach, process, analysis and findings that include eight themes are presented along with a discussion. The chapter concludes that psychological safety is a core condition for the effective running of virtual spaces, but the current framing in the literature is ill-suited to the context of disability services. A virtuous cycle is proposed where staff presence creates the conditions for psychological safety to arise leading to meaningful connections that support a sense of mattering. This cycle is supported by staff practices that are enabled or constrained by organisational norms.

1.4.0.5 Chapter 6: Viability and sustainability in Safe Virtual Spaces

The final research cycle is an international modified online Delphi survey which verifies the findings around staff practices that support safe virtual spaces, whilst also looking at the governance arrangements needed to support them. The framing for the survey draws on the Viable System Model (VSM) devised from Systems theory. The purpose of this final research cycle is twofold. It seeks to validate the findings from Cycle 2 which proposes a reframing of

what psychologically safe virtual spaces consist of and the practices used to support the creation of safety in virtual services. It also aims to develop an understanding of the governance arrangements needed to develop and sustain viable safe virtual spaces. The case is made for designing a real-time Delphi survey online using the Viable System Model as a way of structuring the questions that can support learning about the conditions needed for viable safe spaces. The findings are discussed within the framing of the VSM in brief with the main discussion reserved for Chapter 7, where they are considered in the context of the overall research outcomes.

1.4.0.6 Chapter 7: Discussion, recommendations and conclusions

This chapter starts with an overarching discussion on the meta-framing and context in which the research took place, and some key concerns about the past, present and future of virtual services. It presents key findings including the following: psychological safety is key to the viability of virtual services, and needs to be contextualised to disability services, where it is most usefully understood as a systemic construct reliant on staff presence and leading to meaningful connection, mattering and belonging. This makes having a psychologically safe space an end in itself, rather than instrumental to a business purpose. The framing proposed here is Safe Virtual Spaces which arise when Staff practices that support safety, technology as the site of practice and environmental and contextual factors cohere. A synthesis of the findings from the Delphi survey leads to an understanding that demand for virtual services will rise, there are governance issues that need to be considered and there is a need for the development of principles for designing Safe Virtual Spaces. Some consideration is also given to power and practice. The contribution to knowledge is considered, along with potential areas for future research and research limitations. It concludes with a personal reflection on the journey and future practice.

1.4.1 Researcher statement: Weltanschauung

I grew up in a house where tripping over a growing inward-bound flow of technology that mushroomed exponentially from 1980 onwards was the norm. My father was an early adopter with a ferocious appetite for gadgets and his excitement around "the next thing" was palpable until the speed of progress began to translate into piles of wires and discarded tech. In 1987, I was the only psychology student in University College Cork handing in printed assignments from an Amstrad laptop and a dot matrix printer, acquired from

his cast-offs. There was a guy working on the 14th floor of the science department who, I was told, could channel information from around the world on his computer, so I made my way there and he printed out a heap of feminist conversations all the way from California. In random printouts from the nascent internet, I found people writing about what I was thinking. None of this gave me a love of technology, but I loved what it could do. When years later I visited disability services around Ireland with my laptop, dongle and an early smartphone in my bag, I was disturbed to see people sitting staring into space with Nokia phones hanging from their necks, and no access to a world beyond those walls. There were often rows of some company's discarded laptops lined up against a wall, unused and unplugged. And if I asked for the code for the WiFi, staff wriggled with discomfort of not knowing, and they might suggest asking the business next store if I really needed it for my advocacy presentation about the importance of voting or something like that. It was 2013. Back in my Dublin office enclave, the depth of the inequality began to stew, and morphed into a community of practice on assistive technology, though many services were reluctant to even talk about it, as they sank their teeth into more basic issues around funding and governance. I knew nothing about assistive technology but I knew it made me mobile, allowed me to work when I wanted to, corrected my awful spelling and, best of all, it allowed me to work from home when I needed to. As the community of practice evolved to find its own identity in collaboration with others, FreedomTech became an overarching banner for advocacy around assistive technology access, and the community of practice became the Community Hub for Assistive Technology (CHAT). It swelled into morning gatherings of up to 100 people, keen to come and slow to leave, and it self-organised with a steering group of three. I started on the ADVANCE PhD programme in 2019, having left my laptop and dongle job behind, but sustaining a commitment to chair FreedomTech. My research interest was to develop a digital community that would offer a liberating alternative to what I saw as a sense of ownership that service providers had "over" the people they served. The pandemic prompts a different kind of response, one that can sustain people and perhaps even disrupt a complacency I associate with service provision. I am also aware that my experience may bias my perception of organisations and that many people find a "home" in services, in an otherwise unsupportive world, and that technology is not for everyone. Being aware of my Weltanschauung (P. Checkland, 1991) is also about holding a wide and balanced view and being open to new information, even when it contradicts my experience. I was continuously surprised by the commitment and initiative I encountered

and used journaling to mitigate against my own biases about how conservative services were throughout my 20 years working on the ground, before moving into policy. And what I observed at the beginning of the pandemic was something different which led to this research: some staff expressed a desire to learn how to sustain contact with those they served and often had enduring relationships with. And the ambition now is to contribute to preparing us for further disruption ahead, so that no one is left behind without some means, however imperfect, to sustain their human right to connection and belonging.

CHAPTER 2

Literature Review

All phenomena may be investigated and understood as organizational processes (*Bogdanov, 1913–1917, pp. 5–6*).

2.1 Introduction

To set a foundation for the forthcoming studies, this chapter draws on concepts within the literature from three disciplines: systems thinking, psychology and practice theory. The intersection of these disciplines creates a unique lens through which to examine safe virtual spaces as an emerging service model for disability services. Together they lay a foundation for understanding the evolution and value of digital innovation in disability supports, facilitation practices, and governance issues that contribute to setting the conditions for safe virtual spaces. A systems thinking approach forms the foundational theory and is threaded throughout this research; the innovation of virtual services arising during the pandemic can be understood through a complexity framing (systems as content). Systems theory can also be used to enrich the construct of psychological safety in this context, whilst practice theory provides a theoretical underpinning for conceptualising how services innovated in context. Chapter 1 has provided a foundational understanding of the nature of systems. Further discussion of specific systems theories will be presented as they are applied in the literature review. Psychology informs theories of safety, meaning, presence and belonging which are constructs used to explore the experience of being online in the virtual space. Concepts surrounding practice theory contribute to an understanding of how staff innovate in the absence of overarching policy guidance (See Table 2.1).

Table 2.1: Disciplines informing literature review

Theoretical approaches	**Structure of literature review**	**Theories**	**Study**
Systems Thinking	Governing digital innovation in disability supports	Complexity theory to describe disability and technology landscape (Systems as content) Learning and innovation practices in context (systems as concept). Establish elements of safety (Systems as construct)	1
Psychology	Psychological safety in online settings	Psychological safety-meaning, belonging, presence	2,3
Sociology, philosophy	A practice theory approach to facilitating safe virtual supports	Theory of Practice architectures	2,3

We need to reframe how we understand the potential value of digital communities for people with disabilities as an enriching space alongside the facilitation practices that support a felt sense of safety and connection. This is important because digital interactions increasingly form a large part of our social lives and mediate our relationships, and disabled people have too often been excluded from participation, which poses both human rights concerns and future risk of exclusion in an increasingly digitalised and volatile world. The nascent literature on digital engagement presents a dichotomised view about the degree to which it either expands our horizon for interaction that frees us from our localised embodied selves to interact with like-minded people and extend our sense of self, or is an expression of "networked individualism" (Osler, 2020), where localised community is being abandoned and is a poor substitute for face to face community (Osler, 2024). Regardless of the stance, it is assumed that online engagement is an inferior version of face to face contact (Osler, 2020), and a precarious way to engage that can lead to affective dysregulation (James et al., 2022). There is a tendency to view virtual engagement as less 'real' than in-person contact (Osler, 2020). Moreover, the common narrative in disability literature points out that there is a tendency to regard digital engagement as a temporary anomaly in an unusual time, and

that it is fraught with safeguarding and capacity issues which are to be corrected by the resumption of face-to-face contacts as soon as it is safe to do so (Fortune et al., 2024). We need to understand more about the potential of online services, by evaluating the level of meaningful connection attainable online, and learn from the adaptive staff practices that supported engagement during the pandemic in the context of increasing global uncertainty. This literature review addresses these issues, by traversing three distinct literatures.

This literature review is organised into three parts. It first explores the status of digital innovation and inclusion in disability supports and the governance frameworks that prompt or constrain their development. The extant literature on online engagement within the disability field, and the extent to which it was perceived as beneficial to participants' mental health and wellbeing, is then explored including research conducted in the context of the pandemic and emerging questions about the level of innovation in this area. Secondly, the value of psychological safety theory is considered as a framework that offers a departure from deficit-based thinking commonly associated with disability. There is a large body of literature on psychological safety, which is regarded as a mature theory that has come of age (A. C. Edmondson & Bransby, 2023) how this construct can translate from a business setting to a disability support service is considered. Thirdly, practice theory, and in particular theories of practice architecture and systems theory in the form of the Viable Systems Model are discussed as offering alternative framings for developing practice-led safe virtual spaces and creating governance structures at an organisational level around them. These literatures have different ontological and epistemological commitments, which are explored through a systems thinking research framing and they inform the research studies that follow.

2.2 Section One: Governing digital innovation

This section outlines the status of digital innovation in the disability space entering the pandemic alongside an exploration of the potential that online supports offer, which prompts questions about what constrains and promotes innovative practices at an organisational level. It argues that in the prevailing external environment, policy alone is unlikely to make provision for the level of innovation needed to respond to crises. Creating the conditions for culture change within a risk-adverse sector where staff are not adequately resourced calls for a complexity framing to understand how organisations can

self-organise, adapt and innovate during a period of disruption. Systems theory provides a lens to understand how some disability organisations adapt as open systems, overcoming safeguarding concerns to harness the potential of technology as never before. As systems are continuously self-organising, our key interest is whether disability organisations organise as open or closed systems and how that influences innovation. The literature is supplemented with a figure outlining some of the main elements of the digital landscape in disability supports entering the pandemic (See Fig 2.1). This literature raises important questions around resilience in disability supports and the governance systems that sustain them.

The prevailing policy environment is characterised by a gap between international recognition that access to technology and Assistive Technology (AT) is a human right, and a lack of national policies to address the right to digital inclusion. AT often serves as a gateway to internet access (E. M. Smith et al., 2022), which makes it relevant to accessing virtual services. The United Nations Convention on the Rights of Persons with Disabilities (UN CRPD) grants people the right to equal access to information and communication technologies and systems (Article 9) and access to Assistive Technology is regarded as central to the realisation of all aspects of life enshrined in the Convention (E. M. Smith et al., 2022) as well as the Sustainable Development Goals (Clark et al., 2022; Panda & Kaur, 2024; Tebbutt et al., 2016). The World Health Organization recognises AT's critical role in promoting societal participation through the Global Cooperation on Assistive Technology initiative, reflecting a global commitment to leveraging technology for disability inclusion (Desmond et al., 2018), and there is a recognised need for resources to embed AT services within disability services (Layton et al., 2020; E. M. Smith et al., 2018). However, these international developments had not yet impacted on national policymaking prior to the pandemic (Darcy et al., 2019; Perfect et al., 2018). A scoping review of the WHO European region suggests that fragmented national policies on AT are common: a lack of consensus on definitions makes it difficult to assess need and coverage and make comparisons across countries (Mishra et al., 2022). Ireland's AT services are fragmented (O'Donnell et al., 2016) and there appears to be a blindspot in thinking more broadly about access to technology amongst people with disabilities beyond the education sector. With the exception of education, Ireland's national strategy on disability does not make reference or provision for technology in other aspects of people's lives (NDIS, 2017). Digital literacy is beginning to attract focus with the development of the national Adult Literacy for Life Strategy (ALfL, 2021) that includes digital skills across Irish society, but again most of the empha-

sis is on staff digital skills in both Irish healthcare policy (HSE, 2019) and in the regulatory framework for social care workers (CORU, 2019). The disconnect between aspiration and policy amplifies the digital divide entering the pandemic.

2.2.1 Digital engagement prior to the pandemic

The pandemic offers a catalyst for exploring digital inclusion but the case for its benefits is already established. Early research on Online Health Communities [OHCs], which describes forums centred on specific medical conditions, peer support and mental health, suggests that they enhance access to health information (Magnusson et al., 2004) and provide a space where people with chronic conditions can meet for both formal and informal peer support without having to leave home (Braithwaite et al., 1999). Perhaps the greatest advantage is the expansive impact on relationships: they open up new opportunities to share stories with peers (Seymour & Lupton, 2004), enhance creative expression and reduce social isolation (Finn, 1999). Online communication also allows people to step outside of disabled/nondisabled binaries, as disclosure of a disability is optional in some settings (Borgström et al., 2019; Caton & Chapman, 2016; Seymour & Lupton, 2004). Social media also offers a way to enhance friendships, social identity and self-esteem (Caton & Chapman, 2016; D. D. Chadwick & Fullwood, 2018) and increases people's sense of control over their lives (Borgström et al., 2019). As early as 1999, it was becoming clear that online communities could prove particularly beneficial for individuals facing physical or psychological impediments to accessing face-to-face services, including geographical isolation, transportation challenges, communicative constraints, or limited opportunities for social engagement (Finn, 1999). Despite these advantages, and the freedoms offered by digital participation, organisations are slow to innovate using technology.

2.2.2 Digital inclusion during the pandemic

Research conducted during the pandemic paints a consistent view of the value of online engagement. It is associated with increased life satisfaction, happiness, enhanced choice, empowerment, autonomy, and confidence against the backdrop of a significant decline in face-to-face interactions (D. Chadwick et al., 2022). People with intellectual disabilities reported a sense of overwhelm and anxiety due to the disruption of routines and loss of

Figure 2.1: Systems map: policy, potential and barriers to online engagement

social contacts; connecting with others online supports better mental health (Lake et al., 2021) and mitigates against isolation (Stuart et al., 2021). Online contact is viewed by people with intellectual disabilities as being critical to maintaining interpersonal relationships, social inclusion and resilience (McCausland et al., 2023; Scheffers et al., 2021). Not only do they receive support, they give it also (Lake et al., 2021). Many different activities drew people together, but staying connected is a thread across different groupings and activities: for people recovering from a stroke, or living with dementia, chronic obstructive pulmonary disease or Parkinson's disease, for example, participating in a choir can provide a space to meet and experience a sense of togetherness (Tamplin & Thompson, 2023) Exercise programmes for people with multiple sclerosis are as much about connecting as moving (Galway et al., 2024).

Considering evidence on the benefits of online participation, exponential growth in the accessible capabilities offered by technology and an increasing spotlight on Assistive Technology, it could have been expected that the digital divide would be breached during or shortly after the pandemic. Differences in internet access offer an indicator of the digital divide: 67.9% of the global population has access to the internet, and European usage rates are even higher at 89.2% according to 2022 World Internet Statistics. In contrast, people with disabilities in the EU experience a 62% reduced probability of possessing home internet access (Scholz et al., 2017). The determinants of digital exclusion amongst disabled populations include living alone, aging and cost according to Scholz Scholz et al., 2017. Barriers and enablers of Assistive Technology take-up are summarised as accessibility of technology, affordability and acceptability of being seen to use it by others (Mishra et al., 2022). Moreover, there is a widely accepted understanding that the prevailing political, economic and cultural climate exerts an exclusionary effect on disabled people's access to the digital world (Borgström et al., 2019; Caton & Chapman, 2016; D. Chadwick et al., 2013; Seale, 2014). Research indicates that the gap which was widening before the pandemic was exacerbated rather than addressed by the pandemic (O'Sullivan et al., 2021; E. M. Smith et al., 2022). Smith and colleagues (E. M. Smith et al., 2022) suggest that AT was not prioritised as an essential service during the pandemic and the speed with which governments initiated lockdowns resulted in many being ill-prepared for telehealth-based services and the digital skills they require to both develop and ensure people could access them. Safeguarding concerns pose additional barriers to participation (Eriksson & Ineland, 2023), as do staff judgements about people's capabilities (Gelfgren et al., 2022). The fact that

digital services are not the norm post-pandemic poses a concern for the orientation of disability policy and services towards digital innovation and their resilience in an unstable operating environment.

Literature on the role of digital inclusion during the pandemic continues to grow, but there is little focus on how innovation is fostered and the facilitation skills needed to sustain online engagement. Safeguarding concerns and assumptions about the capability of people with disabilities to participate online trumps innovation even when the benefit is known, particularly for people with intellectual disabilities (Gelfgren et al., 2022). Since the pandemic, there are calls for service providers to develop their skills and capacity for the delivery of remote services and provide training and appropriate digital and assistive technologies to clients and their caregivers to facilitate engagement with health services and their communities (Scheffers et al., 2021; E. M. Smith et al., 2022). However, the focus here is often on digital skill competencies and less on supporting staff to develop innovative skills or online facilitation skills. Where studies attend to staff skills, the focus is on practices that support access to technology rather than on facilitating group engagement online (Seale, 2023). Two questions arise here: what are the supporting conditions for digital innovation in the absence of clear policy guidance, and what does it take to facilitate safe virtual engagement that sustains a sense of connection in uncertain external environmental conditions? These questions can best be addressed by using a complexity lens.

2.2.3 A complexity approach to digital innovation

A complexity approach offers an understanding of why some organisations get "stuck", yet others are driven by a culture that supports self-organised innovation even without guiding policies. There is no overarching structural governance stitching different elements together horizontally (eg. AT capabilities and social care competencies) or vertically (eg. integration between international and international policy instruments) indicating a systems-wide "stuckness". The absence of clear direction at the start of the pandemic may cause many organisations to "freeze" or get stuck according to social field theory which describes psychological forces that motivate both individual and collective behaviour, and act in ways to preserve their own existence, with staff acting from culturally embedded organisational norms that restricted digital inclusion (Lewin, 1951). However, the absence of policy can also lead to a very different outcome. Intentional voids in policy can also prompt innovation by creating enough constructive ambiguity in a time of turbulence to prompt innovation (Inkpen & Choudhury, 1995). Innovation refers to *"the im-*

plementation of new or or significantly changed product or process" (Gault, 2018). Some scholars suggest that formal strategies can impede innovation where they have become embedded in the organisational mindset and stifle creativity and responsiveness (Mintzberg & Waters, 1985) or block out organisations' "peripheral vision" to real-world conditions (Inkpen & Choudhury, 1995). It may be that organisations tend to act with a consistency that is embedded within their own conditioning, in patterned and collectively organised ways, and which is coherent with their internal logic, whether conscious or not (Buckle, 2003; R. C. Chia & Mackay, 2023). The implication of this is that, regardless of why there is no strategy, organisations continue to operate purposefully, in accordance with their patterned and persisting self-organising dynamics, even in chaotic conditions (Buckle, 2003). Meadows Meadows, 2008 explains that these cultural and behavioural repertoires then act as a "stock" from which new patterns of behaviour can emerge, and so if the culture is open, organisations are more likely to adapt and create something new. If on the other hand the culture is constraining, then organisations with tight controls and formalised procedures are less likely to innovate (Mintzberg & Waters, 1985). The absence of explicit strategic policy guidance, leads to some organisations being able to self-organise and develop virtual services, once they had a clear rationale for doing so. This implies that the drive to innovate does not come from external national strategy making, but from internal culture within organisations which drives their thinking.

Relationships are key to digital innovation as both staff and people using services are more likely to adapt when the rationale to do so is both strong and supported within a relational dynamic rather than organisational policy. Adapting describes a capacity to sustain stability amidst external pressure, by maintaining an ability to respond to external feedback in a way that fosters resilience (Ashby, 1960). Maintaining stability requires homeostatic mechanisms that support organisational adaptive capability. As organisations are social constructions (Coghlan, 2019) and the true purpose that an organisation serves is evidenced in what staff do rather than policy documents (Beer, 1995), the importance of relationships as a driver is not to be underestimated. One study recommends that home internet access and accessible technology need to be backed up by supportive relationships in order to have the greatest impact on the participation of disabled populations in the digital world (Scholz et al., 2017). Another study suggests that support staff and peer advocates, who did not have an understanding of why technology would be of value to people with an intellectual disability (ID) pre-pandemic, or assumed it would not be of interest, were able to innovate once it became the

only means of accessing the world beyond home. They were then able to draw on their creativity and resilience to manage risk and develop shared decision-making practices (Seale, 2023). Seale describes this orientation towards adapting as a "possibility-focused" approach to practice which distinguishes those who did innovate from those who did not. The benefits for people using services are clear: one study suggests that learning to cook using the internet not only improves relationships with staff but fosters greater independence amongst adults with ID in residential settings (Ramsten et al., 2019). The relational dynamic may offer a powerful rationale for adaptation and next we turn our attention to how adaptation is enabled in complex settings.

Adaptation begins with the idea that disability organisations, like all complex living systems have boundaries, and how open or closed those boundaries are determines the extent to which they can innovate as self-organising systems. Complexity theory offers a way to understand how systems observed as ontological realities behave according to non-linear dynamics, while critical complexity (Cilliers, 2005) offers a way to understand what it means to act from within that complex reality and co-construct a response to it (Preiser, 2019). All systems are self-organising, but only some are adaptive and open to the exchange of information with the environment, whilst others remain closed and stuck in a loop of unchanging rules of engagement and internal reorganisation only (Ashby, 1960). This explanation offers a way to differentiate between staff that were open to adapting to the new operating conditions imposed by the need to maintain social distancing through developing a fresh response using technology as the medium, and those that self-organised internally and remained closed to the potential of digital engagement. Complex Adaptive Systems (CAS) may extend our understanding of the patterns in adaptive systems that lead to digital innovation. Preiser Preiser, 2019 proposes six organising principles of complex systems that include the ability to adapt, the idea that they are constituted relationally, and also that they have non-linear dynamics which means that cause and effect might not be straightforward or proportionate (Boulton et al., 2015). In addition to these three characteristics, CAS are context-dependent and at the same time radically open to new ideas. The sixth feature of CAS suggests that non-linear causality leads to the emergence of new fresh outcomes, which in this instance may be the innovation of virtual services. If this indeed offers a better way of understanding innovation in action, it may offer some ideas about how to govern for creativity and adaptive skills that go beyond knowledge acquisition around digital skills towards broader concerns towards creating

capabilities that enhance resilience.

In conclusion, it may be that governing for digital inclusion is more about creating the conditions for self-organising adaptive behaviours in disability supports than it is about top-down policies. This shift in thinking is presented in Fig 2.2. If organisations can be seen to self-organise during a period of uncertainty, without explicit policies, then policy might usefully focus on creating enabling conditions for governance that unstick organisational norms enough to embrace technology in a less risk-adverse way. This would not negate the need for investment in digital skills and technology, but it does open the door to a need to focus on raising staff capabilities to adapt and innovate creatively and responsively to emergent environmental conditions in the service of the people with disabilities they support. What this might imply in terms of creating the container for safety online is discussed in the next section.

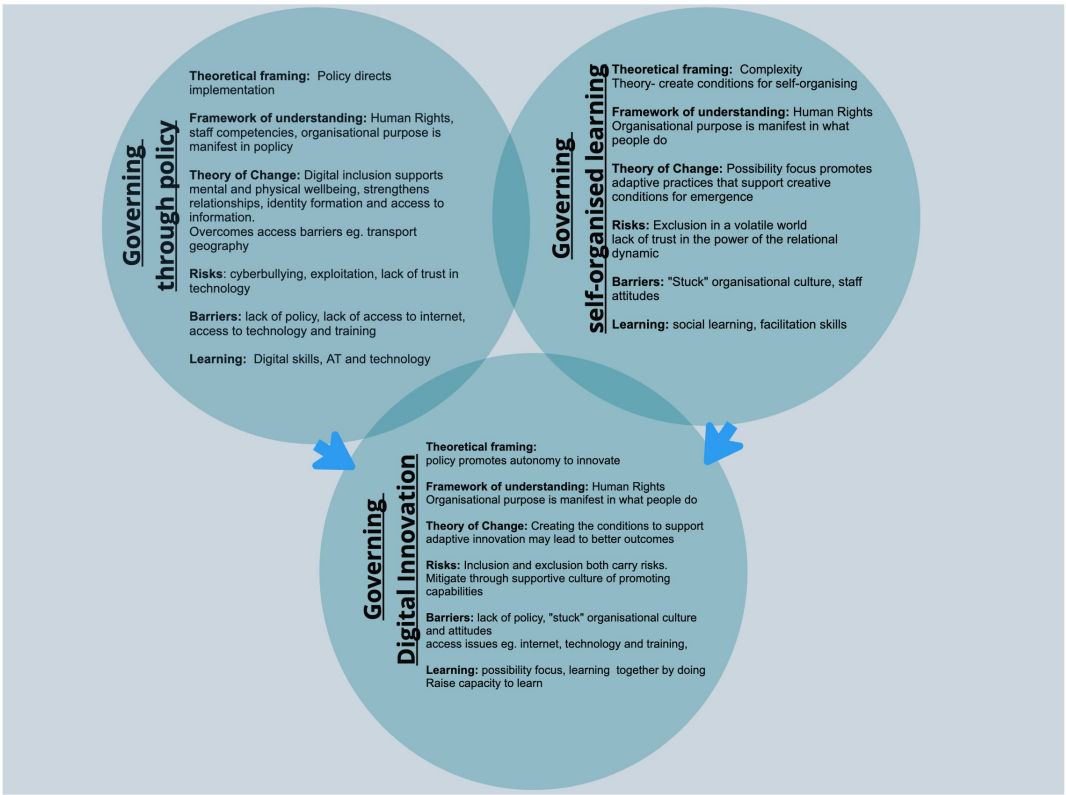

Figure 2.2: Governing digital innovation

2.3 Section 2: Creating the conditions for psychological safety

The value that virtual services provide for those attending, particularly in the midst of uncertainty, also needs exploration. In this section I will present an exploration of the literature on three main bodies of thought: firstly I suggest that the construct of psychological safety offers a more affirming way to approach safety in virtual services, that shifts away from a deficit approach to safeguarding. I also propose that the concept has enduring relevance at a descriptive level, but that an exploration of its underlying philosophy, purpose and scope requires further consideration, if it is to be of value in the context of this research. Expanding the idea of how safe spaces can be constructed calls for further consideration of how it relates to organisational learning, as discussed in the previous section on digital innovation, and how meaningful connections and staff presence also contribute to creating safe virtual spaces. Together, these three constructs suggest that creating a safe space may require a systemic review of what is needed to create the conditions for psychological safety in the context of virtual services operating in a complex operating environment.

2.3.1 Psychological safety

Innovation requires enough of a sense of safety to innovate in unknown territory and create a safe virtual environment in which people can meet. The term "safe" is used to describe a sense of psychological safety: it explains the degree to which people feel safe to speak up and share ideas and engage with candour (A. Edmondson, 1999; A. C. Edmondson, 2018; A. C. Edmondson & Bransby, 2023; A. C. Edmondson et al., 2016). Psychological safety involves the establishment of a virtuous cycle of engagement, building upon the principles of positive psychology, aimed at broadening and enhancing individuals' existing capabilities and facilitating their sustained engagement in the workplace. This framing suggests a strengths-based approach to amplifying positive outlier behaviours (Caiels et al., 2021; Russell, 2022) amongst organisations that did adapt to develop online supports, in a context where many did not adapt. It differs from a safe-guarding orientation of the word safety that aims to protect people's right to live safely, free from abuse or neglect. Understanding how a strengths-based approach to enhancing safety can be adapted to virtual group sessions is important if we are to craft effective policies and recommendations for the diversification of disability support

models in an uncertain world.

The construct of psychological safety has been the subject of several literature reviews including three involving Amy Edmondson (A. C. Edmondson & Bransby, 2023; A. C. Edmondson & Lei, 2014; A. C. Edmondson et al., 2016), one of the key authors in this area whose most recent review suggests it is now a mature theory which has come of age. Systematic reviews have also focused on the area of healthcare (Newman et al., 2017; O'Donovan et al., 2019; O'Donovan & McAuliffe, 2020). How the construct is measured, and how robust it is, is also a subject of review (Frazier et al., 2017). Psychological safety is needed for effective innovation, creativity and performance within teams (A. C. Edmondson, 2018; A. C. Edmondson & Bransby, 2023). It explains the degree to which people feel safe to speak up and share ideas and engage in discussion with candour. It involves the establishment of a virtuous cycle of engagement, building upon the principles of positive psychology, aimed at broadening and enhancing individuals' existing capabilities and facilitating their sustained engagement in the workplace (A. C. Edmondson, 2018). It is often described as a polarity and contrasted with what is not 'safe' (A. C. Edmondson, 2018), as Table 2.2 illustrates.

The components of the construct have a lot to offer in understanding the characteristics needed for a virtual space to be experienced as a safe space. It is not confined to individual traits but nonetheless it is a part of the workplace that leaders have a responsibility to foster (A. C. Edmondson, 2018). This idea is suggestive of an interpersonal construct (A. C. Edmondson & Lei, 2014) which makes it of relevance to this research, where the relational dynamic of interest is between staff and the people they support. The increasing realisation of the importance of safety in uncertain and sometimes volatile operating contexts is to be welcomed from a complexity perspective (A. C. Edmondson & Bransby, 2023). The notion of openness also links well to adaptiveness in Complex Adaptive Systems, and the commitment to organisational learning is commensurate with developing an understanding of the conditions that support digital innovation. Again the focus of psychological safety is on what staff do, but in the extant literature, the role of the leader is key to co-creating a culture of safety. The construct is aligned to how safety might be expressed online making it a good fit for exploration in this research.

Psychological safety is most commonly studied in work team contexts, which points to a need to review what it means in the context of creating safety between staff and clients in virtual disability services. Psychological safety has found traction in healthcare settings (O'Donovan et al., 2019; O'Donovan et al., 2021) as well as education and commercial enterprises (Liu et al., 2016),

Table 2.2: Psychological safety as bipolar construct (Edmonsdon 2019, 2023).

Psychological safety expressed as ...	**rather than...**
Presence	Absence
Engagement	Disengagement
Candor	Being nice
Express self	Hide
Mistakes reported quickly	Mistakes hidden
Share experience safely	Experience embarrassment, retribution humiliation, being ignored
Learning	Blame
Act now for future	Discount future
Openness	Defensiveness, fear
Feature of work climate	Individual personality factor
Temporal immediate experience	Trust between two people
Ambitious goals	Lowering standards
Honest	Dishonest
Challenging	Anxiety provoking, over exertion
Risk-taking	Apathetic, lax
Having voice	Silence
Inclusive	Exclusionary

as a way of improving team performance (A. C. Edmondson and Lei, 2014; A. C. Edmondson et al., 2016). The construct is largely deployed in US and European healthcare settings with a concentration on clinical healthcare settings, and more specifically nursing, where the focus is on ensuring patient safety in a clinical sense (A. C. Edmondson et al., 2016). One research review of mental health recommends the inclusion of patient and family carer perspectives in an attempt to change organisational culture, whilst also highlighting difficulties in reaching these groups (Hunt et al., 2021). Another study focuses on psychological safety in nursing home teams, but again the dynamic explored is between staff (O'Leary, 2016). While the experience of the pandemic shifts the focus towards telehealth, which concentrates on the relational dynamic between healthcare provider and individual client, research is limited to the creation of a virtual clinical environment and non-verbal and spatial cues, rather than the dynamic of what transpires through interaction (Duane et al., 2022). The focus in much of the research revolves around safety within teams or in one-to-one telehealth settings whereas this research looks

at psychological safety as a relational dynamic between staff and beneficiaries of services in a group context. Over time, the literature has moved from an initial focus on individuals to teams and organisations (O'Donovan & McAuliffe, 2020), where those in positions of authority experience a greater sense of safety (A. C. Edmondson & Lei, 2014; O'Donovan & McAuliffe, 2020). Individual characteristics, gender and voice also play a role (O'Donovan et al., 2021), which suggests that the relational dynamic between individual characteristics and operating context are important. In social care settings, and disability services, which often involve enduring relationships with clients and sit in a liminal space between professionalised therapeutic roles, family and peers, a different approach may be needed than can be found in the literature.

The current framing of psychological safety bears resemblance to a systemic framing, including a commitment to address complexity, but the philosophical underpinning of both approaches are at odds with each other in significant ways. Psychological safety is most often understood through a Cartesian framework which assumes that constructs can be measured using traditional empirical research approaches. The most recent literature review finds that 154 out of 185 studies in the review measure are exclusively quantitative studies (A. C. Edmondson & Bransby, 2023). According to Lee and Edmondson, *"as organizational scholars, we are trained to look at the world dispassionately"* and also seek to do good for humanity (Lee & Edmondson, 2017). The definition of good is assumed, without recourse to reflexive research practice. The assumption that the researcher does not impact on findings, or indeed on the felt safety of those being researched, is problematic because it assumes that objectivity is possible, which is incompatible with a systems understanding of how the world works. It also assumes that all other variables are equal which, in dynamic complex situations, tends not to be the case. Grappling with real-world complexity requires a shift in the understanding of the nature of reality (Boulton et al., 2015) which in turn necessitates a shift away from traditional scientific methods (Preiser, 2019). In the literature, where a systems approach is invoked, it tends to change the boundaries of the system and acknowledge complexity whilst adhering to traditional research methods (O'Donovan & McAuliffe, 2020). This anomaly is also evident in the overriding emphasis on antecedents to psychological safety and outcomes rather than reciprocal relationships and complex interdependencies (Newman et al., 2017), and a tendency to study it in static rather than dynamic terms (O'Leary, 2016). Tracking patterns over time is important, as situations are always subject to the flux of time (Vickers, 1970). Complexity theory sug-

gests that developing organisational capacities to creatively respond to emerging circumstances that are guided by systemic insight, necessitates the cultivation of a systems mindset which supports a deeper understanding of how complex systems behave. Developing an understanding that the world is characterised by nonlinear dynamics and emergence, which pose intractable problems that defy simple or quick solutions at one level of a system only, demands that a complexity framing is matched with commensurate research approaches.

It seems reasonable to suggest that psychological safety is a key component of taking effective action in critical situations where there is a high level of certainty, but this does not address the overarching reason why taking action is important in the first place. Many studies suggest that psychological safety is an instrumental business tool aimed at maximising productivity and reducing mistakes in the service of achieving organisational goals (A. C. Edmondson, 2018; A. C. Edmondson & Bransby, 2023). For example, A. C. Edmondson and Bransby, 2023 (p. 73), suggest that it should only be considered in these terms and not as an end in its own right; this would be to *"risk fetishizing work climate, and perhaps distracting people from the organisation's actual mission"*. Whilst that rationale may hold true in a commercial organisation, this framing is not suited as a focus for virtual services, where the right to feel psychologically safe is strongly implied within the UNCRPD. Article 3 particularly grants people the right to dignity, autonomy, and full inclusion and participation in society and references the importance of creating an environment that respects people's inherent dignity (Article 3). It is also a factor in other Articles including the following: the right to physical and mental integrity (Article 17), and to be socially included (Article 19), as well as the right to freedom of expression and opinion, to share and receive information and ideas (Article 21). Article 11 explicitly states that people with disabilities have the right to be safe during humanitarian emergencies and other disruptive events (Article 11). The right to feel psychologically secure is therefore an inalienable human right rather than something that can be instrumentalised in service of another purpose. In this case the means is the ends. It may be more appropriate to address the meaning that virtual services play in people's lives above instrumentalising psychological safety for goal-oriented purposes.

There is a difference between creating the conditions where psychological safety can arise as part of a relational dynamic and supposing that a leader can create a safe space that in some way `guarantees' that someone else will feel psychologically safe. The current literature rightly places the responsibility for driving a psychologically safe culture on the leader who has

the responsibility to create an environment that supports people to feel safe. In situations where power is unequally distributed, the onus is on those with leadership responsibility to create spaces where those in receipt of a service or holding less power are treated well and respectfully, and are listened to (Appelbaum et al., 2016; A. C. Edmondson & Bransby, 2023). This responsibility is clear in the literature and is not in dispute. However, while a leader's way of being and acting in a situation determines the culture of the space and what is possible, and they must do everything they can to create the conditions for safety, they cannot assume that they always get it right. The principle of equifinality suggests that there are many different and idiosyncratic ways to do something and reach the same ends and research finds that there is no leadership style or one right way to create a psychologically safe space (Frazier et al., 2017). This is because each encounter takes place in time and space and must be regarded as unique:

> Every contact you make with a human being (or even an animal) is an experiment and a dangerous and therefore important experiment. It is dangerous because it can never be repeated (quoted by Ramage and Shipp 2020)

While the role of leader is important, the issue is with the cause-and-effect logic that does not take into account the temporal complexity alluded to by Vickers (Hackman, 2012). It also does not address the complexity associated with the appreciative setting (Vickers, 1970) of each person in the situation, regardless of their formal role.

Vickers describes appreciative settings as the interests, discriminations and valuations we bring to situations that support us in making judgements about what to notice and how to experience what is going on amidst the noise and confusion and ongoing flow of events. The appreciative setting that each person in a situation brings may or may not match the reality of all the efforts that one party might take to create a safe space. Each individual has an intrapsychic experience of feeling safe or unsafe in the past, which might also inform how they interact in a given situation in the present. Individual agency – the feeling of control over personal actions and their consequences (Moore, 2016) – must be also be taken into account as people often experience ambivalence about being part of a group (Kahn, 1990) and motivation to create a safe space cannot be assumed.

Whilst leaders have a responsibility to set the right conditions for safety to be possible, cause-and-effect logic can usefully be replaced with the systems principle of emergence, given the temporal complexity involved in re-

lational dynamics (Hackman, 2012). Once the conditions are conducive to creating the opportunity for psychological safety, it may co-arise as a feature of a relational dynamic (Macy, 1991) in a specific space and time: the leader has the responsibility to set the right conditions but cannot dictate the experience of another and what emerges in the space.

Key to developing a contextual understanding of psychological safety that applies to this research may lie within the initial literature concerning employee engagement. Early research links psychological safety to a sense of security that enhances adaptation and attenuates defensiveness and learning anxiety (Schein & Bennis, 1965). Here the concern is with reducing defensiveness or "learning anxiety" when actions do not yield the anticipated results. Complex environmental conditions such as a pandemic offer what Schein and Bennis, 1965, describe as a level of anxiety that is greater than any initial anxiety that prompts learning. Most theories around organisational learning focus on skill acquisition (Argyris, 1977) rather than openness to learning and being temporarily incompetent. Lewin suggests that we need to destabilise organisations to unfreeze them by creating three processes, the first of which is to disconfirm that the current way of doing things can continue, but this alone might not produce enough incentive to change (Burnes, 2020). It is only when a more serious anxiety arises that not taking action becomes more threatening than overcoming the initial anxiety, and it is this second anxiety which paradoxically creates the push for promoting learning (Schein & Bennis, 1965; Schein & Schein, 2016). To take action, it is important to perceive that there is a manageable path forward that will not jeopardise personal integrity, and this needs to happen within a shared team environment. This chimes with the idea of self-organising systems operating out of equilibrium and it creates a clear link between psychological safety and learning. Here the learning is about the individual learning in real time along with others, rather than absorbing a particular skillset or competency as an individual learner.

Understanding how learning happens in a shared team environment calls for an understanding of the context in which it is occuring and how individual anxiety can be managed safely. Kahn (1990) argues that psychological safety helps people express themselves physically, cognitively, and emotionally rather than disengage, or withdraw. His research explains how staff navigate a sense of presence and absence within their work environment, as a live dynamic that emerges from an intrapsychic tension between maintaining personal identity and autonomy while simultaneously adhering to group membership norms (Kahn, 1990). He outlines three fundamental conditions that influence engagement: meaningfulness, psychological safety, and avail-

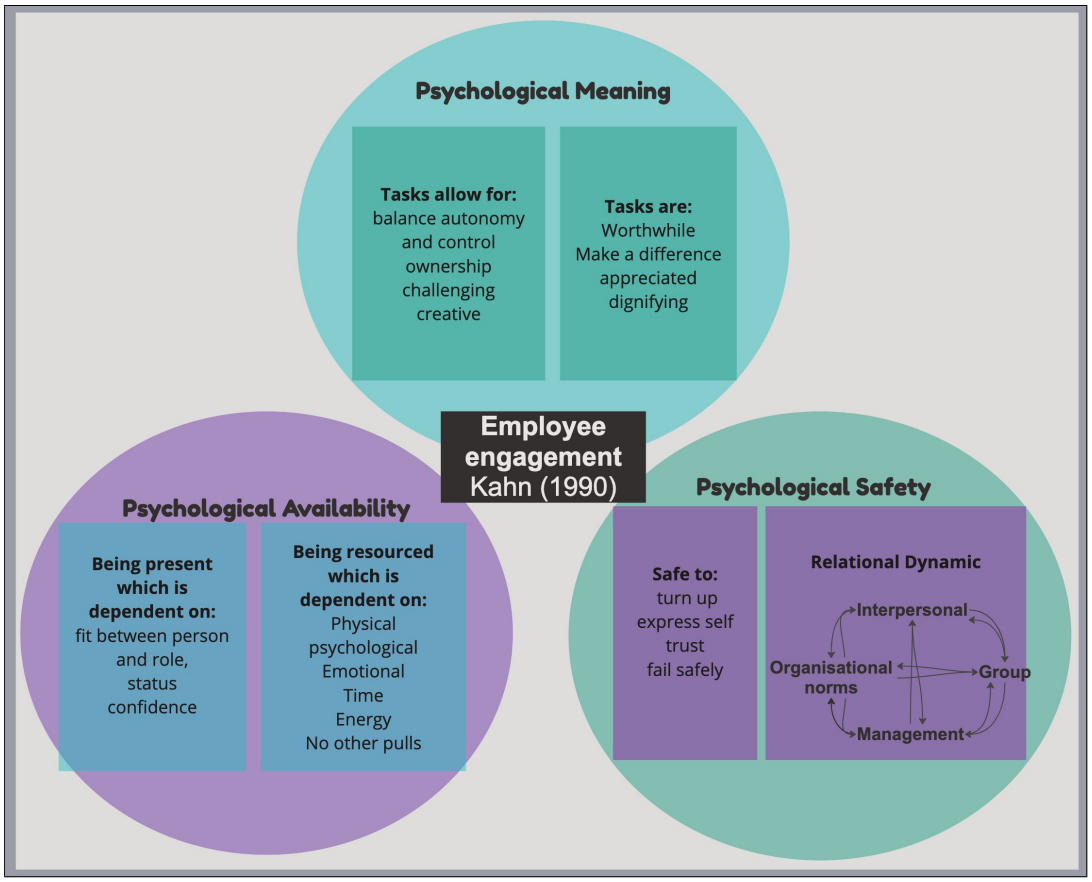

Figure 2.3: Employee Engagement (Kahn 1990)

ability (see Fig. 2.3). The first condition, psychological meaningfulness, encompasses a perception of work as worthwhile, useful, and valuable, where one's contributions make a meaningful difference across task characteristics, role characteristics, and work interactions. Tasks involve challenges, clarity in role delineation, creativity, and a sense of autonomy. Role characteristics emphasize the significance of feeling like we matter within the workplace, while work interactions underscore the importance of rewarding and dignified interactions that foster a sense of belonging and connection between personal and professional spheres. The second condition, psychological safety is, for Kahn, a relational matter rather than an individual characteristic, relying on the interplay between individual relationships, group dynamics, management style and process as well as organisational norms. This aligns with the current literature which also acknowledges that it is an interdependent construct (A. Edmondson, 1999), but the fact that psychological safety is nested not only in a particular relational dynamic but is also related to meaningful work and psychological availability, the third component of engagement, is significant. Psychological availability addresses individual distractions that impact on a

person's capacity to engage effectively, including physical and emotional energy, and outside life factors. Current literature tends to extract psychological safety as a stand-alone construct that has subsumed meaning and availability peripherally: for example, the most recent literature review points to four clusters of research, where engagement is included as a minor concern within the theme of "improving the work experience" but meaningful work gets even less attention and is only mentioned in terms of the need for cross-cultural understandings of what that might mean (A. C. Edmondson & Bransby, 2023). Meaning is important in social care work, but it may also be important in terms of creating safe spaces where people can engage and have a reason for doing so. Engaging online may need to include consideration of the person's environment, including others in the person's environment as well as personal circumstances that affect their availability to participate. These concerns may be interrelated and irreducible to feeling safe online alone. If this is the case it suggests that meaning and psychological availability are also indivisible from psychological safety and relevant to creating the conditions for safe virtual spaces, and this warrants further consideration.

2.3.2 Meaningful social connections

In this section, I propose that meaningful connections arise when people are validated as individuals in the eyes of others so that they feel seen, heard and understood through interaction. Meaningful connections feel worthwhile and involve a felt sense of interdependency where both parties give and receive something in the interaction. When people feel connected, it may give rise to a sense of belonging and mattering, which gives engagement meaning. To explore this further, this section looks at the purpose of being in relationship with others and why it is important for a sense of safety in the world, starting with why we need social connections and relationships for survival, well-being and resilience. Reviewers of Bowlby's work on attachment theory suggest that he drew on cybernetics as much as psychoanalysis to explain how the parent-child relationship acts as a biological and behavioural system to support our basic human need for survival (Bretherton, 2013; Flaherty & Sadler, 2011). The strength and quality of our network of social support is a strong predictor of health, happiness (Fredrickson, 2013) and longevity. This is because caring relationships optimise our development by stimulating brain development, supporting emotional regulation and enhancing learning (Dietlin et al., 2019). Being connected may protect us against stress and trauma (Hobfoll et al., 2007; Masten & Obradovic, 2008), and re-

cent literature suggests that connections bolster well-being amongst those impacted by COVID (Kilgore, 2020). The consequences of social disconnect are high: they include anxiety which impacts negatively on our sense of self and overall wellbeing (Baumeister & Tice, 1990), increases the risk of depression (J. T. Cacioppo et al., 2006; S. Cacioppo et al., 2015) and is correlated with higher morbidity and mortality rates (S. Cacioppo et al., 2015). Research suggests that the drive to stay connected with others is more important than the activity we engage in together and even the level of joy we derive from it (Jolly et al., 2019). Connection therefore, can be regarded as a critical condition for resilience, and this is particularly poignant during a time of upheaval which calls for distance such as the pandemic.

Achieving a sense of connection relies on a virtuous feedback loop which supports us to regulate our emotional states enough to experience feelings of being connected, and the more we feel connected to others, the more resilient we are. John Bowlby proposes that we humans are complex systems that use regulating behaviours to adapt to environmental conditions (Bretherton, 2013). The ability to regulate ourselves between the extremes of rigidity and chaos is linked to having a sense of awareness and presence that fosters connection (Siegel, 2020). Emotional regulation, therefore, entails effectively managing and controlling emotions to maintain psychological well-being. Siegel likens emotional regulation to self-organisation in complex systems, where optimising self-regulation involves cultivating the capacity to monitor and modify behaviour and emotions sufficiently to balance both autonomy and interdependence in an integrated manner (Siegel, 2020). Bowlby also postulates that our ability to regulate is dependent on our internal working model of the environment being an accurate representation of the external reality (Bretherton, 2013), which suggests that it is our subjective experience of feeling connected that impacts on wellbeing. But that does not give us the whole story. If we are complex systems, we are situated within a larger intricate network, characterised by interdependence and connection in a recursive "web of life" (Capra & Luisi, 2014). This perspective implies that as relational beings, we exchange energy and information at various levels within our affective worlds. The patterns of flow may not always be tangible or discernible at our daily levels of awareness, yet they still influence us at a subconsious affective level (Siegel, 2020). This is important as it implies that maintaining connection does not necessarily depend on occupying the same space or time, as relationships can be distributed both temporally and spatially in complex systems and be strong or weak (Buckle Henning, 2017). In other words, we do not need to be in the same room with someone to be

in relationship to them, any more than we need to be in communication with them in real-time. While we are affected by our perception of the strength of our connection, we are also affected by energy flows beneath our conscious perceptual awareness, and both impact our wellbeing.

The quest to develop and sustain a virtuous cycle of connection is a fundamental human endeavour, that also satisfies a deep human need to belong and to matter to others. Kahn's (1990) research found that people engage more in work they find psychologically meaningful, that makes a difference and where they are appreciated (Kahn, 1990). This may enrich our understanding of the conditions that support some staff to innovate to develop virtual services, but it also points to a potentially deeper understanding of what feeling psychologically safe in an online setting is about. It could be assumed that one of the main reasons for group virtual services is precisely to create a space where people can feel that they are meaningfully connected to others over and above achieving some other stated purpose or taking part in a specific activity together. Meaningful connection is often linked to purpose, being able to create and sustain a coherent sense of self in the world, as well as having a sense that we matter (King & Hicks, 2021). However, coherence and purpose might not be as important as mattering to others (Costin & Vignoles, 2020), and the sense of belonging that comes with mattering (Baumeister & Leary, 2017). Recent research suggests that mattering at an interpersonal level rather than a cosmic existential level is the greatest predictor of having meaning in life (Guthrie et al., 2024). This progression in thinking is laid out in Fig 2.4. Siegal writes that *"relationships are not the icing on the cake: they are the cake."* (Siegel, 2020, p. 91). If mattering in relationship to others is important, then it is also important to consider the conditions that support that sense of safety.

2.3.3 Online presence as a critical component of psychologically safe virtual spaces

Presence is a critical contributor to creating psychologically safe spaces that foster meaningful connection and belonging. It is an important construct in the literature around digital engagement and is also essential to Kahn's third construct around employee engagement which he calls psychological availability: the ability to be fully present and engaged in an endeavour (Kahn, 1990). This section explores different framings for understanding presence as it relates to online engagement including social presence, embodied presence, and presencing and suggests that an understanding of online pres-

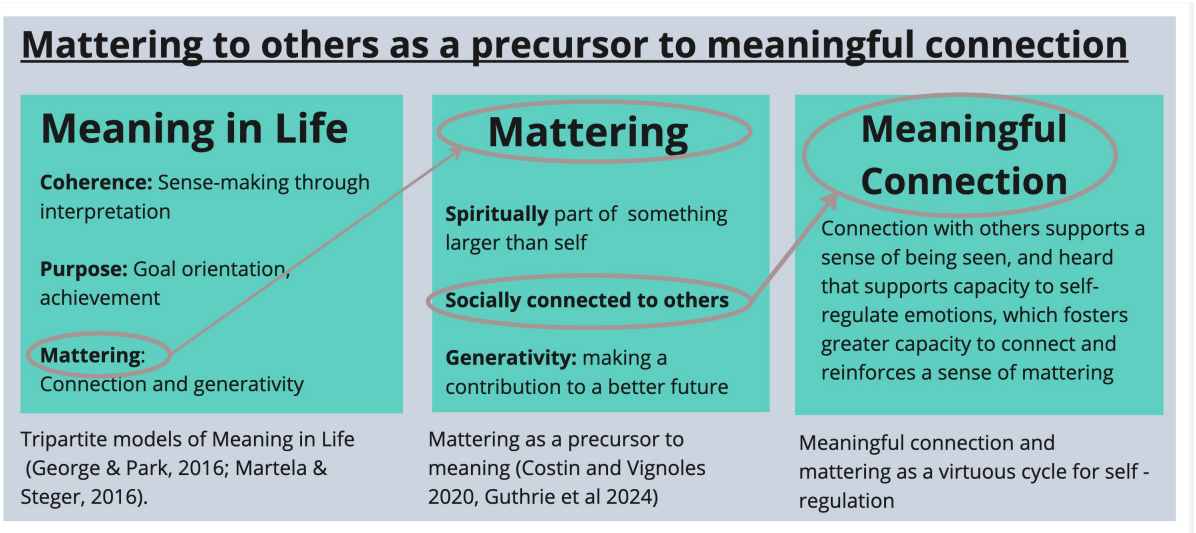

Figure 2.4: Mattering and meaningful connection

ence can benefit from incorporating insights from Lewin's field theory (Lewin, 1942).

The prevailing approach to presence in digital environments, where it is considered, relies on the concept of social presence, which is based on a professional mode of interaction on what might be described in systems thinking terms as an 'information transfer' level of awareness (R. Ison, 2017). The concept of social presence describes the ability to project a sense of being real and salient in online environments, to see others as real and experience connectedness as a result (Chen, 2023; Yeung et al., 2023). It assumes that professionals providing services can deliberately and impartially deploy social cues that are understood as intended by the recipient of the communication. In online educational contexts, this includes gestures, smiles and humour, use of personalised examples, calling people by name, questioning, praising, initiating discussion and feedback, and varying voice and being relaxed (Gunawardena & Zittle, 1997). This framing is based on a representational view of reality which limits the understanding and potential of presence. For example, the immediate availability of the clinician to be present in an authentic way and open to being part of a relational dynamic being created online is not considered. Instead, the professional giver of services is regarded as an objective or neutral actor, and no regard is given to personal factors that may affect their presence. These may include depletion, diminished confidence, or self-consciousness due to a mismatch between personal identity and organisational status, or other personal concerns (Kahn, 1990). Mostly, however, presence is notable by its absence! It is not considered in much of the literature on competency frameworks for telehealth and therapy (Hilty et al., 2017),

digital competencies in mental health care (Kopelovich et al., 2024) or psychiatry and medicine (Hilty et al., 2020), which sidestep presence entirely. One exception is a proposed evaluation instrument for telehealth interpersonal skills centred on social presence that includes attention to verbal and non-verbal communication, relationship building and the need to attend to potential distractors in the environment (Henry et al., 2022). This points to a clear gap because creating psychological safety in online interactions is likely to require greater attunement to what is going on in the relational dynamic than social presence might suggest.

Understanding digital presence needs to go beyond social presence, but other emerging framings are also incomplete as they do not convey an understanding of presence as an intersubjective dynamic. 'Telepresence' is grounded in an illusion that the technology is not there (Lindemann & Schünemann, 2020; Lombard & Ditton, 1997). 'Telecopresence' is also limited as it is about reaching each other in real-time without being in the same place, but does engage with presence in depth (Zhao, 2015). Lindemann and colleagues suggest that digital presence must be reconceptualised not just as a temporal phenomenon but as a spatio-temporal phenomenon (Lindemann & Schünemann, 2020). This suggests that online interaction is about creating space in an intersubjective virtual field. Field theory may enrich our understanding of what presence in this context needs to attend to beyond physical cues (Lewin, 1942). The psychological forces that influence both individual and collective behaviour include prevailing conditions that make some behaviours possible and constrains others in a given social group. This is known as field theory (Lewin, 1942). These conditions are felt energetically but might not be articulated consciously. Pomeroy and Herrmann (2023) claim that field theory implies that a distinct entity arises as part of collective life, that is *more than* but different to the sum of its parts. They propose that not only is the social field characterised by an intertwining of unconscious behaviours within a group (intercorporeality), but that those behaviours may also be driven by interactions between rather than by individuals (autonomy) which in turn makes some behaviours possible but constrains others (affordances) (Pomeroy & Herrmann, 2023). This leads to a social system with its own distinct and unique shape, which can be inferred from the patterns and interconnections it gives rise to, even if it cannot be directly observed (Pomeroy & Herrmann, 2023). It might be assumed that the social field is equally present in the intersubjective digital space where a group meets over time, which is not reliant on everyone being in the same room at the same time, but which nonetheless is boundaried by technology and group composition. As social beings, we are open

to incorporating tools and technologies beyond the body to support interaction (Merleau-Ponty, 1964), which suggests that while technology is a distinct characteristic of the space in which virtual services happen, it may not be as critical as attending to the social field that underpins interaction. The social field is of course present in face-to-face encounters also, but it may be that we are more accustomed to putting it in the background and calling it context (Pomeroy & Herrmann, 2023). It may be that digital settings immediately foreground the social field, as the need to be fully present and draw on all our bodily senses is key to making sense of what can and cannot be seen online.

Being present to what is going on in the social field calls for a heightened sense of embodied presence which supports us to suspend what we think we know, so that we can allow new information in, and act on it in a live enacted way. From a systems perspective, we are living bodies grounded in the experience of being in the world and we cannot step outside that experience and at the same time be present enough to be connected to another person. To rely on mental cognition without including the body is to operate within a closed loop of our own making, which curtails our capacity to respond to emerging conditions. This is because our nervous systems are closed in their operations and information arises from historical ways of being and thinking rather than from environmental messages (Maturana & Varela, 1987; Varela et al., 2017). Enaction is an approach to embodied cognition introduced by Varela and developed alongside psychologists Thompson and Rosch. It suggests that we are not passive recipients of information, as taking information on board is an active and embodied process, where bodily actions precede cognition (Varela et al., 2017). Therefore, our understanding of the world is shaped by our bodily interactions, perceptions, and emotions. We do not simply observe the world, but actively engage with it through our senses and movements. In other words

> cognition as the enaction of a world, means that cognition has no ground or foundation beyond its own history, which amounts to a kind of groundless ground. (Varela et al., 2017, p. 7)

We therefore tend to project constructed information (meaning) onto the environment rather than engage in a 'live' and present way in many encounters. Enaction is compatible with a phenomenological approach to presence which supposes that presence involves a suspension of our usual ways of being and thinking so that they are 'bracketed', thus allowing a flow of new or disconfirming information to register at a neurological level, so that

we can respond in real-time without defensiveness (Husserl, 1999). Embodied presence supports attention to the social field beyond what can be seen on the screen.

In this research, presence is conceived of as attention to what is going on in the digital space in the moment, at the social field level, and listening deeply to what is emerging in real-time, so that something new or different can happen and be supported in a way that supports psychological safety. The next section on practice theory develops the thread started here about the distinctive nature of the digital space as it picks up on the conditions for psychological safety and considers how practitioners can enact practices that give rise to the creation of safe virtual spaces.

2.4 Section 3: Practice theory

Practice theory resolves some of the issues that arise in the literature presented thus far. To develop an understanding of practice theory literature, I begin with a brief understanding of what practice theory is. I then explore how it is theoretically commensurate with a systems thinking approach. I then explore the contribution of three major thinkers and their contribution to practice theory: Bourdieu, Heidegger and Schatzki (Bourdieu, 2017; Heidegger, 1967; T. R. Schatzki, 2002). This section concludes by presenting a case for the theory of practice architectures (Kemmis, 2022) as a way to make sense of the practices that support safe virtual spaces. Like many major theoretical fields, practice theory is comprised of many different approaches and understandings which defy a simple definition. Sandberg and Tsoukas claim that practice theory has developed in significantly distinct ways from how it is used to describe professional practice in most organisational study literature where it is assumed to describe a theoretical commonsense approach to being professional (Sandberg & Tsoukas, 2015). As a theory, it stems from sociology and examines the role of human practices in shaping social reality (Nicolini, 2012). It is founded on the understanding that people engage in various everyday practices, such as rituals, routines, and behaviours, that both produce and reproduce social order. These actions are also influenced by social structures and cultural norms which creates a web of interconnected practices within broader social contexts (R. Chia & Holt, 2006). This suggests a dynamic relationship between individual agency and environmental structures, where practices both reflect and shape larger social systems, that are constructed and maintained over time.

This brief definition suggests that practice theory may be compatible with systems research. It marks a departure from the representational ontological world of realism by embracing not just the structural aspects of the world but also the nature of our being and doing and the possibilities for action afforded by the dynamic interaction between them. Sandberg and Tsoukas propose three distinctions between a practice theory approach and the traditional scientific approach (Sandberg & Tsoukas, 2015). Firstly it moves away from the idea that the world is made up of entities that are reducible to individual parts which can be understood as independent variables to be studied objectively. This aligns with Bortoft's view of the "whole" which is irreducible to its components and yet, at the same time, an understanding of the whole cannot be garnered from some God-like view but from entering though the parts, in order to understand the whole (Buckle Henning, 2017). Secondly, it rejects the subject-object dualistic thinking of objective scientific approaches to research. Practice theory and systems theory both assume that independent researchers cannot understand discrete entities and phenomena from the outside-in as a subject-object dynamic. While systems theory focuses on interdependency and mutual co-arising (Macy, 1991), Heidegger focuses on "intertwining", the idea that we are never separated from others and things in a socio-material world, making objectivity in scientific endeavour illusory. Thirdly, both approaches go beyond representational understandings of the world based on predefined characteristics of phenomena to include the cognitive processes that bind us to our internal preunderstandings and conditioning (Varela et al., 2017). The theories also diverge. Systems theory places the inherent systemicity of phenomena at the centre of the research endeavour and devises ways to study ontological and constructed systems using epistemological methodologies drawn from a systemic understanding. Practitioner approaches to systemic practice are described as praxis where theory informs practice (R. Ison, 2017). Practice theory, on the other hand, takes practice as the primary object of study (Sandberg & Tsoukas, 2015) and where practices are understood as the fundamental component of social life (T. Schatzki, 2016) making activity and performance the focus of study within an ontological framing. Both approaches are concerned with reconciling the duality between the structural and affective world by acknowledging intersubjectivity (Kemmis, 2022). This suggests they are theoretically commensurate for this research.

The practice theory field has been influenced by the philosophical contributions of Heidegger who suggests that practices form a background understanding for human action which is too often over-complicated by social

sciences through representational interpretation (Rouse, 2007). For Heidegger, being in the world is characterised by continuous and iterative wayfinding in a world experienced as an extension of self. His concept of "Dasein", meaning our "being-in-the-world", involves us in practices that are inseparable from the very essence of human existence. As the world is in continuous motion, this involves a process of continuously coming into being (dwelling) whilst creating the world at the same time (building). This suggests that much of everyday activity that takes place is guided by continuous sensemaking, which means that navigating our way through the world requires extensive practical skills which are passed on by society through individuals, and often outside of consciousness, rather than through beliefs or rules (Dreyfus, 1991). The notion of being and doing is also linked to the concept of autopieosis (R. Chia & Holt, 2006; Maturana & Varela, 1987), which suggests that through a constant interplay of being and doing, humans are self-producing, which immediately links practice theory to embodied cognition outlined in the previous section.

Pierre Bourdieu's practice theory stands as a counterpoint to the idea that human behaviour and organisations are determined by the structural characteristics of a situation alone, and this is referred to as the *practice turn* in social theory (Bourdieu et al., 1977; Dreyfus, 1991). He introduces the idea of human agency to explain that the actions we engage in are deeply embedded in the interplay of social structures and *personal dispositions* (Bourdieu et al., 1977). He uses the term 'habitus' to describe how these dispositions are acquired through socialisation and become ingrained in our way of being in the world, including the rules, values and social conventions that we live by (Bourdieu et al., 1977). This idea stems from Heidegger's suggestion that practices transcend mere actions, to become intricately linked to our understanding of our world. The habitus provides a consistency for action and works alongside capital within a particular field of endeavour to form practice. Bourdieu suggests that practice comprises embodied and generative improvisation that is adaptive and consistent over time (Bourdieu, 2004). This theme is picked up by Schatzki who describes practice as specific "doings and sayings" that are bound up with the material arrangements that are needed to perform the practice (T. Schatzki, 2016; T. R. Schatzki, 2002). Four components "hang together" to organise the activities that comprise the doings and sayings of practice. The first is a practical understanding about how to go about the doings and sayings of a given practice. This is closely aligned with Bourdieu's habitus, as it suggests an embodied skill or capacity to carry out the practice (Sandberg & Tsoukas, 2015). The second component are the rules that create boundaries around practices, including explicitly named

principles, or instructions. Thirdly, teleoaffective structures combine both expectations of what we are supposed to do (what our purpose should be) and our feelings about doing it, into an orientation about what matters (Friedland, 2018). The final element is a general understanding of the standards through which we decide what is worthy or trivial, proper or improper to do or say. Together these four elements constitute the doings and sayings of practice and are bound up with the socio-material arrangements to bring coherence to how we understand ourselves as practitioners in a particular domain.

The theory of practice architectures extends Schatzki's practice theory in two specific ways: it explicitly embraces the affective world of those participating in practice and elaborates on the conditions that make practice possible and the niche in which it occurs (Kemmis, 2022). It is both a theory and methodology for explaining how practices are both enabled and constrained by the architectures that hold them in place (Mahon et al., 2017). Schatzki's notion of *doings and sayings* are expanded to include *relatings*, the values, feelings and emotions of practitioners. These *sayings, doings and relatings* are "bundled" together (Kemmis, 2022) to guide action (see Fig.2.5). Action draws on individual agency and personal disposition and is either met or constrained by the site of practice or context. The site of practice may support a better articulation of practices in the 'niche' of the virtual world. Practice architectures include language and ideas (*cultural-discursive arrangements*), resources (*material-economic arrangements*), and roles and relationships (*social-political arrangements*), that are bundled together in practice landscapes and traditions. The bundles of practices meet the architectures in intersubjective space which can be semantic in relation to *sayings*, physical space and time in relation to *doings*, and social engagement in relation to *relatings.* This elaboration of practice theory gives credence to the affective nature of practicing as well as a structure that distinguishes between building and dwelling in the space.

Practice architectures can be described as ecological niches that sustain different practices and support their unfolding in a particular place and time. Kemmis compares practices in their niche to Capra's conditions for living systems and suggests that practices are like different species in a complex living system that nourish each other (Kemmis et al., 2012) to create ecologies of interconnected social activity nested within larger systems (Kemmis, 2022). The flow of energy between practices is also expressed as agency, and agency makes other practices possible. They self-organise and self-regulate in response to external conditions in a similar way to Complex Adaptive Systems (CAS). This is significant because it suggests that practices are not pre-

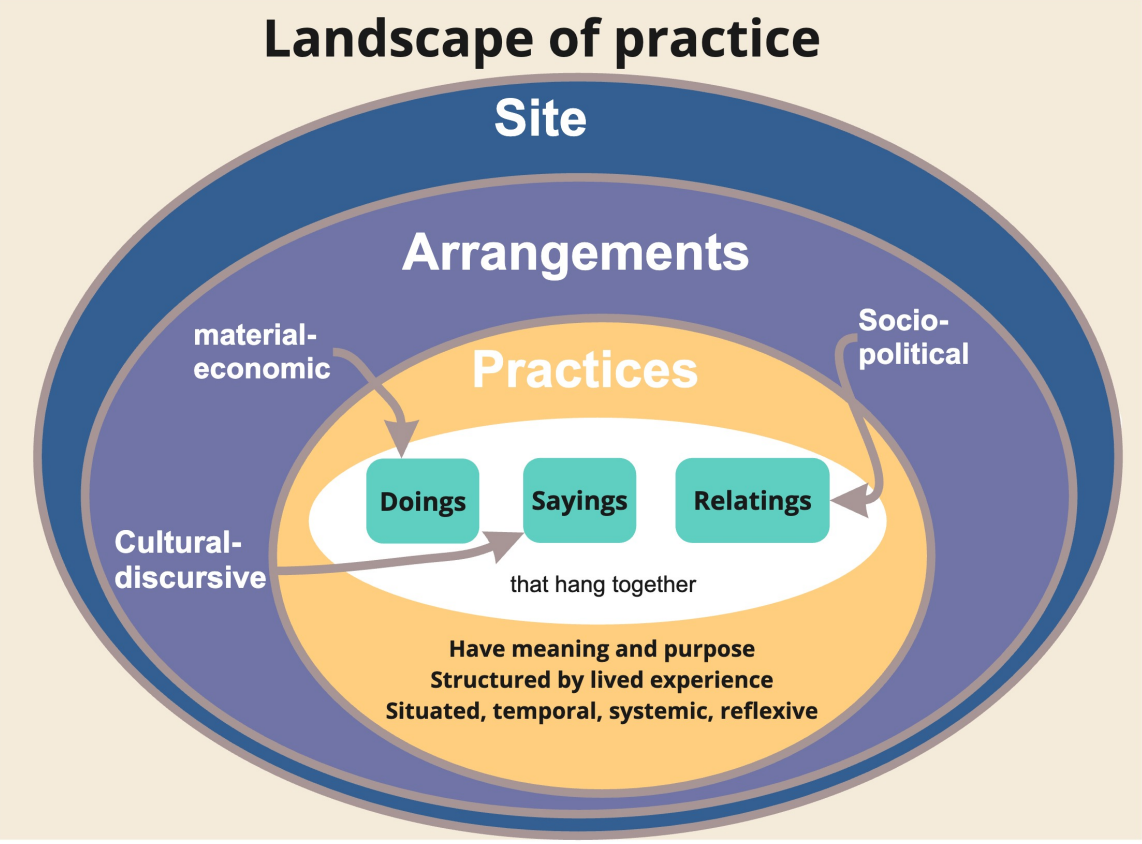

Figure 2.5: Theory of Practice Architectures (from Kemmis, 2022)

mediated or strategically planned in advance. As with CAS, practices are organised to a different logic from that of a logician (Bourdieu, 1990) or the premeditated means-ends logic associated with planned strategy (R. Chia & Holt, 2006), which suggests that strategy is not made and then implemented, but arises from a "style" (Dreyfus, 1991) of engaging in continuous sense-making that draws on the habitus as a

> durable transposable set of dispositions that orchestrate individual actions to achieve consistency and predictability (Bourdieu, 1990, p. 52).

Theories of practice architecture may offer insight into the practices that make adaptive action in complex situations possible. This chimes with Wittgenstein's claim that human behaviour can only be described through sharing the whole "hurly burly" in the background that is guiding behaviour (Wittgenstein, 1958). It may explain how some organisations can adapt even during unstable operating conditions. Practice theory also suggests that we are what we do: our practices give rise to our identity and individuality which is infused with per-

Figure 2.6: Practice theory

sonal agency as we engage in the act of self-making. Identity arises as an integral part of being and doing within the cultural milieu in which we find ourselves in rather than beliefs, rules or principles (Dreyfus, 1991). The approach this research takes to practice theory is laid out in Fig. 2.6. The world we inhabit emerges autopioetically around us (Maturana & Varela, 1987), and we use extensive practical skill passed on by culture that may not necessarily pass through consciousness (Dreyfus, 1991). Power is an inherent feature of the social world (Bourdieu, 1990): it is hidden in the habits of how things are done in a given setting (Kemmis, 2022). Historical and global patterns of power are also embedded in our place-based practices and shape and reshape what is possible. Structural power may contaminate local practice, but it is expressed and felt through practices enacted in situ (Foucault, 2019). Deliberate reflexive practices may support the development of personal agency in addressing the latent power hidden within the status quo. This makes a strong case for

exploring staff practices and their contribution to safe virtual spaces, by exploring the "room" for manoeuvre that staff have for adapting without completely destabilising the entire ecosystem of supports.

2.5 Conclusion

This literature review has identified three major bodies of literature that not only offer a valuable way to understand the adaptive staff practices that led to the innovation of virtual services, but also a potential route forward for guiding the governance of innovation as a sustainable and viable complement to in person services. There is an existing body of literature to suggest that digital participation was beneficial prior to the pandemic and international recognition of its importance did not result in changing practices on the ground. A complexity framing, which sits within an overarching systems research approach, provides a fresh way to understand how adaption happens when a system is operating out of equilibrium. The psychology literature also tells us that, as individuals, we are also self-organising systems and our ability to adapt is dependent on us being safe and being able to self-regulate, and psychological safety can be enriched to include mattering, meaningful connection and presence. Not only do services need to regulate between autonomy and control, but as individuals we also need to self-regulate between being too rigid and too chaotic and this may offer insight into the benefits of online engagement. Mattering to others, which enhances our sense of connection, may be a reinforcing virtuous feedback loop influencing a sense of safety and wellbeing. When there are staff practices and organisational resistance that involve safeguarding concerns and assumptions are made around people's capacity to participate this can end up excluding people from digital innovation participation. The experience of the pandemic provides an opportunity to study practices in the absence of strategy and to study its impact on adaptive innovation, particularly when the anxiety of staying the same is greater than the impetus to change. Practice theory may offer a way of combining an understanding of the structural and processual issues that arise in developing and facilitating in the moment. This is an autopioetic distinction which suggests that staff built virtual services as they were running them and we can only understand this and what makes the virtual space safe by inquiring into the experience people report, rather than relying on quantitative measures of safety or fidelity to policy. In doing so we are shifting from a 'what' to a 'how' question, not only about staff practices but also systemic

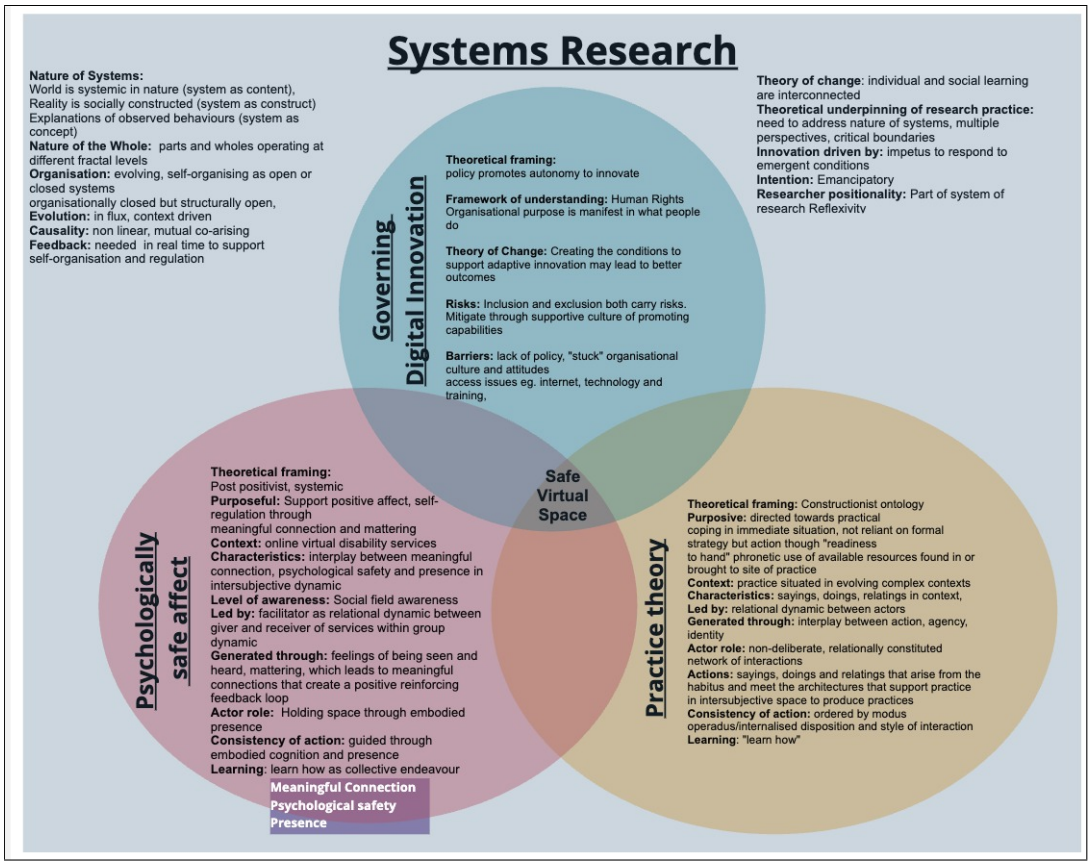

Figure 2.7: Summary of literature guiding research project

governance systems that can support the safe digital innovation of safe virtual spaces. The combination of all three literatures is laid out in Figure 2.7. Together the literature on digital governance, psychological safety and practice theory offer a robust theoretical framework to inform this research project.

CHAPTER 3

Methodology

Systems enclose and are enclosed by other systems with which they are in constant communication, in a natural hierarchical order. (*Joanna Macy p. 72*)

3.1 Introduction

This chapter outlines the methodological approach taken in this research. It is set out in three parts. The research paradigms that frame the research are first explained. These include critical realism and a systems approach to research. As a qualitative research project, it attends to systematic structuring, and as systems research, it attends to using systems thinking concepts in the research design. Attention is also given to creating a rigorous approach to qualitative research that ensures equal weight is given to the more systematic tasks of developing research methodology (Blaikie & Priest, 2019). While the Systematic Qualitative Research approach provides an effective 'checklist' for everything that needs to be considered, the systemic design process attends to process design. Together they provide a strong integration of systemic and systematic concerns and provide the backbone to this research (see Fig. 3.1). This section also presents the approach to developing the research purpose, founded on a quest for improvement that starts with the situation in context and underpinned by an appreciative framing. The second section in this chapter covers developing systems research practice, research competencies and reflexive practice aligned with an Action Research approach. The final section deals with the meta-design of this research, which includes the development of research questions, designing re-

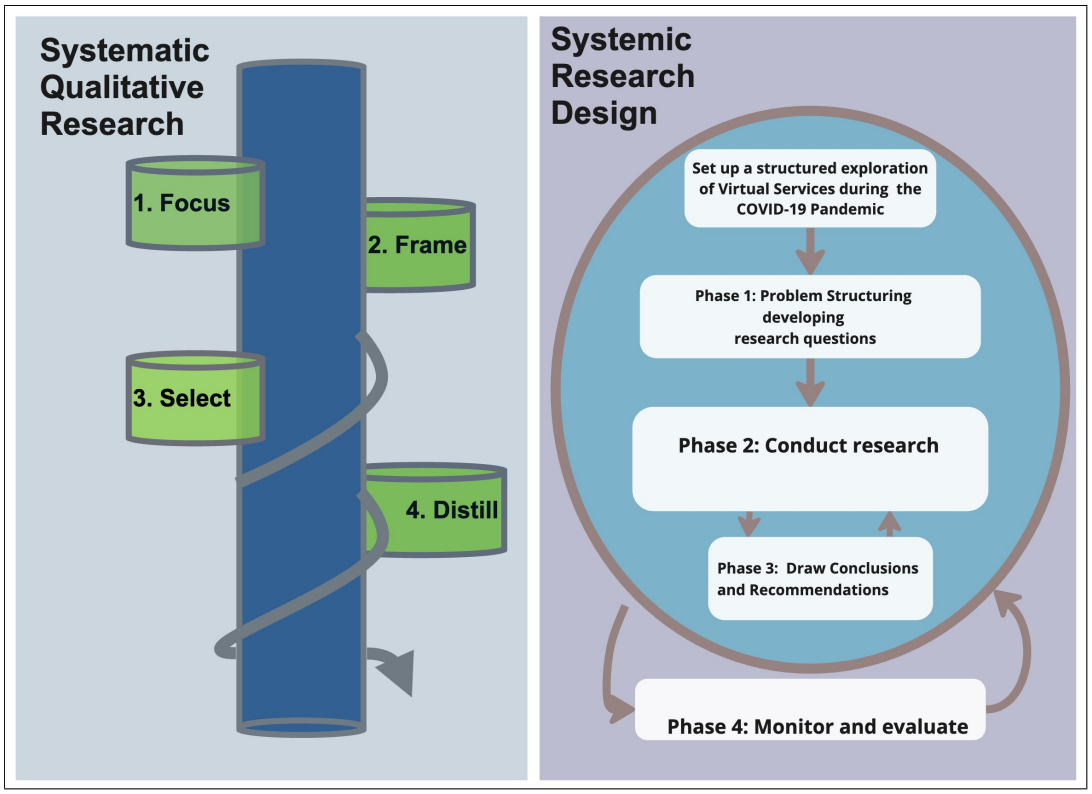

Figure 3.1: Systematic Qualitative Research and Systemic Research Design

search across three cycles, and engaging in reflexive practice throughout. The chapter concludes with a statement on researcher positionality.

3.2 Section One: Research framing

This section sets out the framing for the research which is summarised in Fig. 3.2 as the ontological, epistemological commitments and the paradigm that were used to guide this research.

3.2.1 Research paradigm: ontology and epistemology

This research was founded on a critical realist perspective of reality, which is commensurate with a systems approach to research (Mingers, 2011). A critical realist perspective assumes both that events that are experienced subjectively and events that occur outside of direct experience are real, and the underlying structures and mechanisms that give rise to these events are real also (Blaikie & Priest, 2019). Critical realism was first articulated by Bhasker as an alternative to positivist realism and critical rationalism (Blaikie & Priest, 2019). Positivism assumes that knowledge represents experience and that the order between events or objects could be regularised and is predictable,

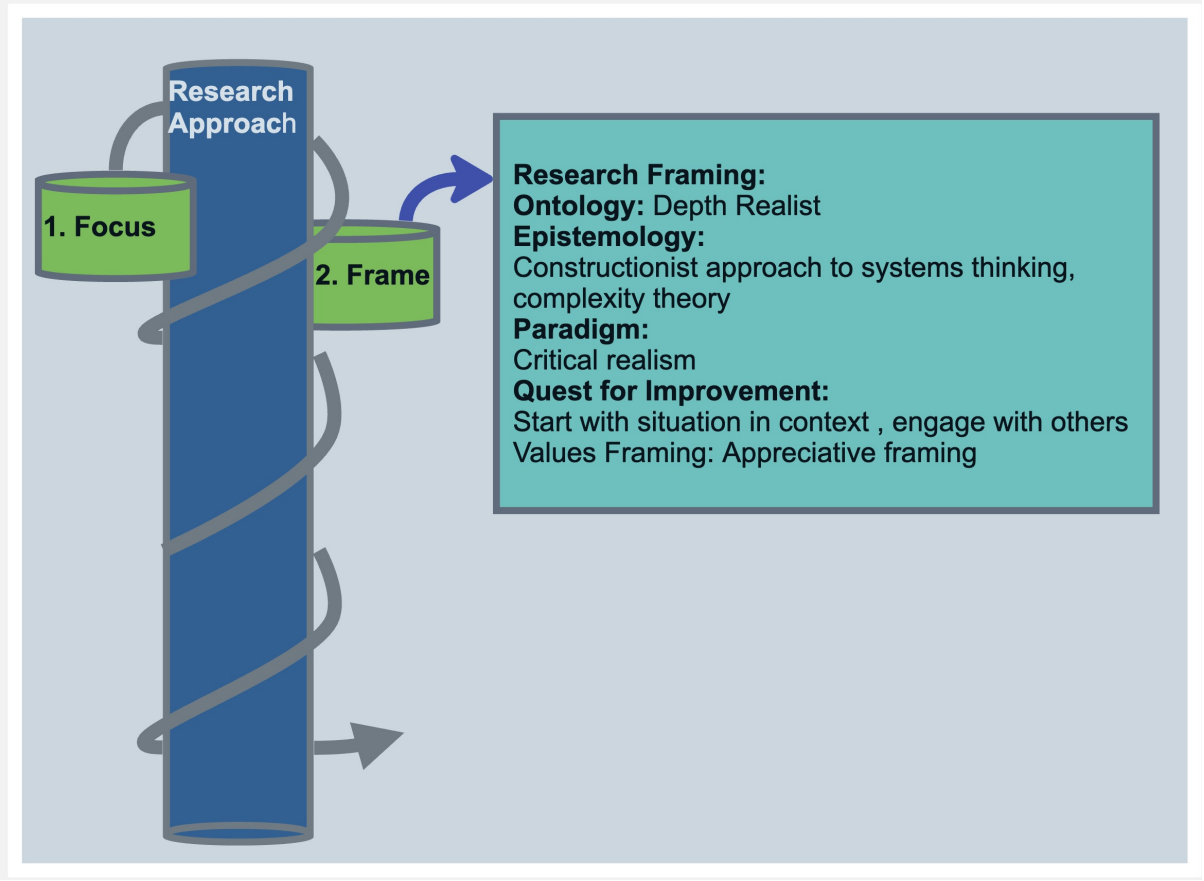

Figure 3.2: Research framing

making events or objects that cannot be objectively verified by experience of no value (Blaikie & Priest, 2019). Critical rationalists, therefore, argue that observation dependent on an observer is not a good basis for making theory: instead they promote deductive reasoning through repeatable empirical testing to verify a scientifically valid theory. On the opposite end of the paradigmatic continuum lies interpretivism, where reality is assumed to be socially constructed through subjective meaning, and symbolic action only. Bhasker (2008, 2020) embraces the plurality of these perspectives and makes three distinctions to stratify the different strands of reality (Bhaskar, 2020):

1. **The Real:** causal structures and mechanisms with enduring properties
2. **The Actual:** events generated by those causal structures and mechanisms regardless of whether they are observed or not
3. **The Empirical:** events that are actually seen or experienced.

These three aspects of reality come together to create emergence that is irreducible across different levels, and are defined by an implicit potentiality

where higher order levels in a system are enfolded into lower levels. Bhaskar (2013) argues that empirical science is 'anthropocentric' and that social structures exist only because of social interactions, which are local and temporal within a specific culture (Jackson, 2019). This implies that they are "open" systems that are not amenable to empirical study. Social structures are 'real' however and Bhasker offers an alternative view of cause and effect where underlying structural mechanisms trigger 'tendencies' of phenomena into action. With regard to causal laws, he writes:

> The real basis of causal laws are provided by the generative mechanisms of nature. Such generative mechanisms are, it is argued, nothing other than the ways of acting of things. And causal laws must be analysed as their tendencies. Tendencies may be regarded as powers or liabilities of a thing which may be exercised without being manifest in any particular outcome (Bhaskar, 1975 p. 3).

These distinctions were useful for this research as they correspond with a systems view of reality, which also focuses on structures and mechanisms, but where the emphasis is on the interaction between them rather than the properties of the components themselves (Mingers, 2014). Emergence is also a key theme in systems research, and complexity theory has developed a sophisticated understanding of emergence as outlined in Chapter 1. Mingers suggests that systems thinking has implicitly influenced critical realism stating that

> many of the fundamental ideas of critical realism have already been developed within the disciplines of systems thinking and cybernetics (Mingers, 2011, p. 326)

and he offers a comparison between the approaches which I further develop based on Bhasker's posthumous paper published in 2020 (Bhaskar, 2020) (see Table 3.1).

There is a notable convergence between both approaches as well as a few key differences. Bhaskar suggests that systems are hierarchical which leads to an assumption that they are layered in terms of size or importance, with each layer opening up a view of another layer above or below it. Mingers (2011) favours the word "nested" to describe how each system contains its own set of emergent properties which interact with each other, thus generating new levels of systems which in turn have their own emergent properties. Systems approaches also emphasise the importance of drawing critical boundaries around situations for the purposes of research, as not doing so

Table 3.1: Comparison between Critical Realism and Systems Thinking paradigm based on Bhaskar, 2020; Mingers, 2011

	Critical Realism	**Systems Thinking**
Ontology	The Real- causal structures and mechanisms with enduring properties	Hard Systems: observed events Soft Systems: experienced events
	The Actual - events generated by the real	Complexity theory: Non linear causality - circularity, feedback mechanisms
	The Empirical-events actually observed or experienced	
Nature of reality	.	Characteristics and behaviour of entities dependent on relationships between them at ontological level
Nature of systems	parts, wholes	Parts are related to the whole and irreducable to individual parts
	Open and closed Systems	Open and closed systems
Organisation	Hierarchical stratified, recursive embeddings	nested
Emergence	Synchronic emergent powers materialism	Emergent properties
	unilateral dependence, irreducible	Nonlinear interdependencies
	Enfolded potentiality - higher order level implicit in lower order level	
Boundary	Not considered	must be demarkated to avoid infinite levels of nested systems

would risk getting lost in infinite systemic recursive layers of emergence, particularly within social systems (Mingers, 2014). Mingers points out that this is not something that Bhasker considered in his definition.

Jackson writes that Critical Realism usefully distinguishes a dualism between social structures and human agency (Jackson, 2019). Bhasker acknowledges the connection between epistemology and ontology, asserting that the study of knowledge inherently implies the existence of a particular reality (Bhaskar in Jackson 2019). However he resists succumbing to what he calls the 'epistemic fallacy' of assuming that reality is entirely socially constructed (Bhaskar, 2020). Systems thinking traditions span both views of reality: early systems thinking was grounded in a structurally oriented ontology with a shift towards more constructionist and phenomenological approaches in the 1970s (Mingers, 2014). Mingers concludes that Critical Realism is compatible with systems research and particularly in relation to how it allows for methodologies that mix both hard and soft systems approaches without having to choose between paradigms (Mingers & Brocklesby, 1997). Critical Realism therefore offers a strong rationale for legitimising multi-methodological research (Mingers, 2015; Mingers & Brocklesby, 1997) largely because of its pluralistic approach to both ontology and epistemology, which avoids the limitations of empiricism and constructionism.

3.2.2 Systems Research as an epistemological approach to learning

This research took a systems approach which is characterised by attention to interrelationships, multiple perspectives and critical boundary judgements around the research situation, and also draws on Action Research (AR). There is some disagreement in the literature about the extent to which systems research and AR are distinctly different approaches. Advocates of systems approaches propose Systemic Action Research as a meta-learning framework for research because of the overarching vantage point it offers for understanding the nature of systems and how they are bound by feedback, non-linear dynamics and so on (Burns, 2014; Hammond, 2017). This leads the field towards an array of distinctive methodological approaches such as Soft Systems Methodology, the Viable System Model, and Critical Systems Heuristics (Reynolds & Holwell, 2020). Others argue that systemic thinking can inform Action Research but is not an independent approach (Flood & Jackson, 1991). For Action Researchers, Systems Thinking is a complementary route to understanding whole open systems and complexities as well as thought

patterns and researcher positionality within an AR framing (Coghlan, 2019), and current-day AR practices draw heavily on systems ideas around open systems and learning across systems (Bradbury et al., 2015). Although both approaches share a commitment to creating real-world changes, they differ in what creating change entails. Systems research explores systemic interrelationships, engages diverse perspectives, and critically assesses boundaries for more effective issue framing and resolution (Williams & Hummelbrunner, 2010). While AR includes those affected by situations throughout the research process, systems research recognises that it is not always feasible to include those who will be affected by the research, but this does not mean that their voice is not represented (Ulrich & Reynolds, 2010). Instead systems research involves constant review of critical boundary judgements regarding who and what should be included in the research as well as who should benefit from the outcome. This research largely drew on systems informed methodologies and some of the reflexive framings from AR to inform researcher practice, thus making it primarily a systems research project, informed by AR.

This research was also informed by a systemic understanding of the nature of learning and change. Systems research is as much about creating change in knowledge which may or may not lead to behavioural change based on that knowledge (Midgley & Ochoa-Arias, 2001; Şenalp & Midgley, 2023). The choices of methodology in this research created the ground for social learning to occur, without taking responsibility away from those operating in the situation in focus to utilise that learning in ways that the researcher is not privy to, or that might not occur within the time scale of the research. This research also understood that learning happens at different levels: it can happen both individually, collectively or as part of social learning. Therefore, the purposefulness of one research participant's learning as a result of participating could not be assumed by the researcher in the time frame of the research project. Social learning is about creating spaces for learning to happen across different contexts, in what Wenger calls 'social learning spaces', which act as social containers for authentic interaction between participants learning from bringing both their practice and how they experience their practice into the research space (Wenger, 2011). This research, unlike AR, did not propose that the researcher needed to be an active participant in the change initiative, but it did propose that opportunities were given for learning to arise through interaction (R. Ison & Straw, 2020). This did not negate the commitment to the dissemination of this research made in Chapter 1. Rather, it was in keeping with an understanding and respect for the inherent limitations of any research approach (Ulrich & Reynolds, 2010). The next section elaborates

on how this research project approached the question of what difference this research should make.

3.2.3 Quest for improvement

This research endeavour started with the development of an appropriate research purpose. The purpose of systems research is to seek improvements in situations considered problematic (R. Ison, 2017). This is the `quest for improvement' articulated by Ulrich, who asks: *what difference should this research make?* Ulrich and Reynolds, 2010. This section identified three starting conditions: research must start with the situation, engage with those involved, and make the value framework guiding the research explicit.

Starting with a situation: Designing research around the situation of interest helped to avoid two common traps in research: being led by methodology or the system. Ulrich argues that the choice of methodologies is immense and good research cannot be justified by technical mastery of a methodology alone (Ulrich, 2001). He encourages researchers to engage with those in the situation or affected by it to establish the basis on which this situation is viewed to be important. Ison and Straw (2020) also call for research to be grounded in the situation but for different reasons. Their concern is to avoid getting lost in designing research focused on "*the system*". To do so,would be to assume that all the interdependencies and interconnections can be understood in advance, and it is possible to be objective about what they are. They recommend starting with the situation rather than an assumed system to avoid the trap of creating system-led rather than situation-led research (R. Ison & Straw, 2020).

The situation this research addressed was constructed from an understanding of a social phenomenon observed during the initial months of the pandemic – namely, the observation that some disability services developed online services very quickly despite a lack of digital literacy. Engagement with colleagues in FreedomTech, and through its online community of practice sessions, made it clear that during the pandemic, the impetus to stay in connection was strong and that staff were making an immense effort to serve those they worked with in whatever way they could. This included driveway visits and phone calls but it also included harnessing technology. Even though staff in disability organisations felt ill-resourced to do so, they attended sessions and demonstrated a huge appetite to learn about what platforms they could use, where they could get funding for technology and to learn from each other how to facilitate services online. It was initially unclear if these were one-

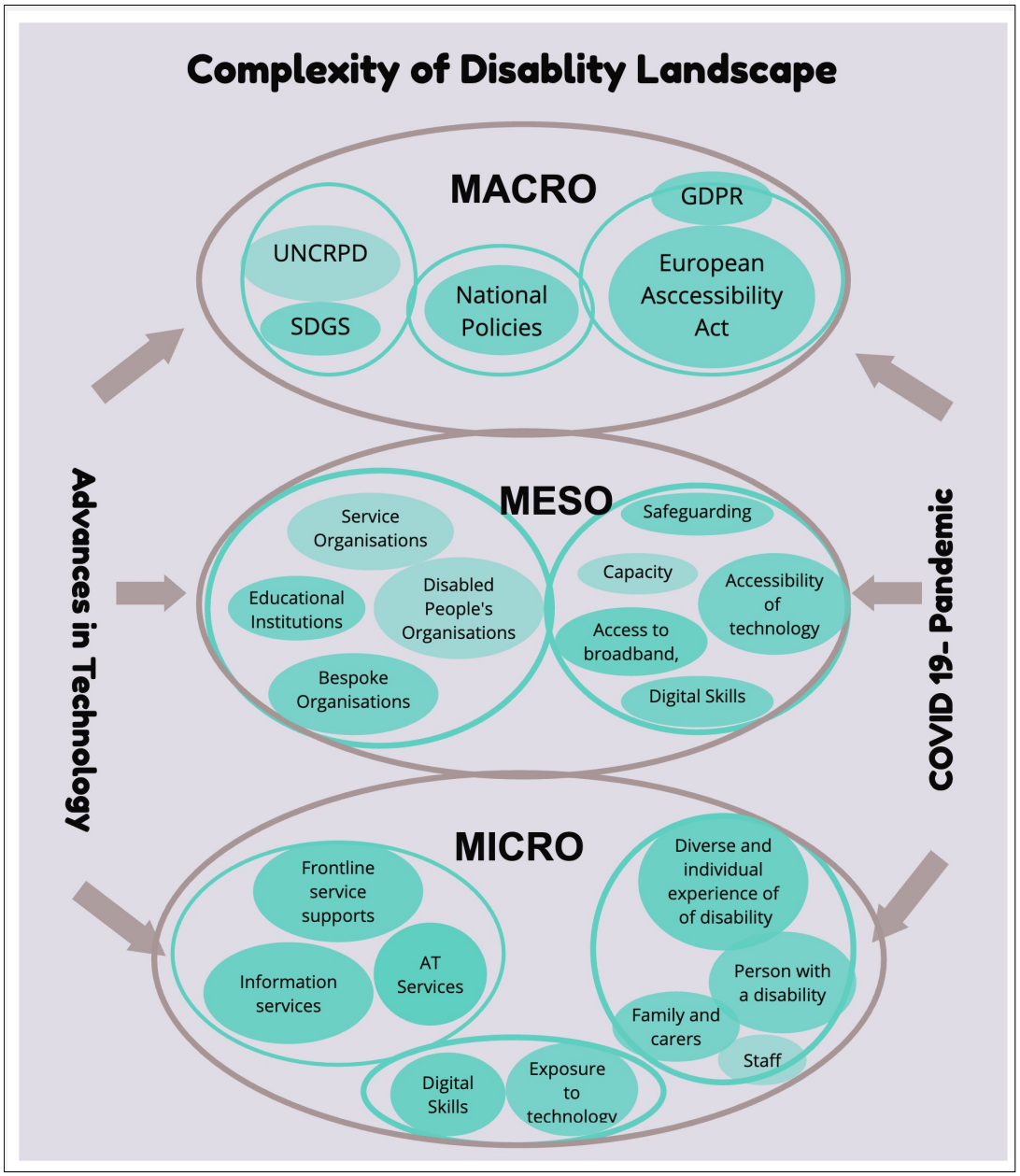

Figure 3.3: Systems map of environment entering pandemic

off events or an emerging pattern. It soon became apparent that it was a situation that required further investigation. In my role with FreedomTech, I was absorbing what I was hearing and discussing it with FreedomTech colleagues, where we designed community of practice sessions that we felt would be most useful. We held five sessions in April and May 2020 alone, and were learning how to do it online as we went. This engagement helped me to fine-tune the purpose of the research over several iterations and with the support of Soft Systems Methodology (rather than being driven by methodology).

Understanding the situation in context and deciding on focus: A systems approach assumes that situations are nested within other systems and

also have subsystems within them, in other words, systems are fractal in nature (Hoverstadt, 2022). The macro, meso and micro-elements within the broad system surrounding this situation is described in Figure 3.3. Systems research is concerned with the meta-processes and structures that influence and are influenced by the situation, as the situation cannot be abstracted from context. This calls for a distinction between the scope of the real-world concern and a refined focus for research that could lead to contextualised knowledge. It also suggests that governance arrangements around the situation that can support feasible and desirable change are important research considerations (R. Ison & Straw, 2020). This dual concern was addressed in the design of this research which started with a focus on the Irish experience of developing virtual services to a specific focus on the staff practices that create the conditions for psychological safety before broadening the research beyond Ireland to research some of the governance issues that need to be addressed to support safe virtual services.

Value framing The quest for improvement also required an explicit value framing. Appreciative approaches (Cooperrider et al., 2008; Whitney & Cooperrider, 2011) offer a suitable values framing by focusing on strengths and positive experiences, which made it more favourable than a Positive Deviance stance. Positive deviants are those who engage in unusual behaviours that allow them to solve problems that others cannot, though both experience the same situation and have similar resources (Pascale & Monique, 2010). An appreciative approach doesn't solely rely on identifying and replicating unique solutions within a community as a positive deviance approach does (Spreitzer & Sonenshein, 2004). Instead, it concentrates on cultivating a culture of adaptation and innovation and encourages a proactive and learning mindset. This made it a suitable approach through which to view organisations aiming to innovate amid uncertain operating conditions.

Appreciative approaches to research shift focus from finding deficits in social situations to developing a research inquiry that promotes opportunities to bring people together to build and expand on their learning and understandings. This was in line with my positionality as the researcher: something positive was happening but it was important to build and expand on the innovation rather than place it as an outlier position. It also aligned with the idea that people operating in social systems can become 'stuck' without resorting to a negative framing that might result in blaming behaviours that did not align with the phenomenon observed.

Relevance At this time in human history, it is important that society's collective resources, including research capabilities, involve real-life redesign of

the systems that will sustain human life and quality of life for all. This orientation is also discussed in the rationale given for this research in Chapter 1 Section 1.2.4. Recognising that research and practice are "inherently intertwined in real life" (Chandler & Torbert, 2003), I took this to mean that research practice must take place "in situ" of the real world problem. This research sought to be relevant and contribute knowledge to advance equality within society, including challenging current power structures that hold a "stuck" position (Bourdieu, 1990) and the socially constructed paradigms that underwrite the status quo (Beer, 1972). As a researcher, I was driven by two primary concerns: the emancipatory potential of technology to support people with disabilities to develop their own agency beyond services, and to ensure future connectivity to mitigate against social isolation due to the pandemic or future environmental volatility, for example budget changes, climate changes, war and increasing global uncertainty. The researcher statement section further elaborates on these concerns.

These three factors informed the development of the research purpose outlined later in this chapter in Section 3.

3.2.4 Applying methodological pluralism to research

Research methodology needs to match the variety of theoretical approaches discussed in Chapter 2 by adopting a multi-paradigm multi-methodology approach, where parts of different methodologies are broken up and brought together in a new way to fit the problem and how it relates to the literature (Mingers & Brocklesby, 1997). Mingers is one of many scholars in favour of using a wide range of theoretical and methodological insights to ensure that research responds to the situation and does not lead it. At the core of each approach is a concern for culturally feasible and systemically desirable change (P. Checkland & Poulter, 2020). Flood and Jackson, 1991, Jackson, 2019, and Midgley, 2011 all support the use of a wide range of methodologies that can provide the requisite level of variety (Ashby, 1956) to address the specific research situation. Midgley proposes that methodological pluralism is a requisite of good research that can expose different or contradictory assumptions associated with different theoretical lenses (Midgley, 2011). His argument is based on the systems principle that if different perspectives are partial, then foundational epistemologies are also partial. Adopting a multi-methodological approach avoids over-identification with one foundational theory that ignores the potential value that others can bring to enrich understanding. It also recognises that methodologies are dynamic and evolving, rather rei-

fied and fixed. In the field of social psychology, the call for pluralism is found in macropsychology, which seeks to apply psychology to *"factors that influence the settings and conditions of our lives"* (*MacLachlan, 2014, p. 851*), though the design of interventions are not bound to one discipline (MacLachlan et al., 2019). In doing so, it seeks to understand "up" in order to address power dynamics and promote two-way learning that promotes "outsight." This research was concerned with choosing methodologies that best fit the situation in line with a systems approach that embraced methodological pluralism.

Midgley suggests that what we perceive as going on in the world (content) and creating knowledge-generating systems (processes) are interrelated contextual processes that involve making boundary judgements (Midgley, 2011). To sidestep the tendency to seperate the knower from that which can be known, he distinguishes between *process* and *content* of knowledge creation. This leads to the following conclusions (Albrecht et al., 2022):

1. Knowledge is contextual and bound to the community from which it is generated. It is neither universal, nor brings us closer to the "truth".
2. The relevance of a particular theory is dependent on the research participants' purposes.
3. Researchers can embrace pluralism by making choices to include meanings that arise from different theories.
4. Standards for making choices between theories must be upheld and explicit.
5. Methodological pluralism works together with theoretical pluralism to support cross-boundary learning.

Making boundary judgements is supported by a pragmatic maxim around choice of methodology. Ulrich (2010) uses the word pragmatism (what is true is useful) to uncover the implications of the positive and negative impacts that research may have. Since it is impossible to identify all possibilities, paying attention to the boundary judgements around the research scope is key to developing valid research. This was also the justification for applying Soft Systems Methodology (SSM) (P. Checkland & Poulter, 2020), as one of its main strengths is that it takes a problem-structuring approach to framing research. Problem Structuring Methods (PSMs) support the development of an understanding of a problem situation, rather than seek an immediate solution (Rosenhead, 2013). SSM also distinguishes between what is desirable to do and what is feasible to do within a research project (P. Checkland & Poulter,

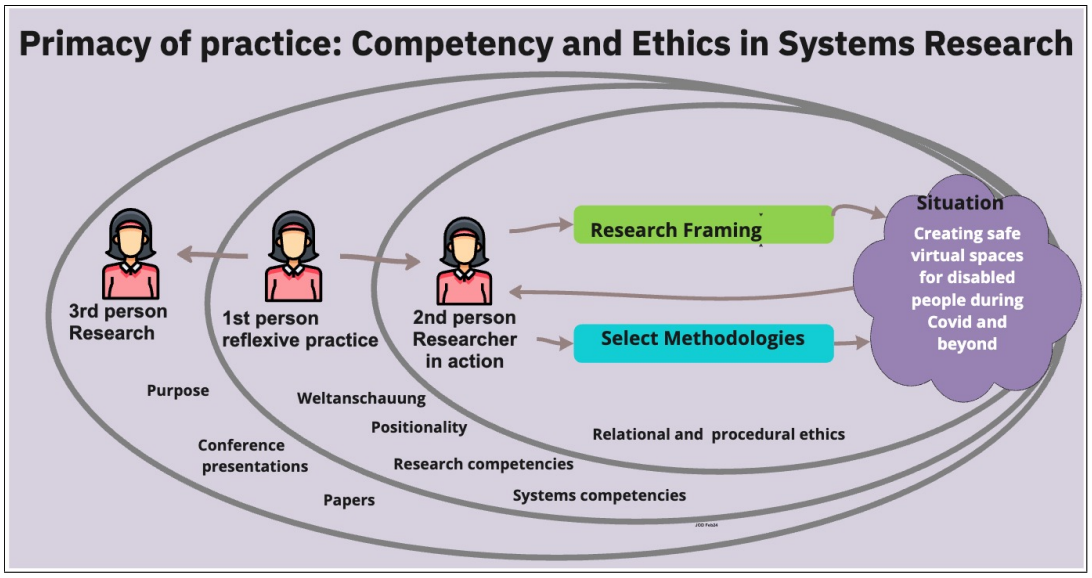

Figure 3.4: 1st, 2nd and 3rd person Research

2020). Ulrich cautions that big is not always better and that when a boundary judgment is made, how we then treat it is more important than where we draw the line between research scope and focus (Ulrich & Reynolds, 2010).

3.3 Section Two: Developing systems research practice skills

This section sets out the approach for developing capabilities as a systems researcher. Here, I drew on Ulrich's (2001) definition of competence which stipulates the need to pursue a self-reflexive, self-correcting and self-limiting approach to conducting research. The quest for improvement in the situation was understood as a personal endeavour and to be concerned with what Ulrich describes as the *primacy of practice* (Ulrich, 2001).

3.3.1 1st, 2nd and 3rd person research

This approach means that good research is a function of practice, and methods are justified by their implications for practice rather than the other way around. To action this, I draw a parallel with the commitment in AR to first, second and third-person Action Research where distinguishing between three inquiries created a supportive framework for supporting different research purposes, on the understanding that all research is "for me, for us and for them" (Reason & Marshall, 1987). This research made three distinctions that are presented in Figure 3.4 and include:

First-person reflexive practice: this was about inquiring into my way of being in the world. It was where I attended to my own worldview, basic assumptions, philosophy of life and "ways of being in the world" (Reason & Marshall, 1987) through self-reflexive practices that explore my Weltanschauung (wordview) (P. Checkland & Poulter, 2020), positionality (Holmes, 2020) and attended to the development of research competencies (Ulrich, 2001) as well as systems research competencies (Buckle Henning, 2017). As the researcher, there are arrows in the diagram that indicate how first-person reflexive practice influenced both second and third-person research practice.

Second-person researcher in action: this addressed the activity of engaging with others in the situation through relationship and practical action. It drew on the research framing and also involves selection of methodologies to enact research. Attending to procedural and relational ethics was of prime importance here.

Third-person research: this focused on involving people beyond those directly involved in the project through reporting, publishing and extrapolating from the situated context to raising more general concerns through publishing and presenting research.

Just as reflexivity described attending to my own biases and assumptions and ways of being in the world, ethics was about how these values are put into action. First-person research concerned reflexive consideration of decisions I made during research, including design decisions and boundaries around what to include and exclude. It was supported by reflexive practice. Second-person research practice focused on engaging with participants within the situation being addressed. Consideration of what the research meant for participants within a fast-changing world context - including the current pandemic and climate change - meant that making ethical decisions needed to go beyond prescribed rules and focus on real-world problem situations. Ethical considerations are considered in greater detail for each research cycle in the ethics applications and supporting documents produced to support enacting each research cycle (See Appendix B). Third-person research involved engaging in a wider discourse through engagement in conferences and other events, as well as developing papers and blogs, and also related to the dissemination of research.

Fig 3.4 draws on the work of Peter Checkland and Ray Ison to illustrate the primacy of practice in systems research. Checkland first depicted action research cycles as an interplay between the framework of ideas, which are actions conducted through engagement with a methodology to investigate a situation (P. Checkland, 1991). Ison added the Practitioner in action to the

diagram, as well as the reflexive practitioner, who observes and reflects on the research process (R. Ison, 2017). I have added a third layer to this to show how it also relates to third-person research.

3.3.2 Systems research competencies

Buckle outlines the perceptual systems competencies required to conduct systems research, which she describes as cognitive and affective abilities that impact on a researcher's capacity to perceive systems (Buckle Henning, 2017). I have already distinguished between different uses of systems ideals as they are applied to this research in Chapter 1 (see Table 1.1). This included systems as content, where systemicity was assumed to be part of the nature of real-world phenomena; system as concept, where systems were perceived as a way to describe systemicity within social phenomena; and systems as construct, where constructs were developed from systems concepts to explain phenomena or as learning devices as with systemic methodologies. Here I focus on the competencies needed to make these discernments, and evidence their application in this research in Table 3.2.

Whole Systems thinking: The first competency is concerned with the ability to perceive wholes, where the constituents of the whole are perceived of as arising only in relation to the whole, which they serve (Bortoft 1996 in Buckle 2017). Being able to perceive this inherent systemicity is, according to Buckle, a disciplined intuitive skill which is as important as the analytical skill that might be used to devise a systemic construct arising from this understanding (Buckle Henning, 2017). To understand the parts, it is necessary to step into the whole as it cannot be observed from the outside-in. Here, Buckle is distinguishing between wholeness-driven systems thinking rather than parts-driven systems thinking.

Perceiving complexity: There are four competencies associated with an ability to perceive complexity. The first is an an ability to discern the order that is inherent in the most complex of systems that supports them to self-organise and allows actions at a local level to co-ordinate at a higher level. This relates to the systemicity inherent in the laws by which systems behave. The second competency is an ability to perceive change, evolution and emergence in systems, which requires a sensemaking capability (Weick, 1988) around what can often be small changes in systems. Thirdly, an ability to discern non-linear relationships that can arise across space and time and are not dependent on proximity helps articulate inter-dependencies arising from historical connections or that can anticipate the future. Finally, being able to detect weak or

Table 3.2: Systems Competencies

Systems competencies	**Evidenced by**
Wholeness driven systems thinking	Critical boundary judgements in deciding focus and scope in research
	Reframing of psychological safety as a systemic construct rather than something that can stand alone
Perceiving order in complexity	Identifying how the initial development of virtual services can be described as demonstrating the features of a Complex Adaptive System that support a level of order that supports a sufficient level of functioning even when far from equilibrium
Perceiving change in complexity	The development of virtual services was driven from the ground up and in small pockets of services initially. Spotting the trend early and the genesis of the activity prompted a curiosity around what staff were doing to contribute to the emergence of virtual services.
Perceiving relationships in complexity	I identify how the power dynamics in relationships between different stakeholders evolves as a growing sense of interdependence between them, which is based on historical familiarity but not bound by it.
	This research also emphasises the future potential of virtual services by making a link with increasing digitalisation and global uncertainty and volatility.
	The research findings point to presencing – a staff ability to sense-make in real time and feel into what is needed next in facilitation terms within the context of the relational dynamic.
Perceiving information in complexity	The Viable Systems Model is used to discern weak as well as strong signals. Researcher reflexivity is used to listen deeply to what might on a surface level seem insignificant but points to a deeper meaning: particularly when analysing interviews using Reflexive Thematic Analysis.
Analogical reasoning	Explanation of the duality of constructing the technical response and dwelling within it in line with Heidegger's concept of building and dwelling as a process of building a plane while flying it.
Engaging with the unknown	Reflection and iterative design
Systematic/ systemic duality	Shift between project managing each research cycle, developing research approach, getting ethical approval and organising participants, and engaging with systemic nature of situation, iterative research design and systemic interpretation.

faint signals in systems is important as they may affect the functioning of an overall system, and the capacity to discern weak signals that are potentially significant are determined by both systems themselves as well as the ways in which we think.

Analogical reasoning: Being able to explain complex concepts using metaphor or analogy is a systems research competency (Buckle Henning, 2017). While metaphor makes a direct comparison that shows similarities between objects (Lakoff & Johnson, 2008), analogies identify commonalities by finding one-to-one correspondences between phenomena from different domains. Being able to do this is about making research accessible to a wider audience and part of a commitment to use accessible language when communicating research findings. To develop an effective analogy for virtual services, I explored the metaphors used in the research interviews and engaged in informal resonance testing within the FreedomTech project to develop the analogy between building a plane whilst flying it.

Engaging with the unknown: Developing a tolerance for ambiguity and uncertainty within the research process also involved a level of comfort with discomfort of not knowing, balancing too much information with too little, and paying heed to frustrations and confusion when it arises. Keeping a reflexive inquiry open around how I balanced these concerns without `foreclosing' on the ensuing discomfort is a key systems competency (Buckle Henning, 2017). A capacity to work with multiple concerns across different levels of the system without simplifying the complex was an ongoing inquiry throughout this research process.

Embracing the duality between systemic and systematic: This research was driven by a systemic approach but being systematic about project managing the research, applying for ethical approval and applying rigorous standards to the application of methodologies, and data analysis procedures was also important. As a duality, they created a backbone for this research (see Fig. 3.5).

Theoretical pluralism: Theoretical pluralism is a way of ensuring that no one foundational theoretical framework is used alone. This approach avoids the cognitive trap of becoming fixed on one foundational "truth" which then informs all methodological decisions and ignores data or information that might benefit from being understood from a different angle or using a different theoretical lens. This research wove threads from qualitative research, systems research, and Action Research together.

Reflexive practice: I committed to engaging in reflexive practice throughout this research that could mitigate against biases arising from my Weltan-

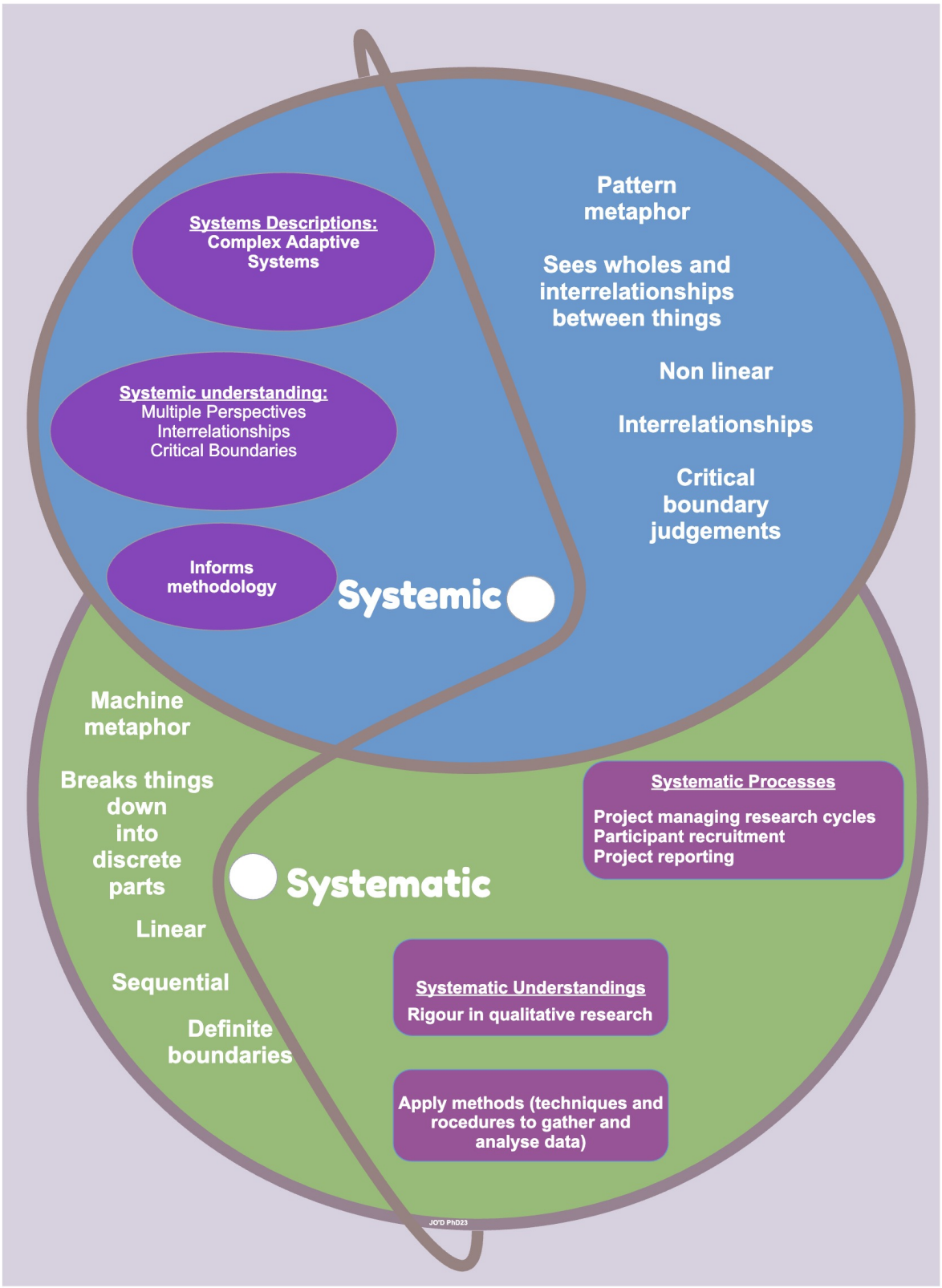

Figure 3.5: Systemic/Systematic duality

schauung and positionality. Reflexivity refers to capacity to engage in critical thinking about personal assumptions and behaviours that impact on ethical behaviour requiring double-loop thinking (Argyris, 1994), otherwise described as reflection-on-reflection or learning about learning, which might be considered triple-loop learning (R. Ison, 2016). As a researcher I was located in the research, which meant that my worldview, values and ethical stance needed to be both explicit and reflected upon (Zuber-Skerritt & Perry, 2002). It also relates to authenticity described as applying "*intelligence in understanding, reasonableness in judgement and responsibility in actions*" (*Coghlan, Shani, et al., 2008*). I used a what, why and how statement borrowed from Soft Systems Methodology (P. Checkland & Poulter, 2020) to construct a system to support ethical reflexive practice in this research (See Table 3.3). A reflexive piece is also included at the end of each chapter as an illustration of reflexive practice that demonstrates ethical consideration of Weltanschauung, and the development of systems capabilities in conducting research (Buckle Henning, 2017). A researcher statement on my postionality in relation to this research topic is also presented at the end of this chapter.

3.4 Section Three: Research design

This section starts by stating the research questions and I then present the meta-design informed by Soft Systems Methodology (SSM). SSM was used at the start of this research project to support the formulation of the research questions, to guide the process of enacting research cycles as an iterative process and to assess the effectiveness of the research. It effectively bracketed the research activity and provided processes to support internal rigour and consistency. I first outline the characteristics of SSM and then outline the research questions and how they were developed using SSM. I then give an overview of the research cycles and the logic behind them. This section also considers some of the critical design decisions as part of reflexive practice. It concludes with a researcher statement on postionality.

3.4.1 Research questions

This research was organised into three distinct research cycles guided by the aims and rationale set out in Chapter 1 and are presented here as a combined progression across three iterative research cycles.

Table 3.3: Definition of system to support ethical reflexive practice

A system to (What)	Sense-check learning Develop thinking Demonstrate links between prior knowledge and experience, new and future learning Reflect on boundaries in research design Expose defensive reasoning/cognitive biases Align actions with espoused values
In order to (why)	Be able to produce original defensible research Develop personal capabilities in systems research Develop procedural, interpretative and evaluative processes to ensure rigour Develop relevant research with potential to contribute to real-world concerns
By (How)	**First person reflection:** Engaging in practices that enhance my reflexive stance including reading, journaling, engaging in personal embodied systemic practices **Second-person reflection:** Conducting the research and using methodologies that support reflection, eg. Crticial Systems Heuristics **Third-person reflection:** Engaging in dialogue with others to reflection on and disemminate research including conference presentations, papers and thesis project

The overarching research questions that this research addressed are as follows:

- **How can psychological safety be understood in the context of safe virtual spaces and why is it important?**
- **How can staff practices support the conditions for safe virtual spaces where people with disabilities can meet online and experience meaningful connection?**
- **How can systemically informed governance systems support safe virtual spaces?**

The research addressed these questions across three research cycles, each focused on developing an understanding of a different aspect of these research concerns.

Research cycle 1: This research cycle explored the experience of taking services online in early 2020 for disability service providers.

- **What were the logistical issues that arose when setting up a virtual service?**
- **How have staff innovated to support setting up virtual spaces?**
- **What learning has taken place about the future potential of virtual services?**

Research cycle 2: This research cycle aimed to understand the conditions that gave rise to meaningful connection and a sense of safety in online services to inform future service design.

- **What are the specific conditions that give rise to a sense of connection and psychological safety online?**
- **How do staff practices foster an environment that allows these conditions to emerge?**

Research cycle 3: This research cycle focused on validating a systemic construct of psychological safety and the practices that support it, as well as exploring the governance arrangements that needed to be met to create safe virtual services.

3.4.2 Meta design using Soft Systems Methodology

Soft Systems Methodology is flexible enough to weave systemic non-linear iterative design and systematic project management of the overall research endeavour together. SSM was developed by Peter Checkland as a way to shift from looking at the world as systemic to conducting an inquiry into it (P. Checkland, 1991; P. Checkland & Poulter, 2020; P. B. Checkland & Haynes, 2019). It is distinguished from hard systems approaches as discussed in Chapter 1. SSM is a flexible method which is designed to be responsive to the idea that every situation involving human beings is unique, and approaching it effectively needs to be guided by a methodology, rather than a tool or technique, where methodology refers to a logic of method guided by principles which must be adapted to the situation (c and p). As a guide to designing a process of conducting the research, SSM (p) was used as distinct from SSM (c) which explores the content of a situation (P. Checkland & Poulter, 2020). SSM is traditionally presented as a seven-stage learning cycle with constitutive rules for an 'ideal' engagement with the tool. Here it was used in a modified way to support the design and enactment of the research process

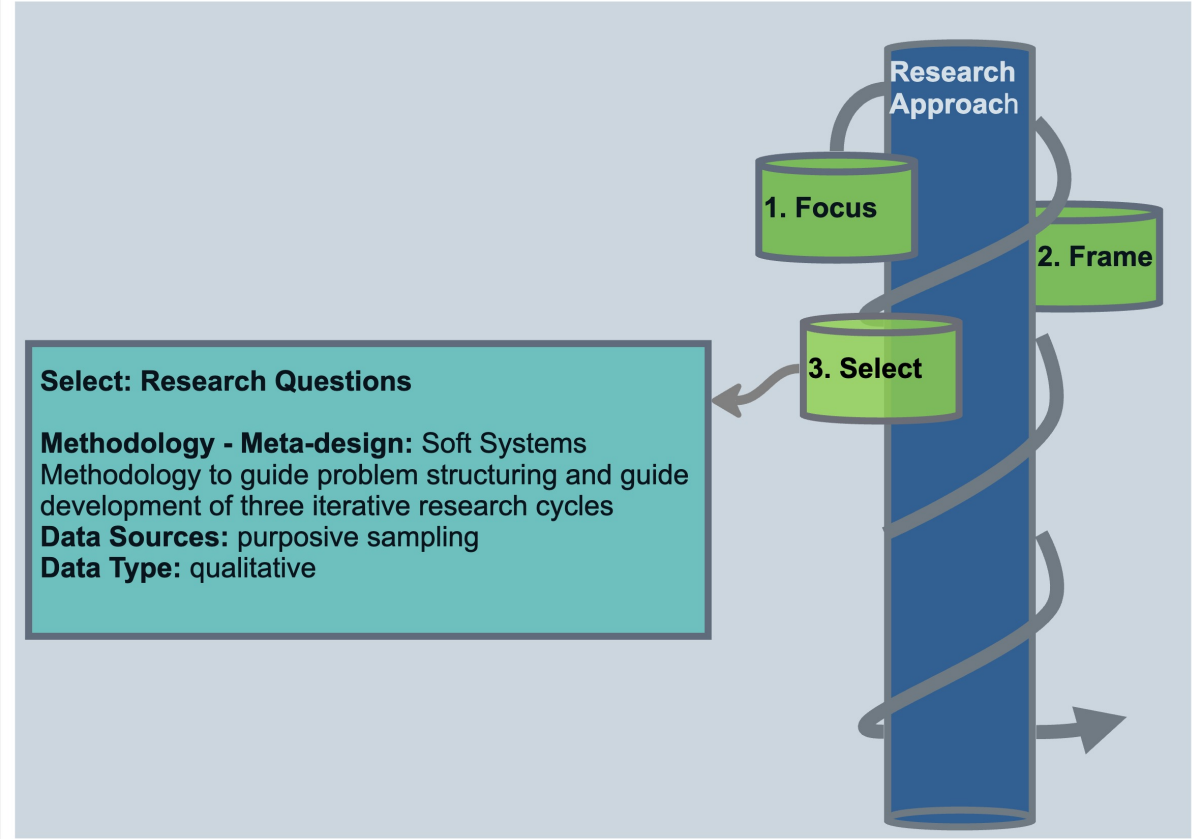

Figure 3.6: Select research approach

across three phases (see Fig. 3.7). The first phase was to distinguish between the scope and the focus of the research given the complexity of the situation and the multiple perspectives on what the research could be about. The second stage was about supporting the research design and a final concern was to ensure that 1st person concerns around reflection and reflexivity were attended to throughout the process.

3.4.3 Phase 1: The evolution of the research questions

The first research phase was to develop questions that distinguished between the wide range of concerns and the focus the research should take. SSM can deal with the evolution of virtual services over time, and the views of multiple stakeholders with different perspectives trying to make sense of complexity with incomplete information and holding different assumptions about the pandemic and its implications, none of which could be verified with any degree of certainty. While people had different perceptions of what was going on at the start of the pandemic, and how they should respond, it could be assumed that everyone was working purposefully, to do the best they could. It helped to structure the informal "finding out" process to frame

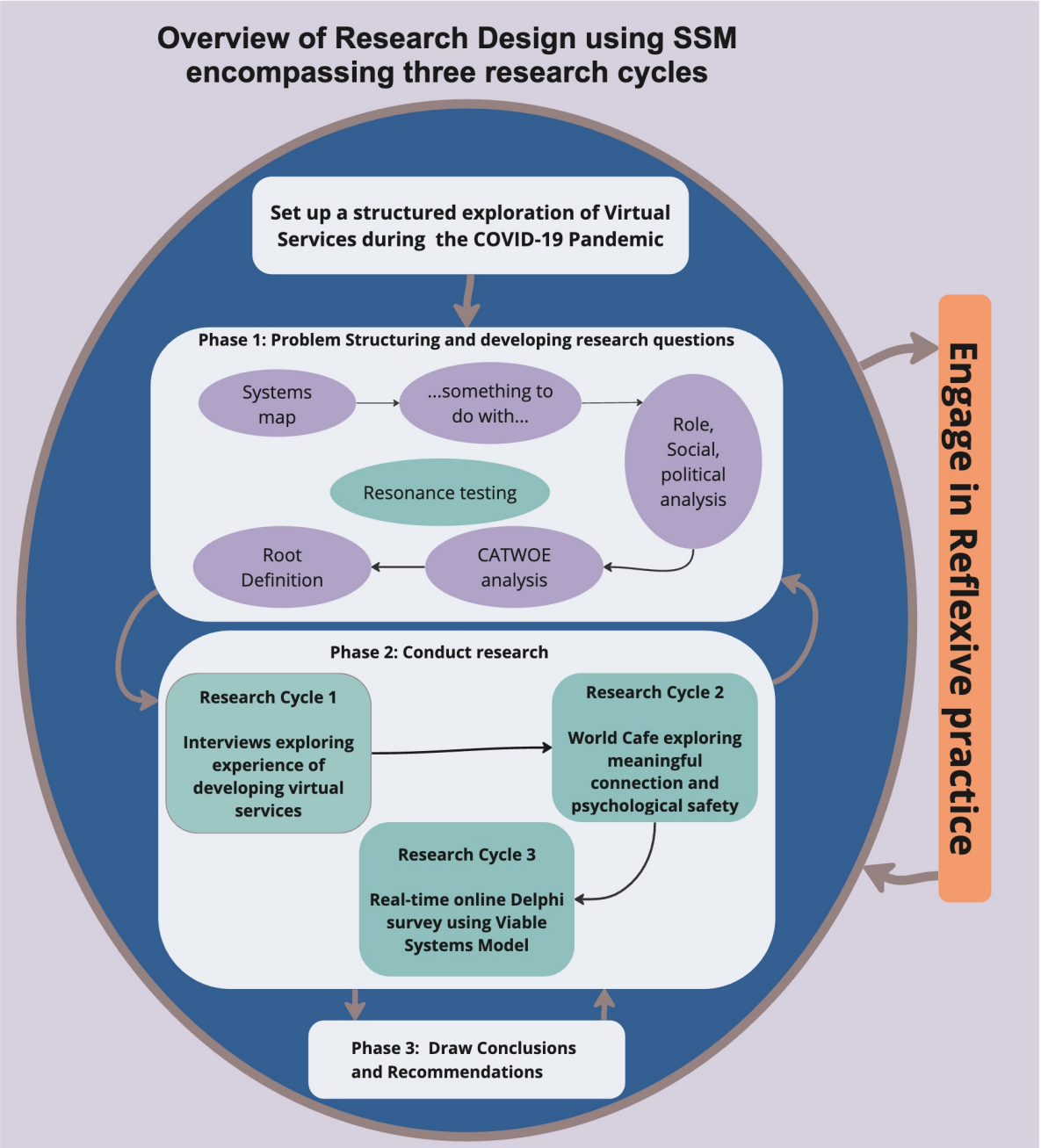

Figure 3.7: Overview of Research Design using SSM

a system of interest for the research. As gaining clarity about what these research questions should and could be is critical in good systems research (Ulrich, 2001), time was invested in developing them, and drawing upon my personal values as a researcher, Weltanschauung, and reflexive practice, as well as the ability to see wholes and the parts within them (P. Checkland & Poulter, 2020). It necessarily involved zooming in and out of the situation to find a part of the system that could be studied and that there would be an ethical purpose for studying it.

The research began with a broad range of concerns and the development of a systems map of the landscape (see Figure 3.3). It illustrated three different levels at which the landscape could be understood entering the pandemic, where the macro level referred to national and international instruments supporting human rights and digitalisation, a meso level that outlined the national landscape including organisations and digital capacity, and the micro level that represented the individual services, people with disabilities and staff. Advances in technology and the pandemic were impacting on all levels of the system. From this broad scope came the task of developing a focus for the research. This process was presented in brief in Fig. 3.6. Framing the situation began with some statements about the nature of this situation. I further explored this framing through engaging in three levels of analysis associated with SSM: Role analysis, Social analysis and Political Analysis (See Appendix A). I also conducted a CATWOE analysis and drew up two Root Definitions and conducted an analysis of the Customers, Actors, Transformation, Worldview informing the Transformation, situation Owners and Environmental constraints operating within the situation. The purpose of these processes is to develop as comprehensive an understanding of the situation as possible before developing a "system of interest" to guide the research focus and develop the research questions. This process is described in greater detail in Chapter 4.

3.4.4 Phase 2: Design and conduct research through 3 iterative research cycles

While starting with a situation and taking a problem-structuring approach helped ensure that this was the "right" research to do, research design was about doing it right (Eriksson & Ineland, 2023). For this research, this meant ensuring a clear rationale for approaching how the research questions were addressed using a systems lens. The research was designed iteratively across three cycles based on the principles of learning and emergence where the

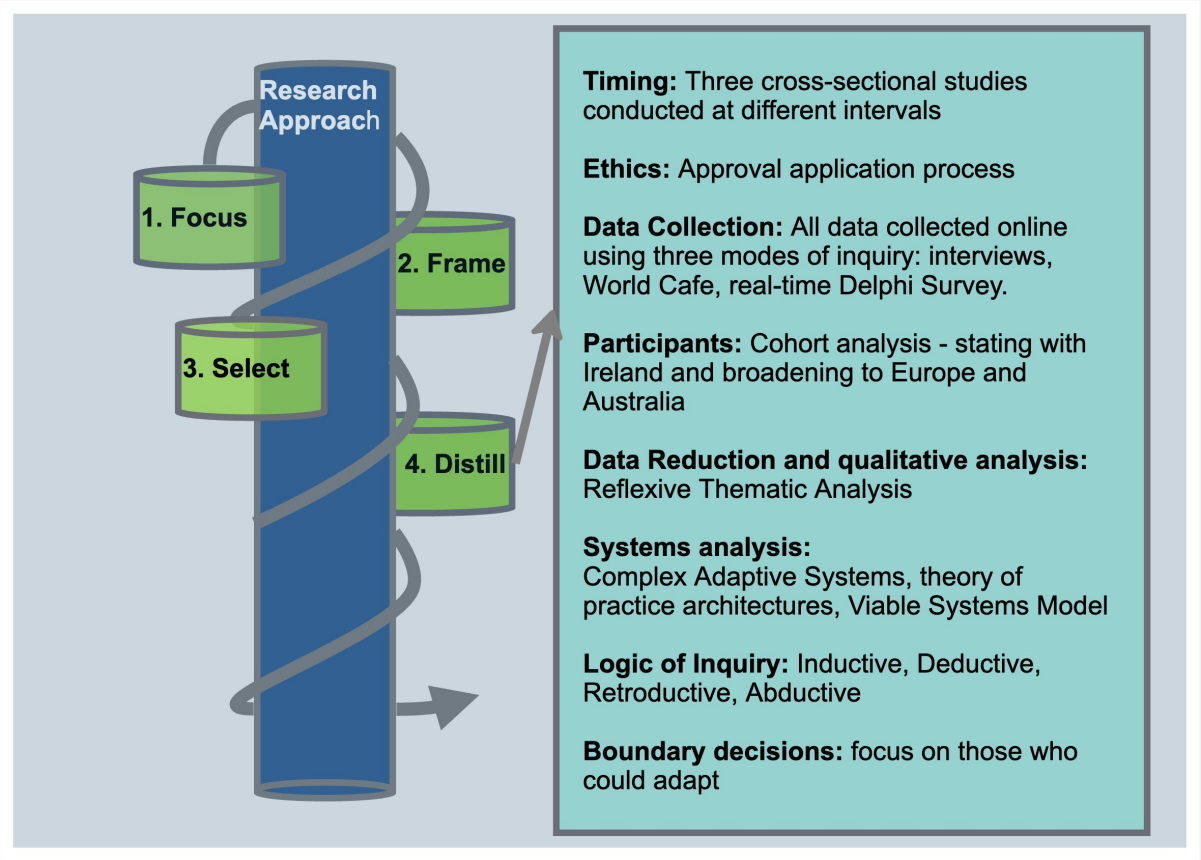

Figure 3.8: Research approach: Distilling research

learning from each cycle influences the design of the next cycle.

Designing and conducting the research involved several considerations about how to distill the research, presented here in Figure 3.8 based on the work of Blaikie and Priest (Blaikie & Priest, 2019). Distilling was about clarifying how research questions would be answered (see Fig. 3.8). Here I considered timing, data collection, participants, data reduction and analysis, systems analysis and boundary decisions across the three cycles. Research Cycle 1 is presented in Chapter 4, Research Cycle 2 in Chapter 5, and Research Cycle 3 in Chapter 6.

Timing: The research was conducted between June 2020 and February 2023. The first research cycle consisted of interviews held between June and September 2020 following the announcement of the pandemic in January 2020 and an Irish Lockdown which commenced in March. The second data collection point was an online focus group using the principles of World Café, held in June 2021. Irish adult day services were opened gradually and following direction from the HSE from October 2022 were given the green light to open fully (HSE, 2022). The final data collection point was an online real-time

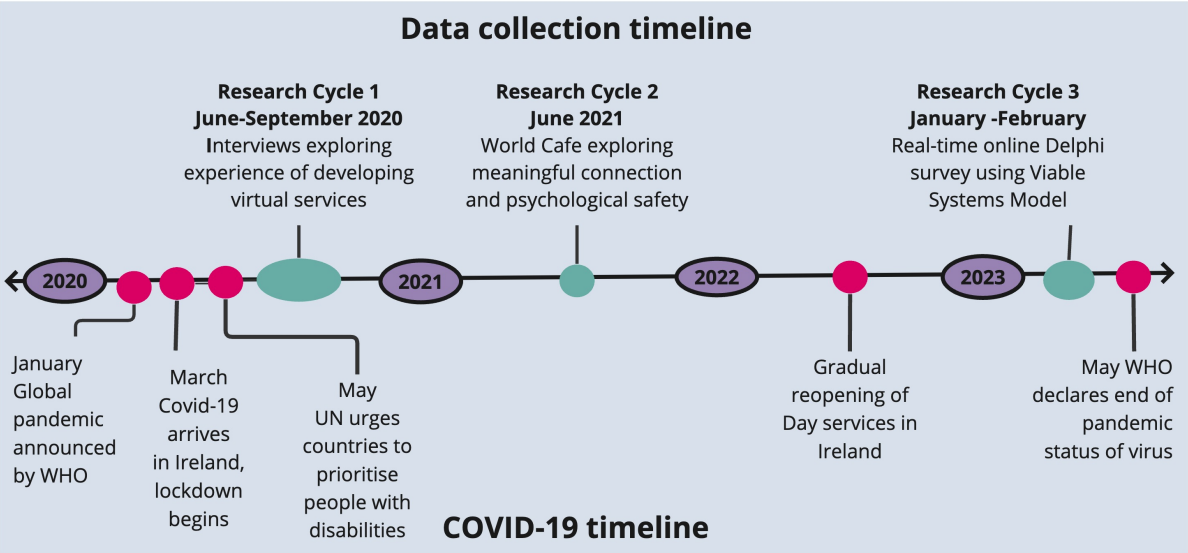

Figure 3.9: Research timeline

survey, which was open for three weeks over January and February 2023. A timeline is presented in Figure 3.9.

Ethics: Each research cycle has received ethical approval from Maynooth University (see Table 3.4). In line with commitments to rigour and treating participants well, additional supporting documents including an interview guide, facilitator guide and moderator protocol were developed to guide the enactment of ethics while conducting the research. The moderator protocol for the survey is presented in full in Appendix B.

Data collection: This research project was conducted entirely online. This was considered the most ethical way to gather data as it protected everyone's health during the pandemic. It is also commensurate with the subject matter of this research.

Three different modes of data collection were used. Semi-structured interviews and focus groups both involved live interaction which took place over Zoom. The literature points to the need for extra care in establishing rapport online and dealing with privacy within the research participant's environment (Lichtman, 2023). These issues did not pose undue concern in this research, as research participants were facilitating online sessions and working online themselves. These issues formed part of the subject matter of the research. Together they formed the basis for claiming that this research was characterised by methodological pluralism (Mingers & Brocklesby, 1997), forming a robust data collection process (Blaikie & Priest, 2019).

Table 3.4: Ethics and supporting documents

Research Cycle	Maynooth University Ethics	Supporting Documents
Cycle 1	Review ID: 2409706	Interview Guide
Cycle 2	Review ID: 2439235	Facilitator guide
Cycle 3	Review ID: 2487156	Moderator Protocol

Participants: The total number of research participants was 51, and they represented a total of 32 organisations (See Table 3.5). Purposive sampling was used in each research cycle. To get a balance across the wide range of organisations and the populations they served, both the researcher and supervisors agreed that the sector could be distinguished by four groupings: organisations that serve people with physical and sensory disabilities (often large national providers that span many conditions), people with intellectual disabilities (large and small organisations with national and local remits), organisations that serve people with specific conditions (eg. degenerative and rare conditions), and organisations that are purpose-driven, rather than serving a specified population (e.g. education, AT services, Disabled People's Organisations). The objective was to have as broad a representation of organisations that adapted to going online as possible and these four categories of organisations were a useful way to spread the interview sample across the sector, so as to be as inclusive as possible.

Research participants were recruited through FreedomTech, which acted as gate-keeper for the first two research cycles focused in Ireland**.** Potential participants were invited to make contact with the researcher if they were interested in taking part. They were sent further information on the interview and inclusion criteria, as well as the consent form. The researcher then checked for eligibility, and once that was confirmed, they were invited to complete the consent form. The research participants in the first cycle are drawn from the pool of Irish disability service providers (n=10) and third-level education disability services (n=2) who quickly adapted to the online environment within the first four months of the pandemic. Participants had direct involvement in setting up services, managing and running them, and each interviewee represented a different organisation. There is much variability in sample sizes deemed appropriate for PhD research projects (Mason et al., 2010), and a sample of 12 was considered sufficient for the following reasons: this was initial exploratory research, not a single research project. Also at the

start of the pandemic, the numbers of services adopting virtual services was unknown but it is likely that given the size of the Irish sector, the sample size was sufficient across the different sectors to reach some level of theoretical sufficiency, as distinct from saturation (Braun & Clarke, 2021).

The second research cycle was organised as a World Café which can accommodate a greater number of participants. In this cycle, 24 participants from across 12 organisations took part. Five of these organisations participated in the first cycle and seven were new to this research. Participant numbers were determined by the following considerations: the maximum number we could confidently host was 40 from a technical perspective. This was the number given at the ethics application stage, as it needed to be stipulated in advance, but a more nuanced understanding of the context, and a pragmatic approach set a more realistic participation rate at 15–20 (Braun & Clarke, 2021). This minimum number that could generate enough data to produce a broad enough view was determined based on contextual knowledge of services that were engaging with FreedomTech around resourcing and learning about virtual service delivery. In both the interviews and World Cafe, the idea of saturation did not apply as the methodology for data analysis was Reflexive Thematic Analysis, which generates themes rather than revealing information lying dormant in the data (Braun & Clarke, 2021). Instead, the notion of data adequacy was applied to ensure that the data yielded sufficient theoretical insight (Vasileiou et al., 2018).

For the final cycle, a purposive sample of 18 participants was drawn from across Ireland, Europe and Australia (n=3) from people who had not participated in any of the previous research cycles. The sample was drawn from invitations issued via the ALL Institute, Maynooth University, service providers and representative groups including FreedomTech, the Disability Federation of Ireland, European Association of Service Providers and the European Disability Platform. Again the ethics application was submitted in advance, putting the maximum number of participants at 30. As the survey was designed as an in-depth qualitative survey, this was assumed to be the maximum number of different views that participants could be expected to engage with, in the time they could commit and that could ethically be asked of them. There is no agreement on what this number should be in the literature (Hasson et al., 2000). Here, participant profiles were sufficiently homogenous to support a smaller Delphi survey – of between 10 to 15 people (Skulmoski et al., 2007). This number controlled for overly complex qualitative analysis of too much data, set against diminishing returns with larger numbers. This was also justified by the fact that the Delphi is designed as a verification process and is feeding

Table 3.5: Research participants

	Cycle 1: Interviews	Cycle 2: World Cafe	Cycle 3: Delphi Survey
Number of participants	12	24 (3 also in cycle 1)	18 (all new)
Number of organisations	12	12 (5 also in Cycle 1)	20

Table 3.6: Analysis of research cycles

Research Cycle	**Qualitative Analysis**	**Systems Analysis**
Cycle 1: Interviews	Reflexive Thematic Analysis Likert Scale	Complex Adaptive Systems
Cycle 2: World Cafe	Reflexive Thematic Analysis	Practice Theory
Cycle 3: Delphi Survey	Cross-tabulation of practices with previous findings	Viable Systems Model: data reduction through development of tables, spray diagrams System Dynamics Causal Loop Diagram

into a pre-existing theoretical model.

Data reduction and qualitative analysis: Qualitative analysis methods included Reflexive Thematic Analysis (Clark et al., 2022) in Cycles 1 and 2 as well as spray diagrams and tables to reduce complexity (See Table 3.6).

A Likert Scale was developed following Cycle 1 as a way of resonance testing participant priorities for focus in subsequent cycles. Data reduction for Cycle 3 was led by the five systems in the Viable Systems Model. A causal loop diagram from System Dynamics was also used to interpret the answers from one question about future demand for virtual services in the Delphi survey.

Boundary decisions: The following boundary decisions were made around the situation. Firstly the research focused on services that could adapt to develop online offerings, which excluded those services that chose not to go online, or that could not innovate even within the same organisation. This was a deliberate design choice as I, as a researcher, saw potential to learn from

those that did innovate, so that the learning could be potentially cascaded if the need for social distancing continued indefinitely. It would also have been more difficult to reach organisations that did not adapt and were not amenable to online engagement in 2020, when this research project commenced. Secondly, the research engaged staff but not people who used services.

The research was also focused in developed countries, starting with Ireland but expanding to include others in the third research cycle. Snowball sampling was used and led to the participation of people from the UK, Spain, Greece, Belgium, Italy, and Australia, but unsurprisingly, as remote services rely on internet access which is not a given in many countries, particularly low and middle-income countries where cost is also prohibitive (E. M. Smith et al., 2022), the sample was concentrated in high-income European countries. This results in a northern hemisphere Western framing for staff competencies.

While this research set a boundary around services that were mediated online, it also acknowledged that face-to-face services continued in some settings where online services were not feasible. This included continued access to day services for some people with older parents and support to attend essential appointments. Day services also relocated to residential settings. `Driveway' visits gave essential contact for people who were isolated, and activity packs and devices were picked up or dropped off to ensure they worked. In some instances, online activities were conducted in residential homes to support inclusion.

Safety operates along a continuum and this research had a specific focus on creating safe spaces as a virtuous cycle that supported agency amongst users of services. This framing of safety referred specifically to psychological safety whilst participating in a curated online space only. This was not intended to diminish the importance of safeguarding issues both online and within services. Internet safety was a concern for people participating in the digital world and has often been cited as a reason why people with intellectual disabilities should be protected from accessing technology, as discussed in the literature review. Safeguarding concerns also applied to services and I acknowledge that organisational cultural issues have also been associated with the maltreatment of people with intellectual disabilities in congregated living situations (Phelan, 2023).

The initial focus on staff was deliberate and intended. It was never envisaged however, that those at the other end of the relational dynamic between giver and receiver of supports would be completely excluded from contributing to the research in some way. When it might have been more

feasible to include their voice in some way, a Critical Systems Heuristic (Ulrich & Reynolds, 2010) analysis made it clear that to include them at the latter end of the research would be unadvisable given the power differential in an anonymous online survey in which their expertise would sit side by side with staff and each could comment and build on each other's statements without knowing each other's positionality. As the risk of COVID-19 receded, it became difficult to make the case for virtual services as the desire to return to face-to-face supports was a concern for many organisations, and virtual services were either cut back or closed.

3.4.5 Phase 3: Continuous reflexive review

The final methodological process that Soft Systems Methodology contributes to is an iterative reflexive process to keep the research on track across five criteria. Throughout the research process, reflexive questions address the importance of developing research that is both rigorous and has relevance and utility in the real world. The intention was to support the development of research that was both systemically desirable in the current macro-operating environment and culturally feasible within the sector (Armson, 2011; P. Checkland & Poulter, 2020).

3.4.6 Phase 4: Draw conclusions and recommendations

This part of the research process is dealt with in Chapter 7.

3.5 Researcher statement: Positionality

This section outlines my positionality including my worldview as a researcher and the commitment I make to reflexivity in the research process. Ethics and rigour are also addressed. This research grows from a longstanding interest in the potential of accessible and Assistive Technology as a means towards greater independence, choice, and access to information. I initiated a project around AT in 2014 which became FreedomTech, a collaboration between the Disability Federation of Ireland and Enable Ireland, to advocate for enhanced access to Assistive Technology in Ireland. For thirteen years I worked with the Disability Federation of Ireland (DFI), which is an umbrella organisation for over one hundred disability NGOs operating in Ireland, supporting them around governance and collective advocacy. Enable Ireland, which is a national service provider organisation and a member of DFI,

has many day services throughout the country and it is one of the largest providers of assistive technology in Ireland. The project includes a community of practice to support transdisciplinary social learning (Wenger, 2011). The project is grounded in a belief that human rights are inalienable and the right to be digitally connected has an emancipatory potential for people with disabilities, unprecedented in human history (O'Donnell et al., 2016). In the background, there has always been another future-focused concern: the risk of climate change, budgetary cuts and other disruptive events that might also impinge on people's ability to stay connected. This concern is informed by my understanding of increasing societal volatility, of social phenomena as entangled and interdependent, and reality as mutually co-arising (Macy, 1991), an understanding which arises from studying an MSc in Systems Thinking in Practice with the Open University, UK. At the start of the pandemic, FreedomTech hosted five online meetings in April and May 2020 to share learning across disability services going online and continued to meet throughout the pandemic. It is against this background that the research is conducted. I move between being an insider researcher and outsider researcher along a continuum that is largely dependent on the role I am in, in a particular context (Herod, 1999; Holmes, 2020). To a conference audience, or a member of FreedomTech's community of practice, I may be perceived as an insider, but to those working directly with people with disabilities in organisations, I am an outsider. I regard myself as a "*roaming*" boundary spanner (Wenger, 2010) traversing different communities of practitioners, policy and academic pursuits with a commitment to systemically informed practice. This research interest evolved from my concern about the exclusion of people with disabilities from participating in digital life, which sets them adrift from mainstream society. This research project forms a natural continuation of those initial concerns and contributes to the learning of the broad community of practitioners in Ireland and beyond. It has been some time since I worked in direct service provision, and I left my role in the Disability Federation of Ireland on commencing my PhD studies.

My Weltanschauung or worldview is also influenced by almost 30 years working in this area. Weltanschauung refers to my attitude towards and understanding of the world (P. Checkland, 1991). It informs the kind of transformation that I would like to see in disability supports. Staff form part of the transformation but are often bypassed or treated as 'implementers of policy' rather than people with their own sense of agency. As a worker, I am interested in the professional development of staff working in service provision, on the basis that it is difficult to support people to develop their personal

agency, if staff agency is curtailed by prescribed ways of doing things or organisational conservatism. I am also interested in the idea of "presencing", which draws on my dance and meditative practice background and more recent training as an Advanced Social Presencing Theatre practitioner based on the work of Arawana Hayashi (Hayashi & Gonçalves, 2021) and how people "show up" for others. Embodiment practices offer a key way to engage in research as a living inquiry through engaging a whole body knowledge to understand what is going on (Gearty & Marshall, 2021) and I continuously use embodied knowing as a way of sense-making in a particular interview or encounter with the literature. The sense of presence that people brought into the online space comes to the fore in the practices they speak of in the research and is exemplified in the way that the construct of psychological safety is crafted in this research.

As a woman living in Ireland with a chronic condition, my health was also at risk during the pandemic. I wish for others to enjoy the freedoms afforded to me, to work and study and act from a position of personal agency which grants me freedoms that are not shared equally. It is a live inquiry that prompts reflexive questions and a return full circle to the role of advocate and critical thinking evaluation partner in championing the innovation of virtual services as a right and a choice, once my studies are complete.

CHAPTER 4

The emergence of Virtual Services

4.1 Introduction

The situation this research is concerned with is the development of online services during the COVID-19 pandemic. The first lockdown in March 2020 led to the suspension of face-to-face disability services in Ireland. Some services attended community of practice gatherings held by FreedomTech, which I was part of, as part of their efforts to resource themselves with the technical knowledge they needed to sustain online contact with people with disabilities. The first research cycle was therefore designed as an exploration of the experience of taking services online to inform the focus of subsequent methodological approaches to answer the overarching research question. This chapter outlines the process of engaging Soft Systems Methodology to set up a structured exploration to develop this initial research cycle, leading to the development of research questions and the research design. An interview process to address those questions is presented, along with logistics, criteria for participation and the rationale for choosing Reflexive Thematic Analysis and Complex Adaptive Systems as part of the data analysis plan. The distillation of the research is also discussed, followed by findings and discussion. For a brief snapshot of the research approach see Fig. 4.1

Research Cycle 1: Research questions

1. **What are the logistical issues that arise when setting up a virtual service?**
2. **How are staff innovating to support setting up virtual spaces?**
3. **What learning is taking place about the future potential of virtual services?**

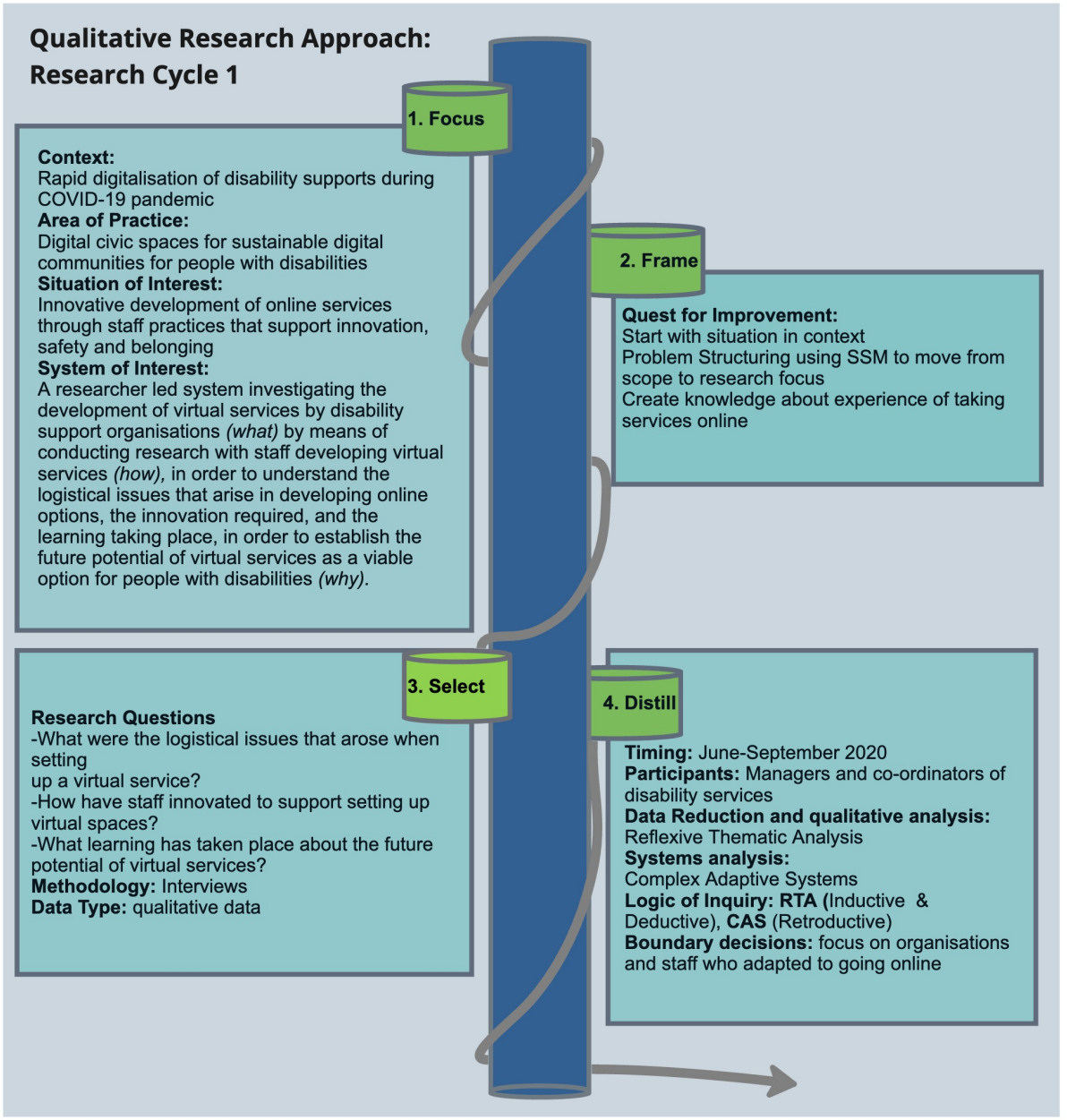

Figure 4.1: Research approach Cycle 1

4.1.1 Phase 1: Moving from scope to focus to develop research questions

The pandemic presented a super-wicked problem (Levin et al., 2012) within which disability was nested as a wicked problem (Rittel & Webber, 1973). Disability could be considered a wicked problem in this context, as there was no definitive formulation of the range of problems that COVID posed for disabled populations: it reverberated across all aspects of living and the pandemic had no obvious end point or solution. Governments and organisations were making decisions amidst great uncertainty, with no obvious right or wrong solutions, only better or worse options. Testing out different options at a policy or practice level was ethically fraught, as all decisions had consequences, were one-shot operations with potentially enormous consequences for human life and suffering, and nested within those concerns was an understanding that each individual's circumstance was unique. The problem could be described as operating at different systemic levels and, given the broad scope, the refinement of a research focus called for a process of refinement.

To support a shift from a broad range of concerns to discerning the research focus, I conducted a problem structuring exercise using Soft Systems Methodology (SSM) (P. Checkland & Poulter, 2020). One of the strengths of SSM is that it supports a structured exploration of a situation considered problematic in some way, where there are many different ways of viewing the situation and there is no definitive way of articulating a unilateral view of how best to intervene. The purpose of the initial analysis is, therefore, to ensure that the research questions and the methodologies used to address them are chosen carefully to produce effective research outcomes. This process corresponds with phase 1 in the overall research design process as depicted in Fig 3.7 and is developed in full in this research cycle (as Fig 4.2). I also engaged in informal resonance testing during this process to determine what is important and where the energy for change lies as the first couple of months of the pandemic unfolded. Resonance testing helps to identify shared priorities so that research can focus on what is important to people in the situation, and it also identifies potential leverage points for change (Burns, 2014). The focus is on emotional responses and connections triggered by issues rather than on traditional qualitative methods and can guide the direction of action and change within a system. As those attending FreedomTech community of practice events in the first months of the pandemic were heavily involved in the thick of the sense-making process, I conducted informal resonance testing with the community of practice convenor and the project sponsor, based

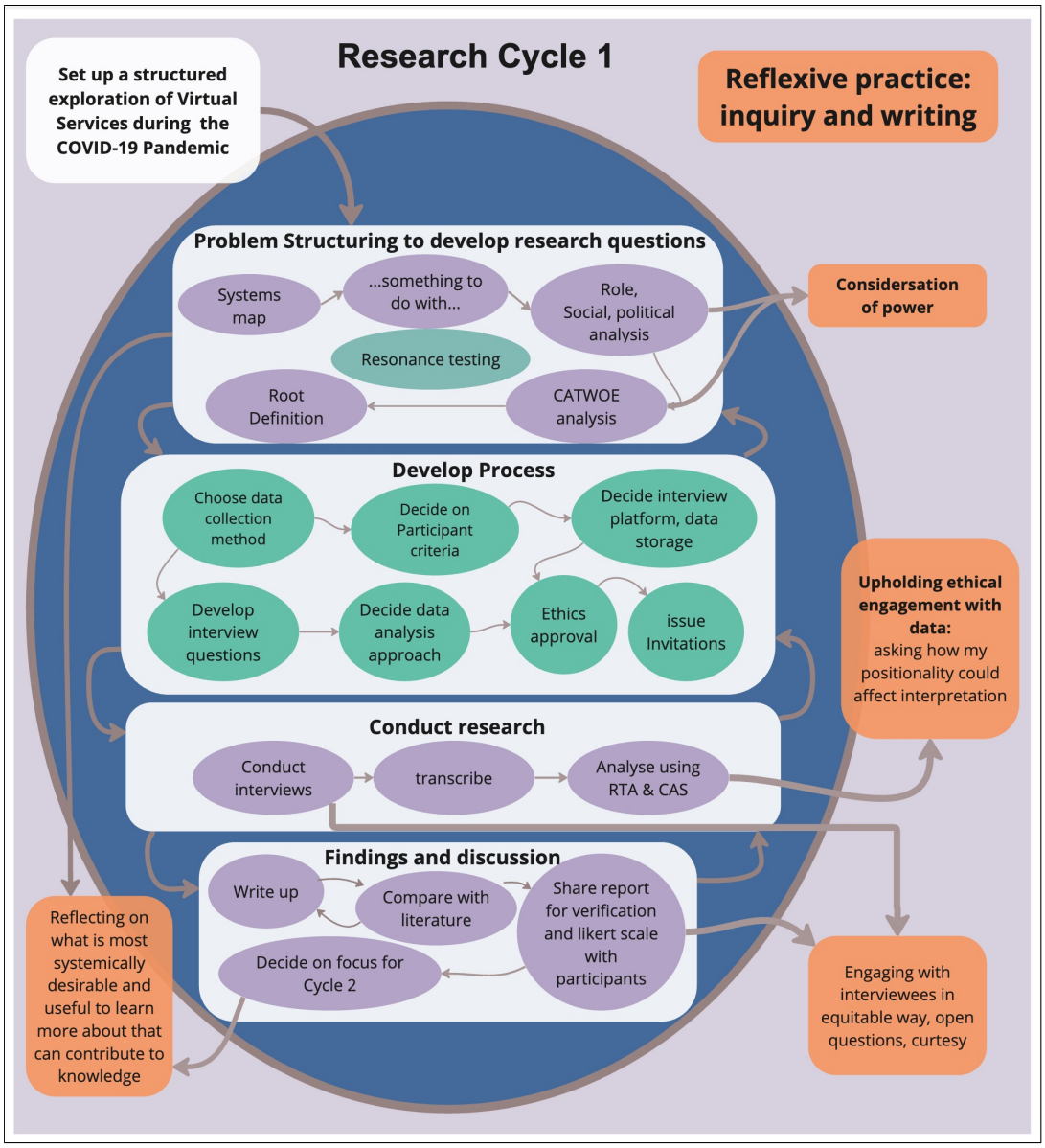

Figure 4.2: Cycle 1: Conceptual Activity Diagram

on what we were hearing in meetings and the need we were responding to.

A staged process was used to structure the research questions and this is detailed in Appendix A.

1. **Systems map:** An outline of the system across macro, meso and micro levels was developed (see Fig 3.3) to give a sense of the breath of the situation and how it operates at different levels and comprises different activities (e.g. policy-making, front line service provision) and stakeholders (people with disabilities, staff, government) with different levels of access to technology and technological skills. The pandemic and advances in technology were both changing the status quo at a rapid pace.

2. Something to do with...

An initial brainstorm of different ways of exploring the situation using the phrase "something to do with" were explored and the following framing had most resonance in informal conversations with colleagues in FreedomTech:

...understanding what staff are doing that is working...

3. Role, social and political analysis:

Role analysis: To test this framing, I explore the different roles involved in conducting the research. Making a distinction between the initiator of the research (often referred to as the client of an intervention), the researcher (or intervenor), and problem situation owners helps to flush out where different people hold different, and sometimes overlapping, roles in research. The initiator for this research is the researcher, supported by supervisors and working within the parameters of a funded PhD programme. I am also the researcher (or intervenor). The problem owners affected by the research include people with disabilities using services, their families, staff, disability organisations and health policy-makers. It also becomes clear that, as the researcher, I may initiate and take action but I am not a problem owner. A social analysis of all the stakeholders helps to flush out the extent to which an initial focus on staff provides the best framing at this point.

Social analysis: Conducting a social analysis of the situation supports the refinement of the research focus as it flushes out issues that are culturally relevant to the situation and add to an understanding of the situation that matches the aspirations of problem owners. It involves consideration of the roles, norms and values at play in the situation over time. The detail of this analysis is found in Appendix A. It leads to the following three observations:

Firstly, different stakeholders have different values and norms and operate at different systemic levels to a different logic that may be in tension with one another. For example, people with disabilities may want to sustain connection and a sense of place and routine, while the National Public Health Emergency Team is concerned with preserving life. This trumps the circumstances that disabled people may find themselves in without support, and does not take cognisance of their families' abillity to support them at home.

Secondly, organisations and staff may have different reaction times. Staff who have enduring relationships with individuals may be in a better position to take action than organisations who are rule-based and more likely to be strategically curtailed at board, management or national policy level, leading to time lags in response. Hesitancy responding can also be associated with norms and values, which may be more conservative at an organisational level.

Finally, technology skills vary hugely depending on role: students with

disabilities have a good degree of digital literacy, whereas this may vary hugely amongst those attending day services and staff, as digital participation tends not to be the norm in Adult Day Services.

Political and power analysis: This analysis is about how power is played out in the situation and how power informs processes. How is power expressed in this situation? What are the commodities that signal power? How is power obtained, used, protected, defended, passed on or relinquished? This power analysis, presented in Figure 4.3, suggests that there are three different power patterns at play: firstly, power is held and defended at a national expertise level by those who need to contain the spread of the virus, and secondly, power is protected by organisations through inaction, in instances where they are not responding to support online options. The third pattern suggests that where funding is released and action is decoupled from role, the commodities of power can be harnessed to support access to online options. Technology, access to it, and the skill to harness it, is the primary commodity of power in this analysis, alongside financial resources.

These analyses inform the direction of the research in two ways. Firstly it suggests that technology is a commodity of power, so the logistics of how it is accessed and utilised is of interest. Secondly, it suggests that power can be relinquished where it is possible to decouple the usual rules and norms around formal roles and the ability to take action to support online engagement. Those with the least power to be proactive are likely to be people who access services, while those working closely with them are likely to have more access to technology or funding to supply technology and shift outside of the usual frame of job role. Similarly, those making strategic decisions around lockdown may need to step more into an authoritative role, even when this goes beyond the norms of their usual modus operandus.

Organisations, which are bound by governance structures, may be less likely to take action. Those who are observed to be working proactively are staff and managers within organisations, and so they form key stakeholders in research taking an appreciative view of adaptation. This leads to the formation of the first two research questions: What were the logistical issues that arose when setting up a virtual service? How have staff innovated to support setting up virtual spaces?

4. Development of Root Definitions I next develop two Root Definitions that use insights from these three strands of analysis, to develop an ideal model of what could be achieved. The word 'root' is used here to convey the idea that this is just one potential 'root' of a system. The ideal model is written as

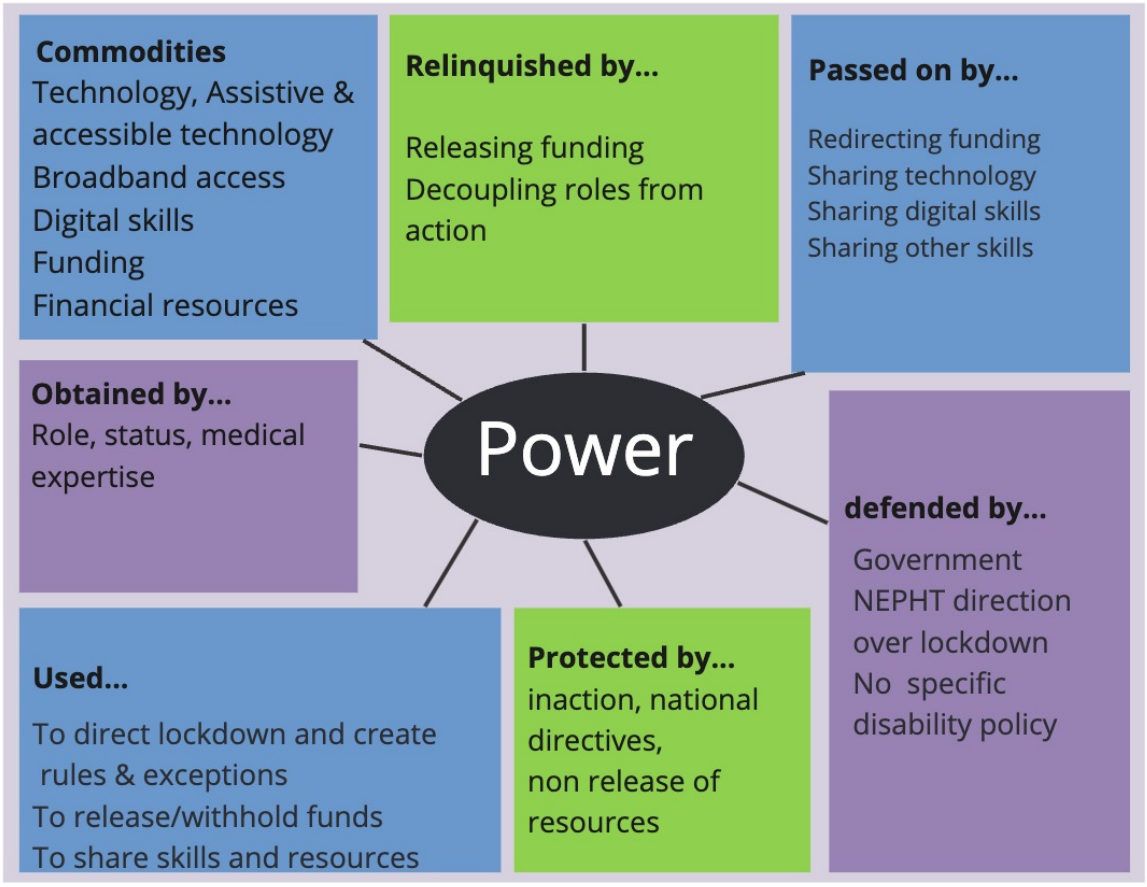

Figure 4.3: Power analysis

a what, how and why statement. As discussed in Chapter 3, SSM can be used to explore both the content (SSMc) of a situation and the process for researching it (SSMp).

Root Definition based on organisational response or using SSM to focus on content (SSMc):

An organisation-led system to sustain disability services (*what*) by means of developing virtual services and supporting all who wish to participate to access services virtually (*how*), in order to sustain connection and well-being during the COVID-19 pandemic (*why*).

Root Definition based on an issue-based response from the perspective of designing a process-based SSM (SSMp) to guide the research:

A researcher-led system into the development of virtual services by disability support organisations (what) by means of conducting research into the experience of taking services online (how), in order to understand the logistical issues that arose in developing virtual services, the innovation required, and the learning that has taken place in order to establish the future potential

of virtual services as a viable option for people with disabilities (why).

The explanation for how from the first SSMc definition becomes the what in the SSMp definition. The how in each definition represents the transformation sought in each instance.

Dealing with the real-world situation is about making a shift from not having access to support to having the option to access to online support. The purposeful activity in conducting research into this situation is to transform a lack of understanding about what the experience of making the shift to online is like in order to develop knowledge that can be shared.

5. CATWOE analysis The Root Definitions are tested using a CATWOE analysis to bridge the transition from a root definition to developing research questions. CATWOE stands for customers (those affected by the Transformation), Actors, Transformation sought, Worldview represented by this transformation, the Owner of the proposed intervention and Environmental contraints. This analysis involves testing the transformation sought and makes sure that the purposes of the SSMc and SSMp are aligned so that the research can serve the wider purpose of the real world concern. The detail of the CATWOE analysis is in Appendix A. It also ensures that the research questions are defensible and reasonable. Given the role of virtual services in the context of the pandemic, and thinking forward to future environmental uncertainties posed by climate change, it seems reasonable to suggest that these research questions are reasonable and defensible.

The Root Definitions and CATWOE analysis help refine the questions further and also put a spotlight on learning about the potential that online supports may have for people with disabilities in the longer term. This results in question 3: **What learning has taken place about the future potential of virtual services?**

4.1.2 Phase 2: Research design

Qualitative online interviews: This research is designed as a series of online interviews. The rationale for choosing interviews to generate data is to elicit first-hand experiences of operating online from people immediately involved in running virtual services. As this is the first exploratory research phase, interviews offer greater flexibility to work with the flow of conversation and sequence the questions to flow in an exploratory way, in tune with how the conversation unfolds, whilst at the same time ensuring some rigour and consistency across interviews. The interviews are designed as in-depth one-hour explorations of the experience of taking services online. Twelve interviews

are considered sufficient for two reasons: firstly this is an exploratory research phase and the pool of potential participants who can participate is small as this is a new innovation (Baker & Edwards, 2012).

4.1.2.1 Interview logistics:

The interviews took place on Microsoft Teams, were recorded and stored securely on the university One Drive.

Interview guide: A brief interview guide was developed touching on the logistics of the interview in terms of content and process. It was a brief in relation to handling the relational dynamics in online interviews, which is the very format that the participants were working in regularly. This was not only the area that they were building up expertise in: it was also the subject of our discussion. I was aware of the need to build up rapport, empathy and to treat research participants with respect and regard. It was also important to ensure that I did not become entrained or lured by the need to perform as interviewer or interviewee. Therefore, I strove for authentic engagement and I eflect on this mirroring in the reflexive piece at the end of this Chapter.

4.1.2.2 Criteria for participation:

Participants directly involved in the development and delivery of online adult services form a purposive sample across four categories of disability supports considered broad enough to elicit a wide range of views across the sector. The categories are:

- Physical and sensory organisations
- Intellectual disability organisations
- Purpose led services
- Condition Specific organisations.

The criteria for inclusion is that participants are involved in supporting the transition to online delivery of group services that were traditionally supported face to face. Exclusion criteria included one to one professional therapeutic interventions and children's services. Interviewees were selected on a first come first serve basis, until each category of service was full. Six of those interviewed provide supports with a health and social care ethos, and six provide education and training supports. They are also evenly split between male and female participants, though these categories were not stipulated in advance.

Participant recruitment: Participants were invited to participate through FreedomTech's mailing list. People attending FreedomTech are primarily interested in learning as part of a community as it is designed as a community of practice, called the Community of Practice for Assistive Technology (CHAT). Participation is open to everyone with an interest in sharing learning about accessible and assistive technology; they can come from different backgrounds to present to each other and to learn. This means that anyone can register to be on the mailing list and attend. There is no conflict of interest between the management of the project and participants. I manage FreedomTech but have no other stake in service provision and contributors to meetings are not decided by me. The Community of Practice convenor acts as the gate-keeper and sends out invitations to participate in CHAT and this is the same process used to issue invitations to participate in this research. To ensure that there is no confusion, consent forms are explicit in separating out the work of FreedomTech from the research.

Twelve participants who were directly involved in the development and delivery of online adult services during the first half of 2020 were interviewed as a purposive sample across four categories of disability supports considered broad enough to elicit a wide range of views across the sector.

4.1.3 Phase 3: Distilling the research

The interviews took place between June and September 2020. All interviews were recorded, transcribed and analysed using Reflexive Thematic analysis with the support of MAXQDA software.

4.1.4 Phase 4: Data analysis

Data analysis was conducted in three steps: firstly, themes were identified using Reflexive thematic analysis and then systems theory was used to explain the how those themes cohere to produce adaptive capabilities. The third final step involved a process for determining priorities to guide the next research cycle.

4.1.4.1 Reflexive thematic analysis

Reflexive thematic analysis (RTA) was chosen as the primary methodology for analysis (Braun & Clarke, 2006, 2019). This approach was regarded as most suited to the task for three reasons: it is compatible with the theoretical framing of this research, combines rigour with creativity and is accessible.

While RTA requires an explicit epistemological framing to underpin and guide analysis (Braun & Clarke, 2006), systems approaches need the complementary rigour of a more systematic approach to handling data. RTA is compatible with a systems approach to research as both methods understand knowledge to be co-constructed and relational. Though grounded in psychology, Braun and Clarke (2019) reject the *"juggernaut of psychology's arch positivist empiricism"* and systems thinking is also framed as a constructionist approach to understanding reality as a socially constructed dynamic (R. Ison, 2017). Instead, the creation of meaning is understood as a relational-dynamic between the researcher orientation, the situation, the frameworks and methodologies in use (R. Ison, 2017), rather than a pre-existing truth that is mined, or 'emerges' from the data (Braun & Clarke, 2006). This puts the researcher in the frame of the research and places a strong emphasis on researcher reflexivity (Braun & Clarke, 2019; R. Ison, 2017).

Secondly, RTA balances the need for rigour and trust in research, along with creativity and researcher reflexivity and responsibility, by providing a coherent procedural backbone (Braun & Clarke, 2006) that lends transparency and rigour to the process of making sense of data while giving room for 'structured scaffolding' (Braun & Clarke, 2019) and a recursive process of engaging with the data rather than a procedure or recipe. The combination of systematic coding helps identify patterns across the data (Braun & Clarke, 2014) and the systemic epistemological grounding informing the research can then be used to generate analysis of what those patterns might mean. This combination creates sufficient tension to avoid the trap of dissecting or decontextualizing interviewee accounts, or falling prey to researcher opinion and over reliance on a code book or the trap of proceduralism or 'methodolatary' (Braun & Clarke, 2021). Finally, RTA is an accessible approach conveying the experiences of people in applied research in policy and practice arenas (Braun & Clarke, 2014) and is widely used and understood in psychology, health and wellbeing contexts, and in client services such as psychotherapy and counselling (Braun & Clarke, 2014), which corresponds well with the area of disability services.

4.1.4.2 Systems Analysis: Complex Adaptive Systems

Complexity theory offers a way to understand how organisations evolve organically through interactions with their environment (Boulton et al., 2015) and particularly for understanding the impact of disruption and instability (Jackson, 2019). Complexity offers an ontological lens through which to view

the evolution of virtual services as the section on different uses of systems theory outlines in Chapter 1. The themes identified are then compared with the six criteria for Complex Adaptive Systems (CAS) which offers a systemic explanation for what animates a living system. This corresponds with the framing of complexity as systemic, operating across multiple scales, containing variety and diversity, and capable of self-organising and self-regulating, which leads to emergence (Boulton et al., 2015). CAS has been criticised for its reliance on the hard sciences while simultaneously forwarding an alternative management paradigm (Rosenhead et al., 2019), and there are also concerns that the investment in time and resources to effectively model an adaptive system that is characterised by unpredictability is both impossible and of dubious value (Jackson, 2019). What CAS offers instead is a metaphor for qualitative research that embraces complexity rather than taming or ignoring it. For example understanding complex systems often exhibit nonlinear dynamics, and small changes, such as changes in staff practices, can have disproportionate effects or lead to unexpected outcomes, can lead to identifying areas that have potential to bring about long-term innovation. Therefore, it is a valuable tool in this context as it may offer further insight into the adaptive capabilities displayed during the pandemic.

This process is conducted independently, and after the RTA analysis.

Complex Adaptive Systems are:

1. ***Constituted relationally****:* the interaction between different parts of services determine an organisation's capacity to adapt, rather than individual departments or functions such as IT, management or policy alone.

2. ***Adaptive:*** organisations adapt to external conditions by self-organising to craft responses that fit their needs. They engage in active sense-making to calibrate responses to the environment over time.

3. ***Dynamic****:* organisations are adaptable even in extreme conditions such as COVID-19: even though they are operating far from equilibrium, they still maintain a degree of stability.

4. ***Determined contextually****:* each CAS is context-specific. You cannot transpose one function into another department or scale up and expect fidelity in implementation, and get the same results.

5. ***Radically open:*** complex adaptive systems do not survive alone, they can draw in resources from outside themselves, and find allies and networks that cut across hierarchy, roles, and boundaries both within and beyond individual services, to create a new flow of information that contributes to sense-making and learning.

6. ***Emergence of novelty****:* nonlinear causality leads to fresh levels of in-

novation and creativity, or disastrous consequences. When a CAS is nimble enough to respond to feedback, it can learn iteratively and develop something new.

4.1.4.3 Validation and prioritisation:

The third and final analysis process was designed to validate the themes and steer the next research cycle. It was important to close the feedback loop with interviewees and make them aware of the themes developed from the interviews, and validate the themes. A process was also required to prioritise which themes were most relevant and useful to research next, in the knowledge that a boundary would need to be drawn around the next research cycle, as not all themes could be pursued. As it was important to produce research that would be relevant to research participants and that would have some practical application to those working in virtual services, it was decided to verify priorities with interview participants. To do this a Likert scale was deployed to ascertain which themes would be most valuable to investigate further. The Likert scale was chosen for the following reasons: it is a widely used tool in research for measuring attitudes and opinions, which is both quick and easy to use. It is also a cost-effective and time-efficient way to gather data (Sullivan & Artino Jr, 2013). While it is traditionally used as a quantitative tool, it also offers qualitative insights and the ordinal data allows for a simple ranking of responses, that can inform further inquiry, without the need for statistical analysis (Kero & Lee, 2016). The Likert scale was developed to ask participants to circle the response that best characterises how they feel about the different themes across 5 levels of priority.

4.2 Data analysis

The process of coding is presented in Fig 4.4 as a linear process but in practice, it was more cyclical and organic, and necessitated cycling back to recode and re-interpret new patterns of meaning in line with the spirit of reflexive thematic analysis (Braun & Clarke, 2019). With increased familiarisation, engagement with the data shifted from an initial reductive process of labelling the transcript to a dialogic engagement with the text. A shift from *"mining"* the data to *"sculpting with the data"*, demanded greater reflexive consideration of the interviews, placing the researcher within the conversation in a way that exposed theoretical assumptions and made learning the art of conducting reflexive analysis transparent. The process can be observed

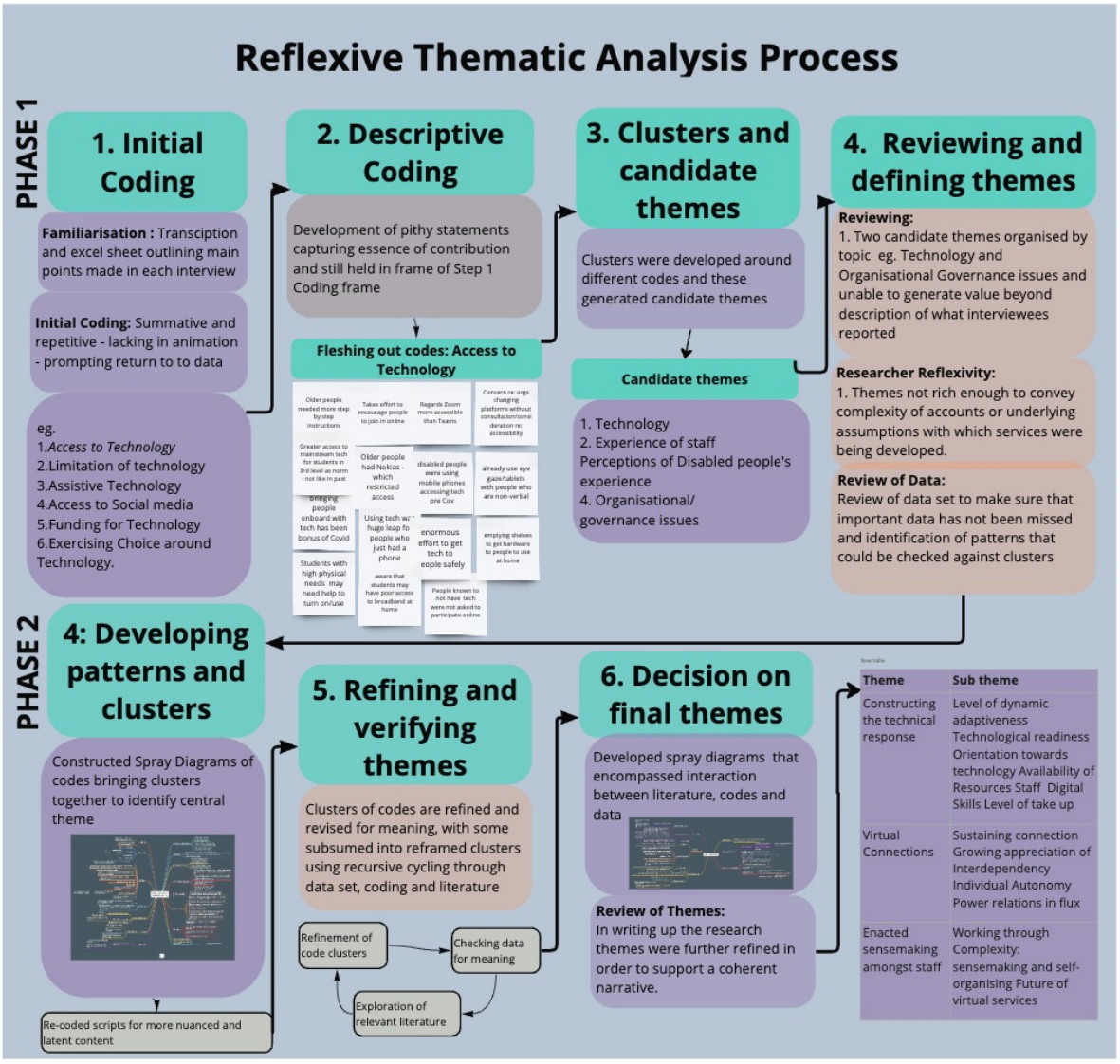

Figure 4.4: Reflexive Thematic Analysis

in the progression from initial open codes to latent codes which were more likely to be theory-informed (Phase 1), and how the patterns are crafted into themes that embrace but push beyond topic-led themes (Phase 2). In this regard, while an inductive process led initial coding, themes were developed as an interplay between data, theoretical assumptions and analysis in line with Braun and Clarke (2019).

4.2.1 Initial coding process: Phase One

1 The familiarisation process Each interview was transcribed and uploaded onto MAXQDA software for further qualitative analysis. A familarisation process began with listening and re-listening to interview recordings and mak-

ing a note on an Excel sheet of main points arising in each discussion.

Process used to develop codes The initial coding stuck closely to the procedural guidance given by Braun and Clarke in their initial paper (Braun & Clarke, 2006). Initial codes were developed by going through each interview and creating codes that summarised mostly descriptive content of the interview so that as much of the data in the interviews was coded as was deemed relevant to the topic. The approach adopted was inductive, and their value was restricted to providing a summative account of interview content.

2 Developing descriptive codes

It took another iteration to move summative codes eg. "access to technology" to bring them to life as pithy statements that could live up to the "take away the data" test (Terry et al., 2017). Figure 4.4 shows the second round of codes associated with the core organising theme of Technology where balance was sought between brevity and meaning that would indicate some degree of connection with other data items (Clarke & Braun, 2013). The semantic codes were organised into 21 subthemes to develop an understanding of some factual aspects of the experience.

3 Developing candidate themes from clusters of codes Clusters were developed around different codes which generated candidate themes: technology, experience of staff perceptions of disabled people's experiences and organisational/governance issues. There was some crossover across themes. For example, staff were included in the "*sense of community*" subtheme alongside disabled people, prompting ethical reflection on who services serve, power boundaries and interdependency.

It became clear that the initial candidate themes were constrained by being organised by topic, which can be one of the pitfalls of poor thematic analysis (Clarke & Braun, 2013). There was more insight to be generated from the data. It required a greater balance between pragmatism and a theoretically informed account of some of the more latent content within interviews. Some tentative patterns could be seen in the coding around technology. For example, it took considerable effort to bring people on board, extra time and often required the support of another person for some disabled people to participate online, which points to a complex interplay between staff orientation, availability and family engagement.

Review: The initial candidate themes were unsatisfying: they deconstructed and de-contextualised the rich accounts relayed during interviews and missed the complex dynamics at play between the different stakeholders. There was also a need to move beyond the blurriness of presenting staff

and disabled people's perspectives as distinct categories, when the interviews were with staff only. It was time to revisit the entire data set and reflect on the extent to which the themes reflected the depth in the stories and add any codes missed in the previous coding process (Braun & Clarke, 2006).

4.2.2 Coding: Phase Two

4 Developing patterns and clusters

Following a reread of the data set, spray diagrams were developed to ladder the data into fresh clusters that could generate more meaningful themes. An example of the initial *Characteristics of Connecting online* diagram is included in Figure 4.4, which attempts to restore some of the systemic interconnectedness between issues.

5 Refining and verifying themes

The spray diagram process shook up the data, but there was still a need to develop clusters that could carry latent content through to the themes. While the initial themes were developed as an inductive process, phase two required a more creative and active engagement with the data, and recourse to guiding literature to 'test' potential themes. This recursive process required much back and forth before deciding on final themes. Spray diagrams were continuously refined to support the process of sticking as closely to the data as possible in the process.

6 Decision on final themes

The final themes were developed based on the keyness rather than prevalence of the issue (Braun & Clarke, 2023). For example, the extra time that it took to set up virtual services and get people on board reoccurred throughout the data but is not considered a theme in its own right, but rather a contextual factor in the named themes. It was important to include both descriptive and latent codes within the themes to hold a contextual shape on the data. the analysis process for one interview is presented in Appendix D.

4.3 Results

The results point to three themes which contain thirteen subthemes which are presented in Table 4.1. They constitute two different meta-themes: *constructing the technical response* and *being in the virtual space,* sustaining virtual connections and engaging in continuous sensemaking. Together they represent the dual concern articulated by building or constructing something whilst at the same time dwelling/being within it (Heidegger, 1967). To

Table 4.1: Themes identified in Research Cycle 1

Meta Theme	Theme	Sub-themes
Constructing the technical response	Constructing the technical response	Level of dynamic adaptiveness Technological readiness Orientation towards technology Availability of Resources Staff Digital Skills Level of take-up
Being in the virtual space	Virtual Connections	Sustaining connection Growing appreciation of Interdependency Individual Autonomy Power relations in flux
Being in the virtual space	Enacted sensemaking amongst staff	Working through Complexity: sensemaking and self-organising Future of virtual services

use an analogy: developing online services could be described as building the plane (constructing the technical response) whilst flying it at the same time (being in the virtual space).

4.3.1 Constructing the technical response

Regardless of size or purpose, all services faced significant technical challenges. A successful transition was the product of a dynamic interplay between organisational style, level of dynamic adaptiveness, technological readiness, orientation towards technology as an empowering tool for clients, and how these factors interacted with the availability of resources and staff willingness and know-how to adapt and innovate. It also relied on a sufficient level of demand and participation amongst disabled people to proceed.

a. Level of dynamic adaptiveness: For most organisations, migration to online services was first initiated by individual staff who set up ad hoc sessions such as yoga classes on Zoom. As the weeks progressed, larger organisations co-ordinated responses across services but others were slower to respond, leaving staff to run solo. Staff in one organisation brought computers home prior to the official lockdown to test how everything worked. A local organisation took a week to respond and attributed this to their size and family-

centredness, while another seized the opportunity to expand their project reach:

> *I thought, great, I can push this now and push it with the organisation...everyone bought into it. So we actually had quite a quick turnaround; within a week of the lockdown we had already started doing scheduled Zoom activities with members* (*Participant 7*).

Some took time to redesign courses or develop internal capacity, but a delayed response related to a desire to preserve their current way of functioning. These organisations were slower to resource online options and favoured the continuation of in-person services as essential services. The level of dynamic adaptiveness could also be detected in the extent to which organisations engaged beyond their own boundaries. Several organisations engaged external support to design services. They reached out to potential funders, policy-makers, course designers, industry and a community of practice for AT for funding and learning. A university disability service became a central resource to online teaching across the college, where they had previously been on the periphery.

b. Technological readiness: The sophistication of the organisations' technological infrastructure impacted on their starting point. While a strong internal infrastructure smoothed the transition somewhat, even those with dedicated assistive technology services struggled to create a viable infrastructure. While one service was unable to use technology already installed due to a lack of training, another had transitioned to a new record management system prior to the pandemic which gave staff confidence to transfer their learning to a virtual service:

> *I think the fact that that group were working on a new system and working on that system together, helped. . . if anybody did have a fear of the technology. . . it's encouraged them to realise it's manageable* (*Participant 12*).

Most organisations, however, did not have a technology infrastructure that could support the transition. They lacked up-to-date hardware, accessible websites, access to smartphones and adequate internal IT support. For example, one website was *"held together with rubber bands"* making it impossible to upload an accessible timetable of events. Another could not embed videos deemed essential to communicate with clients and a small national

organisation relied on their external IT contractor for guidance on accessible platforms and General Data Protection Regulations (GDPR).

c. Orientation towards technology: Organisational orientation towards the role of technology in people's lives also impacted on their response. Technology was a given in third-level institutions and in organisations with existing AT services. The use of WhatsApp was discouraged by the Health Service Executive (HSE) and organisations drew a boundary between in-service supports and encouraging use beyond the context of the service. Safeguarding dilemmas were ongoing:

> *I was meeting a lot of resistance, in terms of "oh but you can't use WhatsApp, oh what about GDPR? but that wouldn't be secure - then you would be teaching them to use social media and what if they did something afterwards that wasn't ok?* (*Participant 1*)

A broad lack of understanding of the potential of technology to enhance the quality of people's lives prior to the pandemic also impacted on the organisation's understanding of what was needed now:

> *There's inventories of PCs and printers and coffee machines, but there's no inventory of equipment that people could use to enhance the quality of their day.* (*Participant 10*)

When it came to developing a virtual service, this team operated in isolation with little support from higher management. In organisations with a poor understanding of the role of technology, staff and disabled people alike were also more likely to have issues around digital literacy.

d. Availability of resources: Organisations varied in their approach to funding virtual services, staffing and time.

Funding. Some interviewees developed proposals to divert funding that were immediately accepted by internal management and the HSE. Others sought external funding for equipment, and one described how they "*emptied their shelves*" of all the equipment they had to equip both staff and clients. However, virtual services were not a priority in all organisations: one interviewee from a large national organisation described how they still relied on a free Zoom account, several months into the pandemic, citing a '*rigidity*' within the governance of the organisation that made it impossible to access resources:

> *We ran out of Wi-Fi at one stage and staff were using their own mobile phones as hotspots to create Zoom classes, and so that's the kind of thing... where staff have gone beyond what they would be expected, really, so they were basically using their own equipment, their own phones, to still make that contact.* (*Participant 11*)

Staffing. The availability of staff impacted the development of virtual services. Some staff within large national service providers were initially redeployed, and most services were running with a reduced staff–client ratio. Staff were also limited in their capacity to contribute or support participation in virtual services where other priorities intervened, particularly in residential settings. This quote illustrates the tension between competing priorities:

> *It's not that people don't want to do it. Yeah, it's not that at all. It's that...It's just a busy day that they have and they may say ok, Tuesday afternoon I'm going to do this with such and such a person. Next thing Tuesday at 12:00 o'clock they are called to a meeting or something happens. . . they don't get to the session* (*Participant 1*).

Technology and broadband. Access to technology and broadband often depended on geographical location, resulting in an inability to work for some staff, as well as a lack of access to services for some people with disabilities:

> *Some people wouldn't have had a smartphone, so we did have difficulty to fully utilize some the other kind of mediums with those people* (*Participant 4*).

Time. The transition to online services required extensive time investment in the provision of devices and training to use them, ensuring internet access, as well as allowing space for people to become acclimatised to using online platforms and being online. One interviewee described the multiple tasks thus:

> *...delivering sessions, then to be off, driving across the city, collecting the device, cleaning the device down, setting the device up and doing exactly the same, bringing it back. And that was never just a one-off, it constantly had to be redone.* (*Participant 11*)

Supporting people to get set up with technology and broadband access was most difficult from a distance and often involved face-to-face meetings

or house visits. Getting students set up with accessibility features and AT in preparation for college was impossible remotely: it required preparing laptops with accessibility features and observational competency assessments. There were concerns that supporting this remotely would have a greater cost in the long run as this interviewee suggests:

> *It's gonna be so difficult to support a student who has technical difficulties with a device or service or a software - the flip side -that this will be pushed out so much and I need to meet them at so many more regular intervals* (*Participant 18*).

e. Staff digital skills: A lack of digital literacy amongst staff was overcome by willingness to work and learn together. While organisations with a specific AT remit had a head start, frontline staff were not recruited for their technological skills and pre-existing digital skills did not necessarily correlate with successful transition as this interviewee suggests:

> *Some staff would have been similar to clients in terms of their use of technology – it would have been very minimal. So, then you have to bring them on that journey as well. Some people were going "yeah, I really know this stuff" and some people said "I haven't a clue". But sometimes the people that didn't have a clue were interested in adapting, but not everybody was* (*Participant 5*).

Staff who transitioned often just needed to be one step ahead of those joining a session, and have one tech-savvy person on a team to guide them. However, not everyone adapted to being online or contributed to the overall response due to a lack of digital access, redeployment, and family or caring responsibilities compounded by the pandemic.

f. Level of take-up amongst disabled people: Online services particularly suited some people with medical or anxiety issues who struggled with face-to-face services, but it did not suit everyone. Some were `intimidated' by technology. Others did not want to see their own image mirrored back to them, or be put on the spot in an environment where they felt exposed. Some people experienced greater mental ill health, along with all the other complications of living through a pandemic. One interviewee described how one person with a degenerative condition, and who had a strong engaged presence at in-person courses, decided not to participate online:

> *He said "It's shocking for me to see what's happened to me." And he says, "I avoid looking at myself " and he said "I couldn't look at myself. I wouldn't be able to do the course*" (Participant 3).

Many disabled people did not have phones, and where they did, they were limited to phone calls and texting. Again, digital literacy and access to technology was not always a deciding factor in participation, and those who found value in online services often found ways to participate, even when it meant borrowing a phone. In many instances, investment of staff support influenced the level of take up: they encouraged people to onboard via phonecalls, creating individually tailored stepping-stones to participation, including one-to-one or hybrid sessions. They also developed instructions and online etiquette guidelines to ensure everyone understood they could be seen on camera, and had opportunities to contribute.

4.3.2 Being in the virtual space

The following section deals with themes associated with the enacted response, were divided between the development of virtual connections and enacted sensemaking amongst staff. Virtual connections refers to sustaining connection and the growing sense of interdependency that emerged which also respected autonomy, which also threw traditional power dynamics into flux. Enacted sense-making involved working through complexity and consideration of the future of services.

4.3.2.1 Virtual connections

a. Sustaining connection Staying connected with peers and staff was regarded as the most valuable aspect of meeting online. It allowed everyone to spend time with friends and peers who were "going at the same speed". In some instances the named activity acted as a vehicle for spending time together, and getting emotional support, as the following account conveys:

> *They can catch up with each other and give each other mutual support and maintain the really valuable relationships that they've made in the groups and they get to laugh and joke, cry at times and share the good things and the positives* (*Participant 6*).

Familiarity was a prerequisite for successful online engagement, whether it was with peers, day service staff, volunteers or facilitators for sessions or fa-

miliar locations. It created the conditions for banter and humour in interactions and created a ground from which to extend levels of comfort, including amalgamating services and groups. Familiar environments impacted positively on the participation and exam performance for some people with autism or anxiety. Familiarity for people with severe to profound intellectual disabilities involved embodied cues from facilitators and content showing familiar environments.

It was important for people to see each other and it was also important to be seen. For education services, this meant staff turning on their video when talking to disabled students and creating more video-based web content. It was equally important to be heard: for attendees to be free to say what they wanted to say and be listened to. One service kept a chat room open all day that ran beside programmed activities:

> *When I go into the chat room I see the people really suffering from isolation - they were in there - they could talk. They'd have a staff member there, they'd have their friends there. . . a couple of people, while this was all going on had a loss, they had parents who passed away* (*Participant 11*).

An understanding of the significance of informal "*kitchen-table*" conversations formed part of the design of online services, but the coffee break in more formal training sessions also translated online well. Being in a virtual space together brought a level of transparency that meant that everyone could see what was happening and get their view across, including via the Chat function, which meant that they didn't have to talk over each other or compete for space.

b. Growing appreciation of interdependency: As services 'entered' people's homes in novel ways and family members became part of online events, human interdependencies became explicit as "*everyone got to see a little bit of each other*". Parents supported their adult son or daughter to access sessions, siblings supported cookery lessons, and everyone engaged in the '*banter*' and '*craic*'. Families were now more immediately involved in their family member's world and staff were also being observed as they worked:

> *There's a lot of magic involved in what happened and a lot has got to do with the willingness to be transparent and expose yourself like this into somebody's home* (*Participant 11*).

Staff were also cautious about respecting the privacy of families. Whilst some acknowledged that their primary purpose was to support the disabled person, they were equally aware that some families were also struggling and needed support. There was a heightened sense of appreciation for each other resulting in a high level of positive feedback and a new understanding that everyone needed each other:

> *Some of the parents said that they {disabled person} just waited - that this is all that they wanted to do that day. They were waiting half an hour ahead of time for the thing to kick off and it made their day (Participant 10).*

Disabled people expressed a renewed appreciation and level of support for each other including the smoothing out of longstanding relational difficulties and a levelling of hierarchies within peer groups.

c. Individual autonomy: Engaging remotely from the safety of home gave some people greater autonomy to make active choices about when and how to engage and also access courses at their own pace. It put the responsibility to initiate engagement on the disabled person and gave many a new level of control, as the following quote exemplifies:

> *There's one person who absolutely flourished in the online way of doing things. I think what works really well for him is the element of control that he has. He can decide whether he wants to be there or not. He can mute himself if he wants. He can turn off his camera if he wants to. I think those little controls meant quite a lot to him (Participant 2).*

Autonomy was curtailed in other ways: some people had little privacy to speak to staff about issues they would rather not discuss in earshot of family, and others were reliant on those around them for support with setting up the call and participating. Some students no longer had access to the Personal Assistants they would have had in college, making simple tasks such as turning on the computer to attend lectures difficult.

d. Power relations in flux: The move to virtual services impacted entrenched power dynamics across services, as self-organised activity at a service level produced new opportunities for meaning-making, in the absence of a national strategic response. A growing sense of interdependence juxtaposed

with autonomy, as well as a shift towards co-facilitating sessions, put the dynamic between 'user' and 'provider' into flux. A felt sense of everyone being in it together opened up an opportunity to create greater parity within relationships between disabled people using services and staff. In some instances, attendees co-facilitated or led sessions and at other times, they led without staff direction or facilitation.

This shift in dynamics was a source of discomfort at times: one interviewee told of a colleague's decision not to run further sessions with breakout rooms due to frustration that her prepared activity was being overshadowed by conversation between participants. In other instances, management prioritised meetings over supporting participation in virtual services and staff who had worked with the same people for a long time made decisions *for* them about their capacity to participate as the following quote illustrates:

> *We asked people, do they have a smartphone? And do they have a computer? And if they didn't have either of those, we went, "well, they can't do it", instead of saying "Ok..maybe there's a family member has this; maybe somebody in their family could come over and show them". So, there were decisions made that ruled people out of things* (*Participant 9*).

This interviewee went to on to explain how these incidents prompted internal reflection that led to changes in practice.

Relational power between disabled people and organisations: As technology replaced geography as an access point to services, the potential to migrate to a different organisation was regarded as a risk to the future of face-to-face services. One interviewee reflected that day services were not investing in creating the kind of stimulating environments that attendees needed to sustain well-being and would need to "*up their game*" to retain levels of attendance beyond the pandemic. Others suggested that disabled people might make different choices if they controlled their own budgets and could choose between services, while a Disabled Persons Organisation member reported that were already experiencing an upsurge in participation, stating that people were leaving day services to join:

> *quite a lot of our participants are involved in day centre activities, and with the lockdown, their contact stopped. Also, there was very little IT contact with participants, compared to what we were doing. . . we had a lot of participants* (*Participant 7*).

Relational power between staff and organisations: Power shifts included an increase in staff agency to initiate and contribute to the collective response to going online. Some staff "managed up" by preparing plans within their teams for sign off by management, and proactively securing permission to repurpose funds; others with AT expertise found themselves central to the task of coordinating the organisational response. These shifts led to a growing realisation that governance structures constrained staff capacity to deliver a valuable service on the ground under usual circumstances. One interviewee described it this way:

> *The guys come here for a place to go everyday, in place of going to work. So this is their life. And what they do during the day here - it's got to be beneficial, nourishing, rewarding and worthwhile, that they actually want to come here. And I think - service providers would be doing a better job if they took seriously what the content of the day consisted of, because it does affect mental well-being to a large extent... but I think the system needs to be given a jolt, in the same way COVID has given us all a jolt* (*Participant 10*).

VS had the effect of creating a shift in relational power at different levels of the system, prompting greater ownership amongst attendees and reflection amongst staff.

4.3.2.2 Enacted sensemaking among staff

Creating and working within the online environment required balancing the complexities of working in a crisis context where services operated far from their usual equilibrium. Uncertainty around personal and family health, job security and the trajectory of the COVID-19 virus formed an ongoing backdrop to the enacted response.

e. Sensemaking and self-organising: Services were enacted as a live interaction between people working in concert with each other to create the conditions for positive and healthy engagement.

Staff found themselves continuously managing complexities in:

- developing session content for sessions and session delivery
- navigating technology and facilitating at the same time
- balancing session activity and conversation
- ensuring equity of contribution and participation across participants

- creating an upbeat social space and a safe space for tougher personal issues

- balancing individual and group needs

- balancing individual and family needs

- dealing with work and home life in one space.

Getting the balance right required a new level of alertness and constant sensemaking to calibrate the response to best effect. Sensemaking about what was needed, and when, relied on collaborative work practices that emerged as a relational dynamic between different contributors, and a level of self-organising that stepped beyond the usual organisational hierarchy. One interviewee observed learning amongst peer trainers around managing a chronic condition:

> *We had two people who are very newly trained, that amazed the whole lot of us, just knocked it out of the park, just like they were natural. But they spent a lot of time talking to each other and saying: 'let's do it this way'* (*Participant 3*).

Everyone stepped up and beyond their usual roles and "*embraced new responsibilities*" and made the most of organisational resources and crafted a meaningful response. In doing so, they found new levels of creativity within themselves. Together, they kept contact with people where it was in their power to do so, often over and above their working hours. In doing so, they innovated and developed new skills in real-time.

f. The future of virtual services: Interviewees viewed COVID-19 as an opportunity to reorganise services and all but one expressed a preference for blended learning in the longer term. As one interviewee suggested, something new was happening that was worth developing further:

> *We discovered that we had creativity within us. It was a pleasure to put it into a shape that ended up being delivered as a programme that had had a beneficial outcome. So, in the same way I think the content of the service delivery, needs to be, much more focused on, rather than just providing a physical building* (*Participant 10*).

There was a strong desire to continue to provide services beyond 9 to 5, and continue to create greater parity of esteem between participants and staff. Interviewees spoke of the opportunity that the disruption of *'business as usual'*

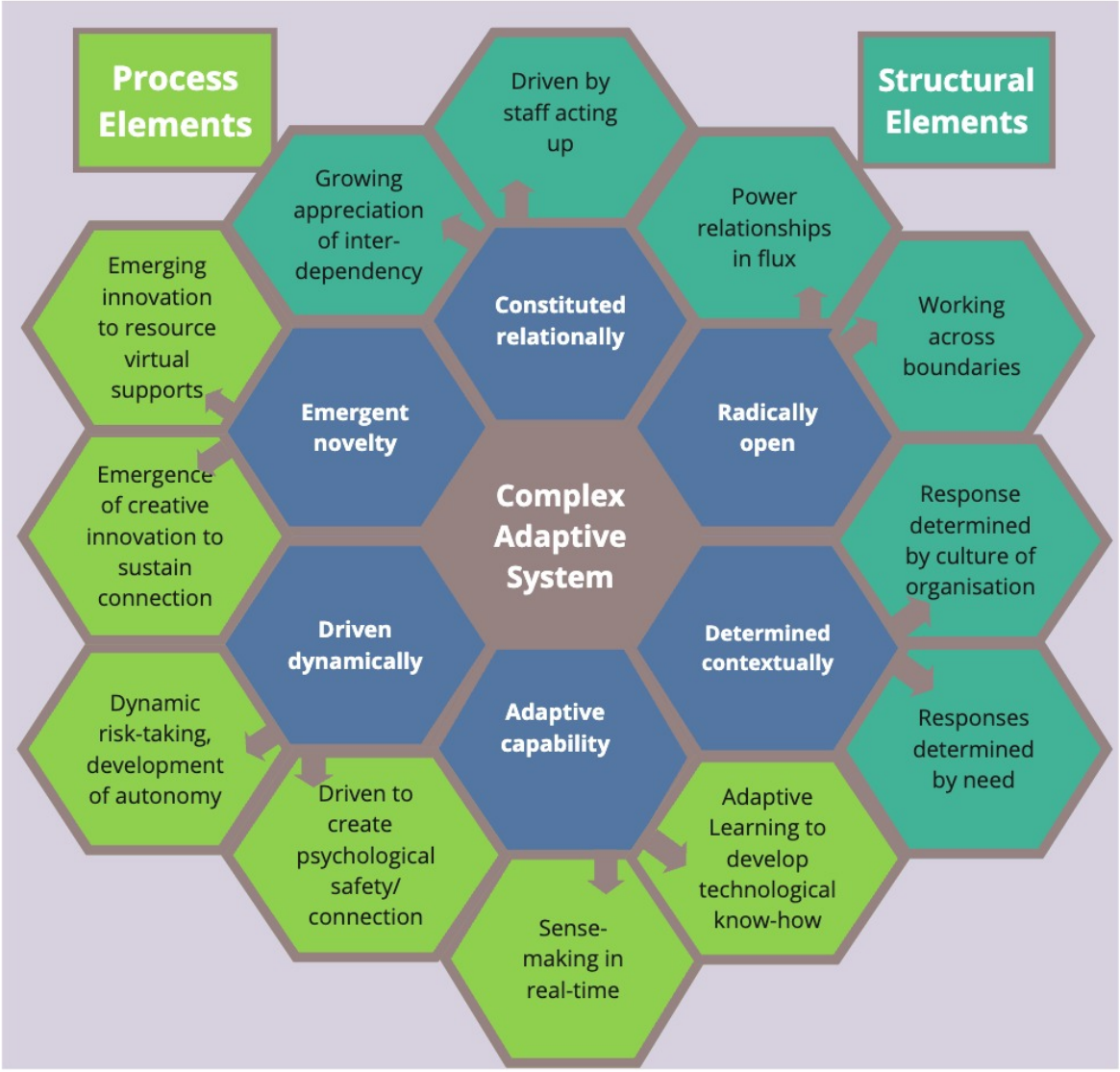

Figure 4.5: Development of Virtual services as a Complex Adaptive System

had created and how it had unstuck a system in which it was sometimes difficult to serve beneficiaries effectively: they would be 'disappointed' if the innovations fell away post-pandemic.

4.3.3 Disability services as Complex Adaptive Systems (CAS)

The themes were compared with the six defining characteristics of Complex Adaptive Systems (Preiser, 2019) leading to the development of Diagram 4.5 and the following explanation. The first three characteristics relate to structural elements and the second three relate to process elements in CAS. They are presented here in clockwise order, starting at the top of the diagram.

The characteristics of Complex Adaptive Systems are:

1. *Constituted relationally:* A growing sense of interdependency is evident in the co-ordination between different parts of disability services to construct the technical response across different departments and organisational functions as no individual departments or functions – such as IT, management or policy – can develop virtual services alone. This coordinated activity to bring different functions together is driven by staff managing up and beyond their usual roles.

2. *Radically open:* Co-operation cuts across hierarchy, roles, and boundaries within and beyond individual services in a radically new way, that is unfamiliar territory in services. It requires an openness to new ways of delivering services, and reaching out beyond the usual boundaries to learn and deal with funders, and seek help, which requires an openness to take in new information and act in new ways. Adaptive organisations also evidence radical openness in the changing power dynamics between people with disabilities, staff and organisations.

3. *Determined contextually:* Each organisational response is shaped by organisational purpose and the needs of the population served rather than a preconceived generic design. There is no one-size-fits-all solution and organisations retain their own cultural ethos even as they adapt.

4. *Adaptive capability:* Services adapt to external conditions by developing technological know-how and engaging in active sense-making to calibrate responses over time, rather than being incapacitated by restrictions that force physical distancing.

5. *Driven dynamically:* Services are driven by the desire to sustain a degree of stability even as they are operating far from equilibrium in unstable operating conditions. They achieve this by creating a safe space online for people to sustain connections. This adaptation is risky, and the very act of taking risks enhances both people with disabilities and staff.

6. *Emergence of novelty:* The response is characterised by nonlinear causality which cannot be anticipated at a strategic level with any certainty of foresight. A fresh level of innovation and creativity is evident in how staff work around external conditions, respond to feedback, and learn iteratively, resulting in the creation of new ways of sustaining connection and resourcing the service.

The link between the practices that support the emergence of CAS are linked to the themes in Table 4.2.

Table 4.2: Practices, CAS and Subthemes

Practices	**Leading to the emergence of CAS**	**Evidenced by sub themes**
Developing technological know-how	Adaptive	
Sensemaking in real-time	Determined contextually Adaptive	Working through Complexity: sensemaking and self-organising
Managing-up and out	Radically open	Resourcing the response Power relations in flux
Innovating creatively	Emergence of novelty	Resourcing the response Sustaining connection
Developing systems sensibility	Dynamic	Growing appreciation of interdependence Individual Autonomy Future of services
Creating containment and safety	Constituted relationally	Sustaining connection Level of take-up
Engaging authentically	Constituted relationally	Growing appreciation of interdependency Power relations in flux Sustaining connection

4.3.3.1 Verification and prioritisation of findings:

The Likert scale was next developed using each of the themes and shared with interviewees along with a report summarising the findings for research and inviting feedback. They were invited to read the report and rate the importance of nine potential areas for future research. Eleven of the twelve interviewees responded. The theme of "feeling safe during online contact" was consistently regarded as the top priority. It was followed by "feeling meaningfully connected online."

4.4 Discussion

The practices that enable the innovation of services as a complex adaptive system at a time of great upheaval are characterised by enacting a response with two reciprocal processes: the service needs to be 'built' at a logistical and technical level, and attention must also be given to how to be or

`dwell' within the digital space (Heidegger, 1967). Learning to fly the plane while building it is a useful analogy: it describes the development of a self-producing autopoietic system which is structurally coupled with the environment though not determined by it (Maturana & Varela, 1987). Autopoeisis is the process through which living systems self-create from their own parts, which aptly describes how the emergence of virtual services is a product of the organisations they come from, and adaptation ensures their continued survival in a changing environment. This and other findings are discussed in the next three sections and are also published in two papers (O'Donnell et al., 2022; O'Donnell et al., 2024). The technical and logistical themes associated with constructing the virtual response are discussed first and their implications for future service design. The value of framing the emerging situation as a Complex Adaptive System is then discussed along with the questions it raises for future innovation. Thirdly, an exploration of the staff practices that contribute some of the essential relational components of virtual services are discussed along with their implications for the value of virtual services. It is important to note that, had the results indicated that staff were implementing policies made elsewhere rather than adapting and innovating with a sense of personal purpose, it is unlikely that the innovation could be described as acting as a Complex Adaptive System in motion, as having challenged the power dynamics to the same extent, or led to the same level of connection.

4.4.1 Constructing the technical response through the development of "technological know-how"

The conditions that come together to construct virtual services include some degree of organisational readiness and a positive orientation towards technology, combined with an ability to access resources. These factors combined with the development of digital skills form the basis for what I refer to as "technological know-how". Prior to the pandemic, a lack of understanding of the potential of technology for individuals with disabilities led to exclusion from the digital world (E. M. Smith et al., 2022; Ueland et al., 2021). Even so, even the most novice users of technology can develop enough technological know-how to construct and deliver online services as part of a coordinated team effort. While Hilty uses *'technological know-how'* to describe cross-disciplinary tele-behavioural health competencies, it is used here to describe the use of technology using procedural and tacit knowledge as part of a shared practice (Hilty et al., 2017, 2020). This corresponds with research that suggests that virtual services require investment in time and effort and

depend on staff attitudes towards technology (D. Chadwick et al., 2022; Fortune et al., 2024; Gelfgren et al., 2022; Seale, 2023).

The following quote is from an extended abstract published on this research (O'Donnell et al., 2022):

> The degree to which organisations were able to pivot and embrace innovation initiated on the ground was often dependent on the cultural understanding held at an organisational level about the potential role of technology in people's lives.
>
> Organisations where AT was understood, were quick to respond, as was a Disabled Person's Organisation with an independent living ethos. Even so, organisations found themselves "raiding the shelves" for technology they had, and it did not guarantee that disabled people accessing services had the technology they needed at home or access to broadband.
>
> Phone usage and in particular smart phone usage was poor amongst attendees in many services, and social media was not encouraged, due to concerns around GDPR and safe-guarding. Digital literacy amongst frontline staff and disabled people posed an additional hurdle, with staff often struggling to stay one step ahead of the people they supported. While these factors played a significant role in outcomes, they did not stifle the impetus to innovate. (O'Donnell, MacLachan and Desmond, 2022, p. 11).

Going online is also a resource-intense process: it takes time to develop digital skills, design the service from both a technical and content perspective and to support the onboarding of people with disabilities. Staff were often just one step ahead of disabled people using services in terms of technological know-how in the beginning; over time, they too developed a degree of know-how and supported staff and each other to use the online platforms effectively. In doing so they can be described as early adopters in the development of virtual disability services.

The very fact that most of the interviewees are now effectively early adopters, despite having a poor level of digital literacy prior to the pandemic, is significant. It raises questions about how we frame the development of digital skills. The rapid transformation, in less-than-ideal circumstances, suggests that not only are digital skills necessary to ameliorate against the negative effects of the pandemic but that it is also possible to learn how, even in high-stakes situations. Learning **how** to construct the technical response, is about

doing, and doing it with others, rather than acquiring skills at an individual level or in an abstracted context. Competency frameworks for digital skills in social care which rely on a knowledge production paradigm or learning 'what', have much to learn from this experience. Practice theory may be more useful than competency framing to understand the construction of virtual services as it shifts the focus from the individual to the process of collective sense-making in context, but most importantly because it can encompass the deeper reasons behind developing technological know-how which is clear in this research: the innovation is a human-centric innovation rather than technologically driven.

4.4.2 Being open to adapt and learn

Most initiatives started on the ground amongst staff, who then managed up by bargaining for resources and legitimacy to continue. Many acted as boundary-spanners (Wenger, 2011), seeking support from across the organisation and sector in a way that could be described as self-sustaining as well as self-organising. This capacity to be radically open is crucial to the survival of a self-organising system, which might otherwise "*starve*" itself of the resources it needs to remain viable (Maturana & Varela, 1987). The literature also suggests that organisations act with a patterned consistency embedded within their own conditioning (Buckle, 2003; R. C. Chia & Mackay, 2023). This logic may or may not be explicitly articulated, but the implications can be observed. Regardless of why there was no strategy, organisations continued to operate purposefully, in accordance with patterned and persistent self-organising dynamics even in chaotic conditions (Buckle, 2003). For example, at a micro level, when staff who had previously assumed technology held no value for their client group understood that it would be the only way to access the world, they then drew on their creativity, and resilience to manage risk, and developed shared decision-making practices to support people to get online, a finding replicated in other literature (Seale, 2023). If on the other hand the culture is constraining, then organisations with tight controls and formalised procedures are less likely to innovate (Mintzberg & Waters, 1985) and may freeze or remain stuck (Lewin, 1942). This suggests that the capacity to innovate does not rely on external drivers such as policy, but may be driven by internal culture. This finding is significant as it offers an example of how complex self-organising systems operate as discussed in Section 2.2.3. This research also suggests that the desire to learn in real time was driven by relationships and a desire to stay connected that overrode resis-

tance to technology-mediated working.

4.4.3 Enacted sense-making and creating a safe environment

While adapting as a complex adaptive system is a good descriptor of the systems in motion, it does not describe how staff engage with complexity (Jackson, 2019; Kwamie et al., 2021). Exploring *what staff do when they do what they do* in practice (R. Ison, 2017) reveals a process of enacted sense-making that effectively reframes services as a relational dynamic between people rather than defining services by roles and functions (R. Chia & Holt, 2006; Raelin, 2011). Staff can be seen to draw on their personal and collective creative capabilities, harnessing skills beyond their job roles and stretching their creative capacities, making the most of limited resources, even when it takes them far beyond their comfort levels. By opening up the boundaries of an online session to include other family members, where appropriate, a deeper appreciation of the interdependencies between everyone evolves into a sense of interconnectedness that changes the relational and power dynamics between everyone. This fills the void left by higher management and policy-makers as the traditional holders of symbolic role-based power (Bourdieu, 2002) and produces new opportunities for meaning-making and enhanced agency and equality between everyone in the online space.

4.4.3.1 Creating conditions for safety

Staff also create the space for safety online through authentic engagement (Krippendorff, 2009). This requires a willingness to be seen as vulnerable whilst sustaining a sense of safety for attendees. The quality of staff presence includes using facial expressions, gestures, voice and humour as well as conveying ease with the technology that gave people accessing services confidence in their ability to adapt in an environment experienced as safe.

But it also goes deeper than a transactional professional relationship. Staff tolerance for staying with the discomfort of not knowing how to be or what to do, also acts as an invitation to attendees to exercise greater agency over their participation and contribution even when it feels risky. Interviewees observe that disabled people move from being what White and colleagues describe as "*occupants*" of services to being "*contributors*" (White et al., 2010). This calls for an enacted sense of awareness of both self as practitioner, the other, as well as the online social field (Lewin, 1942) which goes beyond the restrictions of the screen. Enaction describes how bodily interaction, perception and emotion determine how we engage with the world, in a way that

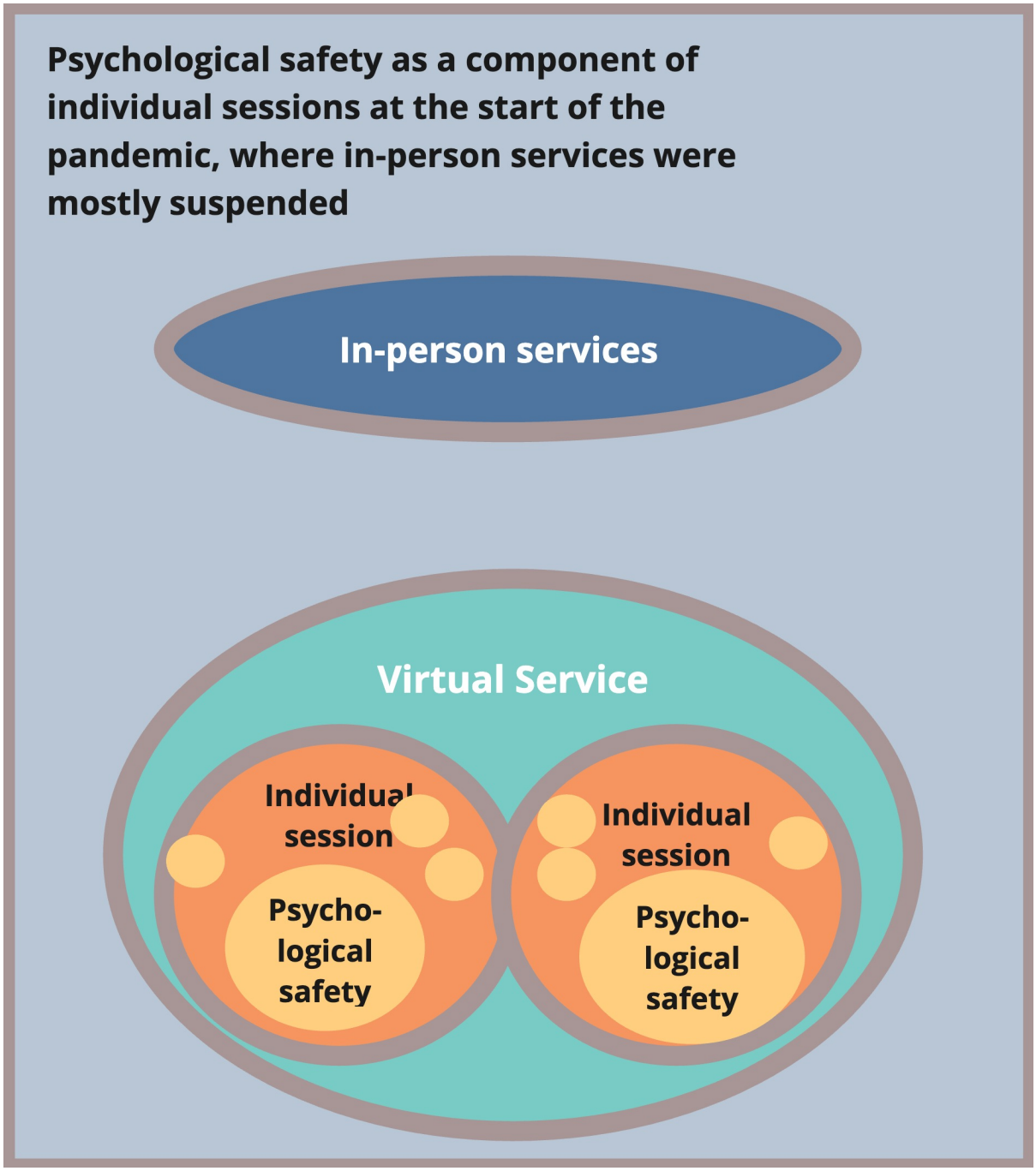

Figure 4.6: Virtual services and psychological safety

precedes cognition (Varela et al., 2017). Effective action calls for a strong sense of presencing, described as deep listening to anticipate what to do in the moment with a future orientation to what is needed next, rather than what has gone before (Senge et al., 2005). A strong sense of presence may be a key contributor to an online environment experienced as sustaining and psychologically safe. The findings from these interviews suggest that individuals feel safe to engage and innovate, take risks without fear of negative con-

sequences, express ideas, opinions, and concerns without judgement or retribution in line with the definition in the literature (A. Edmondson, 1999; A. C. Edmondson & Bransby, 2023). When people feel seen and heard, they feel they matter, which leads to meaningful connections (Costin & Vignoles, 2020; George & Park, 2016). This places psychological safety in a key position in relation to effective virtual services, which at the start of the pandemic sit separately from face-to-face services which are mostly suspended at this time (see Fig. 4.6).

4.5 Conclusion

The overall finding is that virtual supports offer a viable alternative for sustaining services when face-to-face services are not feasible. Human relationships are the primary driver for this development and contact can be mediated virtually, as this research finds that relationships can be sustained online and are critical for reducing isolation which is consistent with other studies in this area (D. Chadwick et al., 2022; Fortune et al., 2024; Seale, 2023). Remaining open to learning amid complexity is key to the evolution of virtual services. It supports the development of technological know-how and allows for innovative practices that create a space for people to see each other in new ways and have greater autonomy and choice over their interactions. There is some suggestion that the degree to which staff are fully present in the online space may contribute to creating psychologically safe virtual spaces for meaningful connections to arise, and this interplay forms a kernel for virtual supports. It is threaded throughout each theme in the findings. The link between psychological safety and meaningful connections, and the conditions that give rise to them, is the subject of the next research cycle.

CHAPTER 5

Psychological safety and meaningful connection

We can learn to work and speak when we are afraid in the same way we have learned to work and speak when we are tired. For we have been socialised to respect fear more than our own needs for language and definition, and while we wait in silence for that final luxury of fearlessness, the weight of that silence will choke us. (*Lorde, 2020*)

5.1 Introduction

This chapter presents the second research cycle in this study. It investigates the conditions that give rise to psychological safety and a sense of meaningful connection online. It follows on from interviews in research Cycle 1 that indicate that psychological safety and meaningful connection are key components of the success of Virtual Services and warrant further investigation. The staff practices that support safe virtual services are explored through a World Cafe to gather diverse views on these two concepts from staff working in Virtual Services. The research approach, process, analysis and findings are presented along with a discussion of the findings and how they link with the first research cycle and inform the third one.

5.2 Research approach

This approach taken in this cycle was to conduct a qualitative focus group in the form of a World Cafe with staff working in virtual services to inves-

tigate how psychological safety and meaningful connection were fostered in running sessions. The focus is laid out in Figure 5.1 which gives a snapshot of all the considerations that informed the design including the questions, the quest for improvement and key decisions on the execution of the research.

5.2.1 Research focus

The research approach was guided by the outcomes of the first cycle which led to the following **situation of interest**: the conditions necessary to create meaningful connections and psychological safety in online services for disabled people. This situation was then reframed as a **system of interest** which formed the basis for the research questions and a Conceptual Activity Diagram to guide the research:

> **a system to bring practitioners and disabled people involved in the design and practice of running synchronous online community spaces together (*what*), using World Cafe, to learn together (*how*) about the conditions that support the quality of online connection and psychological safety (*why*).**

This system of interest formed the boundary for the research to be undertaken. See Fig. 5.1 for a snapshot of the research approach.

5.2.2 Research framing

The purpose or quest for improvement was to develop knowledge about how psychological safety and meaningful connection can be fostered in Virtual Services and to create an opportunity for learning amongst research participants. This research cycle sought to be relevant to participants by involving them in the co-production of knowledge that could inform their practice. Again, the research adopted an appreciative approach and this informed the choice of methodology.

5.2.3 Selecting research questions

The research questions were developed by cycling back through the findings of Cycle 1 and engaging with FreedomTech colleagues to ensure that they corresponded with the call for 'powerful questions' that may be of interest to potential participants and prompt discussion and reflection (Brown, 2010). The resulting research questions are:

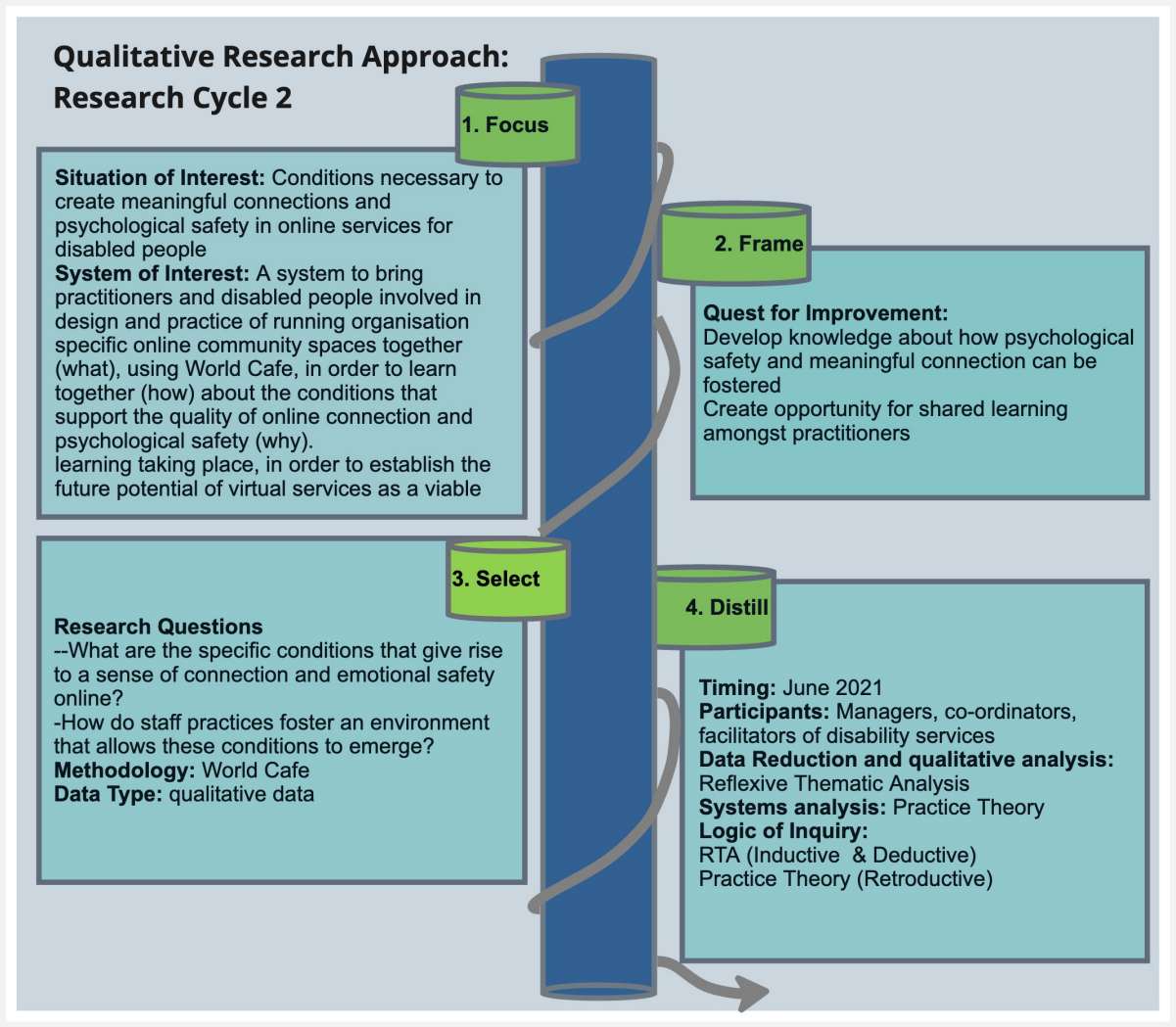

Figure 5.1: Research Approach: Research Cycle 2

1. **What are the specific conditions that give rise to a sense of connection and psychological safety online?**

2. **How do staff practices foster an environment that allows these conditions to emerge?**

5.3 Methodology

The World Cafe methodology is next introduced, including the rationale for using it, the research design, and the steps involved in managing the group process on the day. A Conceptual Activity Diagram in Fig 5.2 gives an overview of this process.

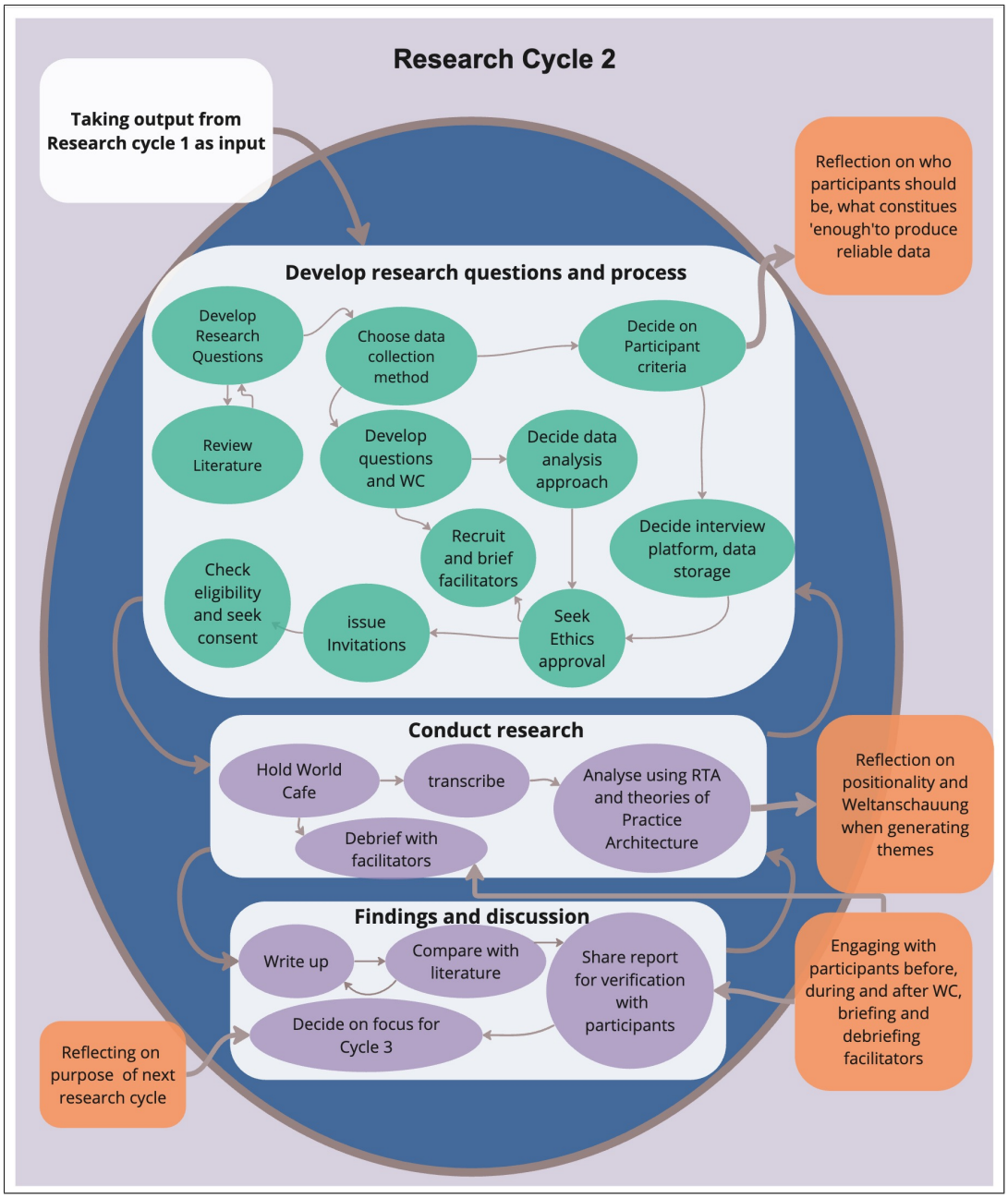

Figure 5.2: Conceptual Activity Diagram for Cycle 2

5.3.1 World Cafe

The World Café is a participatory methodology that brings people together in a highly structured process to have a conversation that can support learning and change (Brown, 2010). It stems from organisational development and participatory sense-making in practice settings, and has more recently found its way into qualitative research where it is used to complement other methods by supporting the exploration or verification of a research topic (Clements et al., 2024; Löhr et al., 2020). It is essentially a way of tapping into the natural flow of self-organising systems, where each micro-exchange becomes a fractal of the larger conversation (Steier et al., 2015). The idea is to `cross-pollinate' knowledge and experience around the room (Jorgenson & Steier, 2013). This leads to the creation of a 'larger pool of meaning' for reflection and inquiry that is likely to be more reliable as it is not subject to distortion caused by relational dynamics amongst participants (Senge, 1997). Like focus groups, it is a discursive method that supports collaborative dialogues. However, whilst focus groups are only suitable for small groups, World Cafes can accommodate large groups. Focus groups are led by a facilitator and a set group of people, whereas the World Café format offers a more flexible self-organising format, where the container is held by the facilitator, but they are not the focal point or expert in the discussion. This reduces researcher bias influencing the discussion. The World Café is also suited to working with peer groups where there is not a marked difference in power, as there might be with working across different levels of a system (Fallon & Connaughton, 2016). The criteria for a successful World Café where people share and listen to each others contribution are as follows. It must:

- have a clear purpose and be led by powerful questions
- be hosted in a hospitable environment
- explore questions that matter to participants
- encourage and value contributions from everyone
- make connections between diverse viewpoints (Brown, 2010).

The purpose is supported by `powerful questions' that also need to be of value to the group, phrased to elicit generative responses and get the group to think (Brown, 2010). While early World Cafes focused on a positive framing, this stipulation has changed in practice where the priority is given to choosing

open questions that resonate with the group, whilst still committing to creating an overall appreciative atmosphere (Clements et al., 2024). The physical space is usually set up with different tables and participants are encouraged to sit with people they do not know (depending on the group composition). Each group discusses the questions and records their thoughts on a shared document/flipchart. They are asked to move groups at regular intervals and to self-select the next discussion group that they join, to increase the number of contact points between them. Usually, the facilitator keeps time and when asking people to move groups, requests that one person stays behind and shares a summary of the previous conversation with newcomers. They then continue the conversation. This avoids conversations becoming stuck and avoids group-think, but it is also an effective way to generate a flexible and co-evolving dialogue. The role of the facilitator is to moderate the conversation where the participants are the experts, rather than facilitating the process which also reduces researcher bias (Clements et al., 2024). Participants are invited to listen deeply before responding and to listen out for patterns they see arising in the dialogue. The final part of the process is to harvest and share collective discoveries from the discussion in the room.

The World Café was chosen for this research cycle for the following reasons. Firstly, it is suited to collecting data from a large group of people in a short space of time, using the least amount of resources (Löhr et al., 2020). Secondly, it was a way to verify and complement other research which makes it fit well here as the second of three research cycles focusing on developing a richer understanding of psychological safety and meaningful connection, in line with the commitment to methodological pluralism (Midgley, 2011). The third reason for choosing this methodology was that it is based on an appreciative framing that focuses on strengths within a situation rather than the problem that gives rise to it. A strengths-based approach is about more than just being positive, which has been the main criticism of these approaches. It creates space where people can find validation and a witness for more difficult experiences, or where things have not gone as planned. Sharing these experiences has a strengthening effect and leads to individual and collective learning in the spirit of open dialogue (Brown, 2010). As it promotes dialogue between participants it was also regarded as a way to facilitate social learning amongst participants and bridges some of the gap between research and practice by creating immediate feedback loops (Silva & Guenther, 2018). The research participants were peers, rather than representatives of different levels in the system, making shared learning more likely. This was in keeping with the commitment to create the conditions for knowledge pro-

duction with participants made in Chapter 3 (R. Ison, 2017). It was also in keeping with the idea that methodological pluralism encompasses the process and content of knowledge creation as an interrelated contextual process, and where knowledge is contextual and bound to the people who produce it (Midgley, 2011).

This study was conducted at a time when most research was being conducted online (Albrecht et al., 2022). Early work on the art of hosting online acted as a reminder not to let the technology get in the way of the conversation and deep listening (Pianesi & Lenzo, 2011). One of the main difficulties with running World Cafes online cited in the literature is the difficulty recruiting participants (Banfield et al., 2021), often because of a lack of familiarity with technology (McKimm et al., 2020). This was not an issue in this research as all the participants in this study were already working and facilitating groups online and this was also the topic of the session. It meant that it was possible to bring a bigger group together, with an expectation that participants were well equipped with the technology to participate as well as a good understanding of online etiquette. There was an echo between the ethos of the World Café and Virtual Services: both stemmed from an improvised way of adapting to unforeseen circumstances and arose in context rather than being driven as a technical-rational model for engagement (Steier et al., 2015). Nonetheless, some design modifications were needed to adapt to the online format.

5.3.2 Design

The following modifications were made so that the online World Cafe could use time effectively and maximise engagement:

The look and feel of the space: This World Cafe was designed so that participants were focused exclusively on the topic and conversation. The design of an in-person World Cafe usually involves attention to the physical space and physical cues in the space are designed to foster a different feel than a traditional meeting or in this case, research conversation, one where it is clear on arrival that this is not a space that is about business as usual (Steier et al., 2015). This often involves setting the space up with visual cues that suggest a 'cafe' with round tables, for example. While some online cafes develop collaboration boards using Miro, for example, to mimic this effect (Albrecht et al., 2022), given the potential participant's expertise in hosting online sessions, I chose to keep the format simpler and keep people's attention focused on

the conversation between participants. Miro boards were used therefore for live back-up note taking and participants could choose to look at them (or not), in the interest of transparency. Participants did not have to actively engage with them though, in order not to dilute the dialogue.

Balancing time, numbers and logistics: The essential design feature of a World Cafe is to give people enough time to cross-pollinate ideas and have as many contact points as possible (Jorgenson & Steier, 2013). Getting the balance between the number of participants in a given discussion, the number of breakout rooms that could be accommodated, and the technical capacity of Zoom, all in the space of a two-hour gathering, required careful management. Adapting the methodology to an online format also required careful calibration of breakout rooms, and assurance that all sessions could be recorded and uploaded onto Maynooth University servers in line with GDPR guidelines. The decision made was to have three breakout rooms with a maximum of 10 participants in each. It was felt that this number would be managable and was a good balance for the complexity of moving people within a short session, whilst prompting enough depth in people's contributions.

Assembling a team: The online format called for the following supports:

- a moderator to introduce and run the session
- a technical moderator to manage the technology and breakout rooms
- three facilitators - one for each breakout session
- four note-takers on Miro board.

FreedomTech colleagues acted as the technical moderator and one of the Facilitators, the other two facilitators were colleagues from Maynooth University and the notetakers were undergraduate students on placement with FreedomTech colleagues. The two university-based facilitators and I were able to record and upload recordings to the university server.

Facilitators were briefed in advance on the philosophy of the World Cafe, the role of the facilitator and the questions and running order of the session. A debrief session was also held after the event.

5.3.3 Research participants

Invitations were issued through the mailing list for FreedomTech. Invitations were also issued during a presentation at a CHAT meeting and on social media. To be eligible to participate, participants needed to be actively engaged in running sycnchronous group supports for and/or with people with disabilities. All participants signed a consent form to participate and for the session to be recorded. 27 people signed up to attend and 24 attended on the day, from across 15 organisations serving people with mental health, physical, intellectual, neurological, and degenerative conditions online.

World Cafe logistics The group met for two hours in June 2021, starting with an opening exercise in the main Zoom room and coming together to feedback between sessions and at the end for a final plenary session. There were two main sections to the café: the first set of sessions focused on psychological safety and the second focused on meaningful connection. Discussion was held across 3 breakout rooms and participants moved between them at set intervals. Each topic had 30 minutes for discussion and the sessions were supported by a facilitator and a notetaker to supplement the recording.

Breakout room discussions focused on the following questions:

Meaningful connection

- What does the term meaningful connection mean to you? Why does it matter?
- How do you engage in sessions so that participants feel met, seen and/or heard?
- How does the virtual nature of the engagement support/inhibit a felt sense of connection?
- How have you been changed by these connections?

Psychological safety

- What does the term psychological safety mean to you in the context of virtual group engagement? Why does it matter?
- How do you go about creating a sense of psychological safety in online sessions?
- What facilitator qualities/characteristics support the creation of a safe space?

- How does the virtual environment support/inhibit a felt sense of safety?

5.4 Analysis

The focus group recordings were transcribed and uploaded to MAXQDA for analysis. World Cafes were originally designed so that the sense-making and harvesting of the data happens within the format of the session or sessions, or is provided as a summary of the discussion. As a qualitative research methodology, there was a need to both maximise the level of contribution and conduct a rigorous data analysis. As it is a relatively new addition to qualitative research I undertook the following process to establish the suitability of Reflexive Thematic Analysis. The www.Worldcafe.com website lists publications and I scanned it for the most recent papers. The list was last updated on 20 November 2020 and I accessed it on 19 November 2021. There were a total of 463 publications on the list of which 239 were from academic peer-reviewed journals published between 2012–2020. Eighteen studies used a form of thematic analysis as a qualitative research method where the discussion was recorded and analysed. The other most prevalent methodology was to harvest in situ and summarise discussion. As this session could be recorded, Reflexive Thematic Analysis was chosen (Braun & Clarke, 2023). RTA involves both inductive and deductive coding and is discussed in detail in Chapter 4.

Table 5.1: Comparison between Interviews and World Cafe analysis

	Interviews	**World Cafe**
Orientation to Data	Inductive: coding and theme development are driven by data content	Deductive: analysis shaped by existing theoretical constructs, which provide a lens through which to read and code data and develop themes
Focus of meaning	Semantic and some latent	Semantic and more latent
Qualitative Framework	**Experiential:** analysis captures and explores people's own perspectives and understandings	**Critical:** analysis focused on interrogating and unpacking meaning connected with psychological safety and meaningful connection
Theoretical Frameworks	Constructionist: focus on realities expressed in data	Constructionist: focus on realities expressed in data

While the same methodology was used for analysing interviews, it was deployed in a different way here: the emphasis shifted towards deductive coding based on the literature and a more critical qualitative framework involving unpacking meaning connected with psychological safety and meaningful connection as laid out in Table 5.1. Both approaches are grounded in a constructionist focus on the realities expressed in the data.

The analysis process (Braun & Clarke, 2006, 2014, 2019, 2023) took place in several consecutive phases, that formed an iterative rather than a linear process of cycling between the data and the literature to develop an account of the data that can capture the patterns and meaning latent in the contributions of participants. The different recordings were transcribed. A familiarisation process and notes also commenced and the following steps outline the coding process:

1. **Code data inductively and develop initial codes and memos:** The initial coding process resulted in some topic-led codes around defining the characteristics of psychological safety and meaningful connection, which I addressed in the next round of coding. This process corresponded with the idea of actively creating building blocks as open coding, before progressing to identifying the themes, which could then be used to *"build the house"* (Braun & Clarke, 2019).

2. **Read literature and recoded deductively:** After the initial round resulted in 684 codes, a refinement and merging process was needed to produce solid themes. Some topic themes still remained, but given engagement with the literature, the breath of what psychological safety was about, and how the space was managed to enable people to feel safe and thus connected, the concept already seemed broader than the text-book definitions.

3. **Clusters:** I first developed code clusters and gave them loose organising titles. This involved cycling back and forth between the literature and the data.

4. **Develop initial candidate themes:** This involved sticking to the data as much as possible whilst listening deeply for patterning that helped develop a compelling narrative that could do justice to the spirit of what people shared.

5. **Review themes**: Some themes were merged using creative mapping in MAXQDA as there were now too many and they were too 'thin'. Themes

Table 5.2: Crystalising meaning within coding system

Example of crystalising meaning within the coding system: 'Performative/Enacted element of facilitating' became 'putting up a good front'. In this refining process the theme `harder to read body language online' becomes `use of embodied self in facilitating' and `harder to read body language online' was kept. The first theme was about the facilitator using their embodied self within the facilitation process, which also included having actions mirrored back online in an immediate feedback loop, as differentiated from the act of listening and it was also different from 'putting up a good front'.

were refined using dual criteria for judging categories – internal homogeneity and external heterogeneity – to support coherence within themes and clear distinctions between them (Patton, 1990).

6. **Review data and extracts associated with themes**: Themes were tightened up by reviewing the meaning behind the codes. This served to both tighten up on the rigour of the coding process but also to dig deeper into pattern development and crystalise richer themes (See Table 5.2).

7. **Review codes and themes**: I then ensured they were aligned and identified themes that could be joined.

8. **Set theme boundaries:** The boundary of each theme was firmed up and a descriptor developed to describe what is unique and specific to each theme. This is presented in detail in Appendix E.

9. **Synthesis:** Consideration was then given to what each theme contributed to the overall analysis (Braun et al., 2022). This is elaborated on in detail in the discussion.

5.4.1 Practice theory

The need to approach the themes from a different perspective was led by the imperative to understand if and how they cohered with the Complex Adaptive Systems framing from Research Cycle 1. Staff practices also featured prominently in the first research cycle. This prompted an exploration of practice theory to explain the themes from a *'wholeness'* rather than a 'parts-driven' perspective (Buckle Henning, 2017). It also supported the shift from using the term practice as a general professional framing, to using it with the understanding that practices shape social reality (Sandberg & Tsoukas,

Table 5.3: World Cafe Themes

Meta-theme	**Theme**
Setting the scene	Resourcing the space
The art of facilitating online	Boundary Setting
	Growing wings on the way
	Presence
Conditions for safety and connection	Enhancing agency
	Home comforts?
The nature of connection	The we-space
	Pixilated people

2015). The theory of practice architectures (Kemmis & Grootenboer, 2008; Kemmis et al., 2012) was chosen for several reasons: it makes room for the affective experience of practitioners, and also contributes to an understanding of the conditions that make practice possible, in context. The theory also aligns with an understanding of systems as complex adaptive systems (Kemmis et al., 2012).

5.5 Findings

The findings indicated that it was possible to co-create conditions for psychologically safe virtual spaces, by harnessing staff facilitation practices and presence, to support connection and belonging amongst participants. Four meta themes were identified: actions that set the scene, practices that supported facilitating online, and a reframe of how psychological safety and online connections were sustained (see Table 5.3). Each are discussed in turn. All participants are represented in the quotes used here, with the exception of one participant who did not speak during the breakout sessions, as their role was not in direct facilitation, but in training other healthcare staff.

5.5.1 Setting the scene

1. Resourcing the space Running virtual services required a substantial amount of behind the scenes work and resources. Between March 2020 and June 2021, a change could be discerned, chararacterised as a shift from reactive

to proactive governance as services matured and developed a distinct identity within organisations. Resourcing the virtual space now included having sufficient policies and staff, not just for the benefit of those attending but also to prevent staff burnout. Time for preparation was a recognised resource requirement, there needed to be careful curation of group composition, time and effort given to design of session content, post-session reflection and follow-up on issues that arise outside of the session itself. The technological know-how that staff developed since the outset of the pandemic was now considered a valuable resource.

One participant outlined the need for explicit structures and internal processes:

> *There's also the structure that's built around the delivery of virtual sessions: guidelines and procedures for facilitators and staff should something unexpectedly happen. What do you do? Rather than when it happens, that people are* [*saying*] *'who do I ring?'* (*Participant 5*).

While the policies and procedures provided structural support, there was also a considerable amount of co-ordination work behind the scenes. This included follow-up actions after sessions, referrals to the safeguarding team, or discussions with key workers. It also included careful consideration of the composition of groups in order to create a safe environment where people could share sensitive personal experiences as the following quote illustrates:

> *It's planning the sessions, and planning the group so that you know the people who you're going to invite into the group, you would hope, would feel comfortable knowing that they're talking to people who have gone through similar experiences to themselves, and that they're going to feel that they can say anything.* (*Participant 15*)

Running virtual sessions required adequate staffing and an understanding of the time it takes to support participation and develop the relationships and skill to support people to feel safe. There was broad agreement that at least two facilitators were required in a session. This might be to follow-up with someone who might leave the session unexpectedly, or support for someone who became upset during a session. It was also about keeping staff safe according to one contributor:

> *Having the appropriate levels of staff there to spread the load, means you don't get staff burnout in class, and you keep those high stan-*

> *dards of intuition, of emotional intelligence amongst the staff, when they're not burning out. But if the staff start to burn, there's too much weight on their shoulders. That's where you start to miss things, and where you can miss really important things are happening on screen for the people you support.* (*Participant 10*)

As facilitating online was not a direct translation from in-person facilitation, it required continuous learning and level of preparation and reflection as the following participant suggested:

> *I think that there's a language of online - what I found a lot - I was trying to plan a session in advance, and then I would try to translate it into an online format: it still hasn't come naturally to think online. And that means I'm probably missing some of the opportunities. I am beginning to see some of the opportunities and potentials, but it's more 'oh God this is what we could do'. So I found that there was a lot more preparation time before sessions, and a lot of learning reflection after sessions.* (*Participant 23*)

These accounts all speak to the level of resource needed to create a virtual service where people felt psychologically safe and connected. Adequate staffing, time and thought were needed to set up a space that could support the practice of the art of facilitating online.

5.5.2 The art of facilitating online

Participants agreed that facilitating online called for clear boundary setting, learning in real-time and a heightened sense of staff presence that had a qualitatively different feel to when everyone is in the same room together.

2. Boundary setting Virtual services required careful contracting with the group and redrawing the boundary around whose safety needed to be considered. Staff could make provision for their direct interactions with participants but could not easily control who else might be in the background of a particular session. At times this compromised the felt sense of safety in the group. The boundaries around who could attend what session also changed, as geography no longer constrained participation.

Services contracted with participants around boundaries in different ways to suit different groups, always with a strong emphasis on privacy as well

as parity of participation. The following quotes are illustrative of what worked in different settings:

> *I run a lot of group support sessions online, and it's really about and giving everyone like a safe and confidential space so let their voices be heard. So, it's about establishing some kind of group contract at the beginning, and letting everyone be a part of that, and feeding into that, particularly in relation to letting people speak, having their turn, creating a kind of a mutual understanding and mutual respect between the participants of the group.* (*Participant 17*)

Another service played a pre-prepared video at the start of sessions:

> *We created a little video with our service users and we have a policy online so it's played a couple of times at the very beginning, just to remind everyone about things: just being dressed, not in your pyjamas in your bedroom, not lying down on your bed, just because like that, everybody can see in... and it's just to remind everybody that everyone has a voice and everybody is allowed to speak.* (*Participant 19*)

Safety also required a different kind of preparedness amongst staff. It included consideration for attendees' personal dignity and privacy, of others in the home environment, and a process for dealing with disclosure online as the following quote illustrates:

> *A lot of the safety stuff that we thought were bigger issues, we didn't see coming at the start. So, it's stuff like, people being properly dressed, people sitting up, not having family members in the background. But I think it's also us, as facilitators knowing what to do, so if someone discloses something that needs further action, it's a follow up phone call or safe guarding team and then we'll have the controls to either put someone on mute or turn someone's video off as well or whatever you need to do as well, it's just having safeguards in place really, so you know what you're doing before you go into it.* (*Participant 9*)

The following accounts point to some ways in which staff mitigated against some of the risks, but the impact of their interventions were limited by virtue of the online space:

> *To be upfront with people to say: 'if you're uncomfortable this is how you leave', . . . 'this is my number to call me privately if you need to talk.'* (*Participant 3*)

> *We were doing relationships and sexuality training online and we had to keep checking in with people that they were in a safe and secure place, because we didn't know who else was sitting and listening. And then, you know, whatever about the person who was in that actual environment, we had other people sharing their experiences, that you didn't want other people who could be in that background hearing. There was this sense that it was nearly out of your control in some ways - you had to warn people, let them know, but if someone was sitting there you couldn't control it.* (*Participant 4*)

While the nature of being online led to people being able to share what they might not feel comfortable sharing in person, *"over-sharing"* was a concern at times, as the following quote illustrates:

> *There's been times where I well, I felt that somebody, perhaps having known them, has maybe shared more than they would have normally, and I've checked in with them afterwards.* (*Participant 16*)

When geography was no longer a limiting factor, the boundary of who can participate changed, as did what can be discussed openly. One research participant commented that shifting meetings from in-person to online increased attendance and depth of engagement:

> *We would always have done meetings with say, a talk on bowel and bladder care or catheters in a hotel. And you might get maybe three or four people, because that's all a. who can come out, b. who are interested and c. who need it and are in the vicinity. Whereas we've done these on line over the last year, three or four of the same type, and you get at least 20/30 people. . . and people feel comfortable asking the questions because unless it's of interest for somebody, people aren't going to log-on for an hour long webinar on catheters - it's going to be people who want to know these things, so that does work, it's one of the positives.* (*Participant 15*)

The above issues were indicative of the complexity of managing boundaries without being able to manage everything that might happen in any one

session. They also suggest that safety was a function of the size of the group and the depth of sharing was linked to the purpose around which people came together.

3. Growing wings on the way Everyone was new to the situation and as there were no precedents to draw on, staff learned on the go. One World Café participant described it as a steep learning process where they

> *started out like birds flapping around experiencing the same problems before we were able to fly.* (*Participant 9*)

Others also suggested that "*everyone is winging it*" and "pretending we know what we're doing here". They needed to be able to think quickly on their feet, deal with difficult topics in group settings and change direction in the middle of a session as the following contributions suggest:

> *A lady in the group, who had really established a good rapport with her peers who she wouldn't have known, maybe seven or six months ago, and now they're getting on great, but she lost her mom really suddenly. And she actually brought it up in the group and there was a whole - so it nearly turned into a whole other session.* (*Participant 1*)

Another spoke of the need to adapt to feedback in real time in response to how people in a session were experiencing their facilitation:

> *Your plan to make that person feel secure might not be going at all well. So you might have to adapt and change what you were initially going to do.* (*Participant 13*)

Learning was also a continuous process, where both facilitators and attendees were learning transferable skills:

> *I think I've learned an awful lot of skills in reading people online that I would bring back when I go face to face. Giving people more time, not looking for an answer and pressing people for an answer, reading the room better, because I think it takes a while for your eyes to adjust to all the little pictures on the screen. So, I would hope to bring a lot of the skills and even the safety and connecting with somebody when I go back to face-to-face.* (*Participant 18*)

The journey inevitably involved many technical glitches that tested everyone's adaptability but equally required an immediate response. One World Café

participant described what happened when she finally gained access to a session she was running after a twenty-minute technical delay:

> *They actually loved the chaos that I was in, when I arrived in. They were reassuring me going 'its all grand, we were online, we were just chatting away without you', so I think it was good learning for me that I don't have to hold that space.* (*Participant 8*)

These examples demonstrated the importance of paying attention to what was going on at the other end of the screen and making sense of it in real-time. While staff and attendees had different roles, it was also clear that both were on a learning curve and the relational dynamic between everyone in the virtual space was of paramount importance.

4. Presence: Juggling different concerns called for facilitators to be fully present and attentive in sessions. They were dealing with a lot of different moving parts in any one session. They needed to exercise awareness of both themselves and everyone else in the session and make sense of what was needed in the moment, whilst also holding a meta-picture of what a particular person might need after a session, within the scope and purpose of that session. This pointed to a number of issues that needed to be considered as this participant pointed out:

> *Strong observation and listening skills like in person but slightly different with limited ability to see the person. Calmness, flexibility with all of the online issues that can pop up. Mindful of individual needs and ability and planning for meeting those needs where possible. Being trauma-sensitive in taking care with content and follow-up should someone become stressed.* (*Participant 9*)

There were two prevalent metaphors used to describe the orientation staff brought to their sense of presence: being an entertainer or a holder of space. Both were performative and called for *'putting up a good front'*, authentic use of self as well as personal risk taking. One facilitator described facilitating this way:

> *I just find that when you are online - it's like watching live television right - you have to be tidy, you have to be dressed half sort of normal, you have to be in good form all the time, you're very much aware of your body language.* (*Participant 2*)

This was in contrast with a *'holder of space'* metaphor described by another participant:

> *What I've learned over the last year engaging service users online is to become much, much more patient. I've become comfortable with silences and just to sit and wait while people can unmute. So I think giving people that little bit more time to get their thoughts together, and because you don't have those visual cues of being in a room with somebody, you have to kind of sit back and just wait.* (*Participant 4*)

Regardless of the orientation towards facilitation, which was dependent on the reasons for coming together, it took immense concentration to read body language through the screen, and sustain connection with everyone in a session. This next quote points to how one participant described it:

> *Not getting distracted and focusing on – trying to focus on – even when you're not talking – focusing on everybody in the group so that you can see someone itching to come in to say something, if they've not got a chance and then you go 'oh, you know Mary, would you like to say...? I see you nodding there.'* (*Participant 13*)

Facilitating was also about being alert and keeping a watchful eye to make sure everyone contributed:

> *You do need to be on the ball as well: you need to be watching out for maybe, quieter people, their voices are lost maybe, because other people are speaking up, and you might miss out on them, so you do have to keep literally a watchful eye on everyone as well, to make sure that everyone is included.* (*Participant 14*)

The following contribution highlights the need to compensate for an incomplete view of the whole person and being able to read feedback cues about how the person was experiencing the session:

> *Again, it's the lack of the body language and the cues that you would normally have – the leg shaking underneath the table, or you know, someone fidgeting with their hands, or you know. It's a different way of getting to know somebody, and I think you really need to be more sensitive to what you see from the chest up, and to read those signs. . . you're looking for those cues constantly. So I think, sometimes your mind goes into overdrive.* (*Participant 4*)

Facilitators also used their own embodied presence as a tool in sessions:

> *Being able to appear calm, even if you don't feel calm, and having everything, having everything you need around you so you're not furiously like reaching for whatever, and you know you're not - you appear like you're in control of yourself, of your environment and therefore you give off this, you know, hopefully, this kind of calm exterior, that you know this is relaxed, this is informal, this is you know this is your space – that kind of thing because I think you can you can put people off if you're too rattled, or if you don't seem in control.* (*Participant 13*)

Making new people feel welcome was about making them feel comfortable:

> *if somebody comes on, particularly if they are new to the sessions, they see warm friendly faces, and are more likely to be comfortable from the beginning of the session.* (*Participant 4*)

For one service which provided social events, there was a need to recreate an embodied sense of that connection online to support comfort:

> *I suppose you just kind of miss that is the connection we were very much a social setting normally, and there's a lot of laughter, and lots of hugs and actual physical contact as well, and you don't have that online, so you just have to try to recreate it, with just – the way you are, just – your own movements, and you know the way you look as well, again back to this idea of making everyone else feel comfortable online with you.* (*Participant 14*)

Many participants reported that the quality of presence required was more tiring than working in person, as they needed to be present to others while exercising constant awareness of their own body language. This was evident in the following quotes from participants:

> *I think that's why this is a far more tiring role than your standard day service. Because never, when you are in conversation with somebody, are you looking at 2,3,4,5,6 different faces while that conversation is ongoing, but you're consistently doing it on a zoom call.* (*Participant 10*)

> *You have to listen 10 times harder, and it is hard, definitely meetings, you know – fatigue, I know it was mentioned earlier, but you have to*

> *concentrate so hard, like far more than you ever would if you were sitting around the table.* (*Participant 2*)

Facilitators were predisposed to creating a positive space that contributed to attendees' sense of connection and wellbeing, as the following contributions illustrate:

> *And you want them to come away, that it's a positive experience and I suppose it's that sense that we're all in this together, like that all parties are equal.* (*Participant 3*)

> *I found personally that I had to psych myself up. You had to be very positive yourself, you know it takes a lot more energy, I think, even online, than it does in person. Because you have to bring everyone with you, you have to give so much of yourself to everybody and you want to have that meaningful connection that everybody goes away maybe having, you know, a little bit more positive day.* (*Participant 9*)

The desire to create a positive space did not necessarily preclude addressing difficult or sensitive topics. One organisation went to great lengths to create a balance between positive space and a realistic one in their online workshops:

> *We were very considered with what we put in, because we just visualized this person sitting in a room on their own, in their house, and we're painting pretty bleak enough picture to be honest. But I feel it's important to be realistic, about their situation as well. So, it's just getting the balance, keeping the hope there, not shattering it completely, but being realistic and that's not always the easiest.* (*Participant 17*)

Sense-making was an inherent part of the performative nature of running sessions and making real-time decisions about what was needed and when. The sense of presence described in this theme pointed to the need for a high-level concentrated effort to convey a sense of safety and connection. It required staff to attend both to what was happening on the screen and using their embodied self as a tool for facilitation, which was extremely tiring.

5.5.3 The conditions for safety

5. Enhancing agency: Enhancing agency was about creating a safe space where people could expand their sense of choice and control. This included having choice about whether to participate in online services, when to come and go, as well as having control over which sessions to participate in. The following quote illustrates this point:

> *It gives the guys that sense of ownership and control as well: if they're at home and doing something better – they won't want to engage – so they're choosing which sessions to come onto, which sessions to stay with. . . if they want to leave, if they're not interested, they can press the red button. But when you see them coming in and having that control over what they actually want to do, it puts that bit more power back in their hands.* (*Participant 20*)

There was general agreement amongst research participants that people took more risks online. One person made the following observation:

> *I've noticed that people have taken risks that they wouldn't really have taken in real life, for example addressing a room of over 60 people, because it's on the screen, people have taken that step, that would enable them to do it hopefully in the future in real life.* (*Participant 1*)

> *We've had people who would say 'I wouldn't even say that to my husband, but I'm telling people on the other end of the screen.'* (*Participant 15*)

Sometimes staff needed to step back so that those attending sessions could step forward and 'own' the space more. One research participant described how attendees took initiative to run sessions:

> *As people got more comfortable within our group – I'm in a small group up to 14, and like that they would say 'can we take a session next week?' – a 15 minute quiz on Eastenders or whatever it may be, and it was huge for them, and they really enjoyed holding the fort, and me just in the background and letting them run the session – they really enjoyed that.* (*Participant 18*)

Another research contributor suggested that creating a space is key to developing disabled people's ownership of their service:

> *... which is open and is safe for people and it's just levelling that power, I mean just that equal environment. So for me it's creating a space. From my experience what I've gotten, which is hitting me so strong, is the ownership by the people who are using the service.* (*Participant 3*)

The same person went on to describe how a sense of ownership impacted on the level of agency people had over their lives:

> *It's enhanced people's lives dramatically more than we ever could have imagined. And feedback from somebody today quite quickly would be: when they went into their day service they couldn't have achieved as much as they did online and they had managed to enhance their life, produce music, make meaningful connections, meet people from across the country.* (*Participant 3*)

Creating a safe container for risk-taking in the virtual space supported people, over time, to take control of the space and it shifted the traditional power dynamic between provider and recipient of services. It required a shift in staff practices and positionality towards holding space in a way that supports people attending to exercise greater choice and control over how they wanted the service to work for them. This happened over time, and had a positive expansive impact in their lives beyond the VS setting.

6. Home comforts? A reoccurring thread throughout the World Cafe was reference to comfort. Three different aspects of comfort were referred to: being comfortable in the home environment, with people, and with technology. While being comfortable was associated with a felt sense of safety which could create the conditions to take risks, too much comfort could also indicate complacency and thus inhibit participation (See Table 5.4).

The comfort of being at home had several benefits. It contributed to people being able to speak up for themselves and engage in positive risk-taking as the following quote suggests:

> *When they are in the home environment in a comfortable space, it allows them to be quite straight and quite honest which is very different than being in a day service.* (*Participant 22*)

It also had something to do with environment:

Table 5.4: Home comforts?

Enabling	Comfort	Inhibiting
Safe to self-advocate/take risks	**Level of comfort in home environment**	lack of privacy
Familiar environment and facilities		Complacency leading to a lack of risk-taking
Sanctuary		home chaotic
Able to share more Connections meaningful	**Familiar people**	Jealousy watching others in day service from home
Can get on with it when facilitators' broadband cut	**Comfort with technology**	Forgetting others were in the room prompted over-sharing
		Lack of comfort with tech leading to exclusion

> *A lot of people feel more comfortable working from home and their own environments: it's their space, has their smell, they know where everything is.* (*Participant 1*)

On a practical level, it cut out travel time to services and events and reduced the fatigue associated with some disabling conditions. It also included attention to practicalities no one had considered before, such as being close to their own toilet facilities.

Not all homes were experienced as a safe sanctuary however. Some people had chaotic home lives that impeded their ability to participate fully. Neither did everyone have a level of privacy at home to engage fully, as indicated in the theme around boundaries. One staff member described the biggest inhibitor for sustaining a meaningful connection as being other family members in the background, which sometimes led to a fall-off in attendance:

> *you could see the eyes constantly going to the side as they weren't really comfortable, or they couldn't really engage themselves because of what was happening in the background. I've lost a couple of service users to sessions because of that.* (*Participant 4*)

A lack of motivation to participate from home was another concern as this research participant supporting young people with mental health difficulties found:

> *When they didn't have to get up, shower, and have a breakfast and come into us, and have the social side of things, it was much easier for them to disengage. And the lack of the face to face accountability made it easier for them to fall off, drop off, and then we would have to work hard to bring them back in.* (*Participant 10*)

While relationships with peers and staff were key to enhancing a felt sense of safety and connection that drove people to take risks and share openly, being too familiar also had some drawbacks. For example, once services began to open on a phased basis with reduced numbers attending in person, jealousies arose when those at home logged into a session to see their friend is in the service that day, and they could not understand why they were not there also.

Comfort with technology also influenced participation levels positively, but could inadvertently lead to over-sharing in situations where people forgot that they were *not* alone with staff, if other attendees could not be seen on the screen.

To conclude, there may have been an optimal tension between being comfortable "enough" to participate fully in virtual spaces for each individual, as being too comfortable may have lead to inertia and being too uncomfortable indicated a lack of safety or meaningful connection.

5.5.4 The nature of connection

7. The 'we' space The we-space refers to the relational space that arises as a feature of the connection between people. While the term is commonly used to describe people meeting in physical space, it can also describe how people inhabit the virtual space and create connection (Krueger, 2011). It is about the actions that people take to let others know that they are seen and heard and how that communication is received by the other, which gives rise to a relational dynamic at an energetic level.

The practice of creating and sustaining this relational took different forms depending on the nature of the session and the size of the group. In a large group, it could have been about acknowledging everyone by name. This research participant described how she systemically acknowledged everyone in her exercise classes with over 20 attendees:

> *I'll say you know 'I can see you waving your hand I'll get you in a minute'. Or, if I can see them doing something in the background, they might be dancing or they might be singing, they might have a nice shirt on, or they've got their hair cut – it's mentioning those little things that 'Oh yeah you got your haircut, you told me you were getting your haircut yesterday, oh it's lovely. Oh you have your birthday, I can see the balloons in the background, you know was your birthday, or whose birthday was it?'* (*Participant 19*)

She also went on to say that she "got her knuckles wrapped" if she forgot someone the following day. Facilitating smaller discussion-based sessions called for different practices to create a connection, as this research participant describes:

> *A lot of it is, just the basic principles of facilitation, like name games: a game that encourages people to give a small bit of personal information, like what's my favourite song? What's my favourite colour? – to flick that to get people disclosing a bit, in a comfortable way and then having a bit of fun. But also just valuing what people say and building on it.* (*Participant 23*)

Connection was experienced as an energetic exchange. One World Café participant put it this way:

> *I need to connect with the people that I'm delivering to – otherwise I feel like I am just talking to myself. So for me, I need the feedback as well, from the people that I am delivering a class to. To me it matters that I can feel that, yes, they are getting something out of it and I'm also getting something out of it. And you can feel the energy when it's not actually working. You can feel it in fact, that this isn't going so well, and maybe I have to change something, so having a connection that way, you know, it does make a difference, just energetically as well.* (*Participant 21*)

Another described a sense of flow in sessions that arises when everyone feels connected:

> *If there's no connection you can kinda tell, and it's very it's very hard to guide the session in a certain way, but you can really tell if it's going well and that connection is there how much easier it flows and how much people are getting out of it.* (*Participant 2*)

The energetic exchange that created flow is also linked to an understanding of the interdependency of facilitator and attendee: both learnt from what arose in the we-space. Staff described how running a virtual service was personally meaningful and provided a source of personal purpose during the pandemic:

> *I knew we were making a really strong impact and even if it was an hour each day. So that really was very valuable to me and very powerful – that there was something we could do to help – when a lot of your control is taken away, so, because of COVID. But yeah the normal things we could do we couldn't do it anymore, but this was something that was giving me some solace, that I could still do something to make a difference for others.* (*Participant 20*)

The inter-dependency between everyone was heightened when staff were committed to learning and they derived meaning from the connection:

> *The meaningful connection thing is for me not to interrupt too much, and for me just to be there. And if they want some input from me then that's good, I can do that. So it's very much a case of them having a forum to talk amongst themselves and to learn from each other and even just to get the craic, you know just to have a chat and talk about whatever is happening at that time. But for me it's certainly a learning process and I've learned an awful lot from them, as well, so that's been really meaningful for me.* (*Participant 11*)

Openness and taking a risk offered those attending sessions courage to take risks themselves:

> *I think openness – and being willing to put yourself where you want them to go as well. I mean, if that's where – if you want them to engage with you, you have to do the same thing. So you can't expect them to deliver, to give you – you know, you're asking them to do this this and this, or give back to you, if you're not going to be willing to give the same yourself. And making an ejjit of meself is usually one – because if I'm willing to go and take that risk, then they're willing to do it as well.* (*Participant 19*)

The we-space gave rise to more democratic engagement and connection. It shifted the power dynamic towards working *with* people and their needs rather than merely delivering a service *to* them.

8. Pixelated people: Technology provided a site for the we-space. It enabled connection across a wider geographical spread than any one service or group could accommodate. It could also be harnessed as a tool for facilitation: many services used breakout rooms when participants in a session got distressed or needed a one-to-one conversation. They could also mute people so that background conversations could not be heard. Technology also acted as a leveller: disabling conditions were often less obvious on screens where everyone was on a level playing field and aids and appliances or AT or other signifiers of disability were in view. One person commented that it offered people with complex needs an opportunity to feel part of a group:

> *And so for the first time, they felt part of the group, and it was something quite wonderful to see, and that stands to technology as well, and everybody was happy.* (*Participant 21*)

Technology also had its limitations: it was more difficult to detect non-verbal cues of discomfort, hidden off-screen. It changed the boundary around creating safe space and lessened the control facilitators had over the virtual space as discussed in previous sections. The time it took for people to feel safe and connected online meant there was a limited window in which to establish a rapport to sustain online engagement. Talking about this issue one person said:

> *The most important thing is, that when you make that meaningful connection, is that they come back on the Zoom again. That's the biggest and most positive outcome. If you haven't made that connection in the first Zoom, then they don't want to come back on the second . . . it's more important than when you meet them in person.* (*Participant 13*)

Several positive impacts of sustained engagement in Virtual services were named, including the following:

- quieter or introverted people found their voice online
- some with complex needs felt part of a group for the first time
- expanded social networks
- development of digital skills
- increased confidence to pursue goals outside of services
- reduction in behaviours of concern

- increased engagement with families.

It is also the case that while some people thrive online, the virtual space did not work for everyone. This was either due to digital poverty – either in relation to skills, access or financial resources – or not feeling comfortable online. Technology was an imperfect ally, both enabling and limiting sustained connection and safety in virtual services in different ways. Participants indicated an appetite for hybrid options once face-to-face services reopened, which suggested that it has a place in the future of disability supports and services.

5.5.4.1 Participation in the World Cafe:

Participants in the World Cafe expressed appreciation at the opportunity to share their experiences of participation. The session concluded with a free space for feedback, where people were asked how they experienced the session. A sample of the dialogue at the end of the World Cafe is presented here.

> **Participant 9:** yes, we all started out like birds flapping around experiencing the same problems before we were able to fly.
>
> **Participant 1:** Yes, 100% this sort of gathering is beneficial. Shared ideas, shared experiences.
>
> **Participant 16:** Great to hear and identify with the ups and downs of others at the end of the World Cafe at the end of the World Cafe – great learning and sense of comradery among the larger and wider Health/Social care community!
>
> **Participant 23**: Experiences vary depending on the facilitation context e.g. scale and purpose – would be interesting to have World Café tables focussing on different contexts
>
> **Participant 4**: agree (name) headless chickens come to mind.
>
> **Participant 3**: I feel there is a community of us going through the same thing. while we may have been at different levels of delivery and engagement 12 months ago we are all at the same point now.
>
> **Participant 5**: Yes this is a great opportunity to meet and share ideas and support each other. Would appreciate more similar meetings. Thanks so much.

> **Participant 11**: lots of similarities regarding online experience, also interesting to hear the differences between intellectual and physical disability groups. Very worthwhile session.

These quotes indicate that the experience was enriching for participants who learnt from each other and found some sustenance for the work. They also expressed an appetite for further opportunities to engage.

5.6 Discussion

This research confirms that it is possible to create the conditions for people to feel safe and have meaningful connections within virtual disability services. This is in keeping with the findings of the first Research Cycle. This discussion covers four topics: reframing psychological safety and meaningful connection as it relates to presence, the contribution of staff practices to bringing virtual services to life as a complex adaptive system in motion, the distinct characteristics of online engagement, and the value of the collective learning experience of participants in the World Cafe (See Table 5.5).

5.6.1 The role of psychological safety

These results reinforce findings from the previous research cycle: psychologically safe virtual spaces and meaningful connections are possible online. Creating a psychologically safe space online bears some similarities to the literature on this subject, where it is described as an affective state that arises where people can be themselves without fear of embarrassment or retaliation, where they are not ignored or humiliated and where risk-taking is possible (A. Edmondson, 1999; A. C. Edmondson & Lei, 2014). This is prominent in the findings: it links with all the eight themes and explicitly informs two themes focused on creating the conditions for enhancing safety and balancing home comforts with risk-taking (See Table 5.4). It is to be expected that attendees would feel safe when attending a disability service of any description. It is a human right under the UN CRPD as presented in the literature review. However, an entitlement does not always translate to practice, and safety needs to be tested in the virtual space. While psychological safety may have the same features as in contemporary literature, a rights-based framing differs from a business or healthcare framing. While in a commercial business, a team aims to maximise innovation and profitability, it serves a very different purpose in virtual services. A disability service framing suggests that the pur-

Table 5.5: World Cafe Themes and relationship to psychological safety, meaningful connection and presence

	Psychological safety	**Meaningful connection**	**Presence**
1. Resourcing the space	Support to prevent staff burnout Intentional planning	Planning for group dynamic	Staff time and emotional energy presence
2.Boundary setting	candour	function of the size of the group and its purpose	"Working the edge" requires active presence and sensemaking
3. Growing wings on the way	linked to candour, Acting now for the future	There is a need to be connected to others running virtual services, as much as those attending Adapting as individual complex systems	and self-regulation for sense-making by doing
4. Live on air	value of authenticity, candour, personal risk, identity, admitting mistakes	Relational dynamic between session purpose, facilitation and attendee profile	requires immense concentration and embodied presence
5. Enhancing agency	authenticity, candour, personal risk, identity Challenging, Express self Having voice	Agency leads to more expansive connections through an enlarged social world Regulated learners take more risks Resilience during uncertainty	make active choices about participation
6. Home comforts?	value of authenticity, candour, personal risk, identity, challenging	comfort/discomfort influences connection possible Balancing autonomy and interdependence	participants need to be available to participate as part of the relational dynamic
7. The We-space	value of authenticity, candour, personal risk, identity	feeling seen and heard, mattering	Presence and awareness to work with awareness of the energy in social field
8. Pixelated people	Can try out new identity and control what is seen online	Relationships hold across digital space and new connections possible	Deep listening to see what is needed, in absence of visual cues

pose of feeling psychologically safe is a personal right where the ends **is** the means rather than a means to enhance profit or reduce errors. The extent to which it infuses all the themes identified in this research would indicate that it is a critical feature of virtual services regardless of the stated purpose of sessions (see Table 5.3).

This prompts consideration of how psychological safety is generated, by whom, and to what effect. In business or healthcare settings, where the focus is on effective working teams, it is generated by the leader and is seen as a feature of workplace culture rather than residing in any one individual (A. Edmondson, 1999). When applied in healthcare settings, the focus remains on teams or teaming, and the recipient of care is not considered, though the purpose is to lead to better patient outcomes (O'Donovan et al., 2019; O'Donovan & McAuliffe, 2020). In this research, however, safety is rooted in the dynamic between staff and the person in 'receipt' of a service rather than within a business or healthcare team. This suggests that psychological safety is a relational and reciprocal dynamic that operates at a fractal level: staff themselves need to feel safe enough to take risks if they are to model safety for attendees. Staff also need to be able to exercise agency and openly step out of their comfort zone and take risks. This changes the relational dynamic between everyone involved. The boundary around whose safety needs to be considered may by necessity include others, including family members who are off-screen. Staff can set up the conditions for a safe space, but they cannot control everything that happens in the space. Staff coordinate and make decisions about how the space is set up, and sense-make on a moment-to-moment basis to guide immediate decisions. They calibrate their responses so that the conditions for enhancing agency and risk-taking are balanced with a degree of comfort and safety. Creating a safe space is about creating enough room for participants to develop a sense of ownership and control, step into their own sense of power and agency and take initiative. Participants step up, find their voice, share honestly and openly and sometimes take the lead in co-designing sessions when they feel safe to do so. Being online is an opportunity for some people with disabilities to have greater control over what is seen on the screen and choice about how they participate. While in a business situation, the outcome of creating safety is innovation and profit, in this research situation, the effects of psychological safety lead to transferable learning where people enhance their skills within services as well as expand their participation in life beyond virtual services. These emergences cannot be anticipated in advance, nor can they be controlled for, which adds to the idea that feeling safe is not just an end in itself, but arises

out of a reciprocal relationship between the giver and receiver of services.

This suggests that psychological safety also requires a comfortable space or `container.' The theme *Home Comforts?* revolves around the contextual conditions that give rise to a felt sense of safety. Comfort can relate to familiar settings or people, comfort with technology or comfort in a home environment. Home comforts or the lack of them, can act as enablers or inhibitors of safety, and while staff can exercise judgement over group composition, chaotic or unsafe home environments are not under their control. Where staff have some control over this, they can create a safe space through conscious practice. Feeling safe is an interplay between being comfortable enough to take positive risks without either sharing too much or becoming so comfortable that inertia takes over. Staff do what they can to support active participation in people in sessions, but it is also clear that not all home environments can support participation. Where staff support participation in a familiar environment with familiar people, and support a level of ease with technology, this fosters greater sharing and connection. This suggests that safety is a co-created dynamic where there is a strong sense of interdependence between staff, people attending the service, and the environment. Balancing comfort and familiarity with agency to contribute more and 'own' the space relies on conscious staff practices that create a `container' for safety in the virtual space, but it cannot guarantee safety for any individual. The idea of a safe container gives a sense of *what* a virtual service strives to create for participants. Safety is a co-constructed experience of being in a shared virtual space.

5.6.2 The role of meaningful connection

The findings around meaningful connection reinforce the results of the first research cycle, which indicates that feeling connected to others and a growing sense of interdependence is a key feature of virtual services. Meaningful connections are important for two reasons. Being socially connected is key to generating a sense of mattering which may be more important for experiencing a greater sense of meaning in life than purpose or coherence (Costin & Vignoles, 2020). Being connected to others also supports resilience through self-regulation.

The World Café findings indicate that staying meaningfully connected gives rise to a "we-space" where everyone matters. It matters to attendees that they are seen and heard, and it matters to staff, who report that providing virtual services is personally meaningful to them because they are learn-

ing from the online interaction and feel as though they are doing something to make a difference to others. The recognition that everyone needs each other creates a space where everyone counts and has a voice. Staff go to great lengths to be inclusive of quieter voices, people with complex needs, and to acknowledge all attendees even in large group sessions. Both staff and participants are open to taking risks in a transparent way, which leads to a felt sense of interdependence. Where a space is held in a democratic way, and there is an understanding of interdependence, meaningful connections arise. This can be described as a "we-space" (Krueger, 2011) which is a relational space where everyone in the group is seen and heard, but it is also about facilitators presenting as their authentic selves. This marks a shift towards creating space for an I-thou relationship to arise as distinct from an I-it relationship (Buber, 1970). The "we-space" emerges as a mutually enhancing, psychologically safe space, where people are free to express themselves without bias or undue expectations being placed on them to be other than they are. The we-space is about more than creating psychological safety, as it emphasises the quality of the connection between people. This may be more important than creating a coherent sense of self through interpretive processes or purposefully moving towards externally validated goals (Costin & Vignoles, 2020). Here, connections are experienced as meaningful rather than transactional. Where this level of meaningful connection can be achieved, a sense of mattering and belonging arises through social connection.

Being meaningfully connected enhances resilience as it supports greater emotional regulation. Bowlby suggests that individuals are complex systems (Bretherton, 2013), that need to adapt behaviour to accommodate changing conditions if they are to survive and belong. Adaptive learning is possible when an individual can manage their anxiety just enough to take the risk to try something new (Schein & Bennis, 1965). As the theme around Home Comforts suggests, too much or too little familiarity and psychological safety can dampen the impetus to participate and learn. Being socially connected enhances the ability to balance these competing tensions. This suggests that some level of self-regulation is needed to join the virtual setting in the first place, and being connected enhances regulation. This is evidenced in accounts World Café participants give around the degree to which virtual services foster a greater sense of agency and risk-taking, as this ability to adapt and learn is an indicator of an ability to regulate. Being meaningfully connected with others therefore acts as a reinforcing loop that strengthens the ability to self-manage and develop resilience. Sustaining meaningful connections may explain why virtual services are important for supporting a sense of mattering,

belonging and resilience.

5.6.3 The role of presence

Presence involves attending to what is going on in the moment, both at a practical and logistical level as well as a social field level, listening deeply to what is emerging and what action to take next (Pomeroy & Herrmann, 2023). Presence is explicitly linked to three themes: *Growing wings on the way*, *Presence* and *the We-space*. Together they inform an understanding of how staff attend to the social field through embodied presence and engage in enacted sensemaking as a live process, but it is implied in all themes (see Table 5.3).

There are different ways of turning up and being a facilitator: some sessions call for an entertainer, while others consciously space for participants and hold back, letting them take the lead. Both are grounded in an authentic use of self in the session and require a deep level of presence. There is a perceived need to set the scene for a positive interaction, as research participants understand the importance of social interaction and how it may impact on an attendee's day. They are also alert to the need to deal with what is going on in the space and take action to include everyone, or even turn off attendee's screens if needed. When attendees become upset, or share too much, they act to attend to both the individual's need and broader group's need. Reading the room requires vigilance and attention to what can and cannot be seen on the screen. Knowing what action to take, in the moment, is a process of enacted sense-making that needs to synthesise what they already know about an individual with what is happening now (Weick, 1988). Research participants describe how they, too, are learning as they go, adapting to feedback and being open to getting it wrong sometimes. They are learning patience, calmness and focus. Running sessions requires immense concentration and is more tiring than in-person work. This speaks to a growing awareness of what is arising in the social field as an intersubjective space between their own cognitive processes, what they see on the screen and the cues they are percieving which may be seen or not.

While social presence and embodied presence both seek to convey a sense of authentic engagement, social presence is situated within the ontological framing of representational reality, and embodied presence is driven by enacted cognition. Table 5.6 distinguishes features associated with social presence from those associated with embodied presence. Facilitating with this level of awareness requires constant calibration about what behaviours

Table 5.6: Comparison between social presence and embodied presence

	Social Presence	**Embodied presence**
Level of connection	Transactional and Professional	Mattering and belonging
Model of interaction	Service provision, inclusion	Interdependence, interconnectedness
Level of awareness	Information Transfer	Social field awareness
Level of adaptiveness	High level of defensive reasoning and rigidity in novel situations	High level of adaptiveness and self-regulation in novel situations
Space	Digital meeting space	Psychologically safe space
Ontological stance	Representational reality	Embodied cognition

or contributions need to be amplified or attenuated in the moment, to keep the session on track. It is about conveying the right cues, but it is more than about gestures and body language alone. It is also about knowing when to step in, and when to stay silent, so that attendees can take more ownership of the space. Embodied presence supports awareness of the social field. Being live to what is happening in the moment calls for a facilitator who can regulate their own emotional state, stay in the moment and respond rather than react (Varela et al., 2017). This is about avoiding actions based on old information (acting as a closed system) rather than the immediate situation (open to taking in new information). This is critical to ensuring that the space is experienced as safe, and non-judgemental, as it makes meaningful connection more likely. Embodied presence is also observed in what research participants say about using their own bodies to convey positive emotions and make people feel comfortable. Embodied presence supports facilitators to adapt to all the interdependent moving parts within a session.

5.6.4 Reframing safety, connection and presence as entwined in a virtuous cycle

The interplay between psychological safety, meaningful connection and presence presented here suggests that they are intertwined. Psychological safety is not a stand-alone concept that can be applied in virtual services: it needs to be contextualised and reframed. Understanding the interrelationship between these concepts leads to the following virtuous cycle which

is presented in Fig. 5.3. When staff facilitate with a strong sense of presence, it gives rise to the possibility of the space being considered safe enough for people to exercise a greater agency and for meaningful connections to arise. This creates a reinforcing feedback loop which is virtuous: the more present facilitators are, the safer the space, and the deeper the connection. These findings suggest a progression from Kahn's framing (Kahn, 1990), where the need for psychologically meaningful work is replaced with meaningful connection and psychological availability is replaced with presence. The concept of psychological safety retains its meaning, but now it depends upon both meaningful connection (which is associated with mattering) and presence (which is associated with embodied and enacted sensemaking in the moment). A comparison between the framing of social presence and embodied presence is presented in Table 5.6.

Together, these three aspects of creating psychologically safe spaces point to a more nuanced understanding of what it takes to create a safe space, how a sense of presence supports it and why being meaningfully connected matters. Embodied presence supports enacted sensemaking in the intersubjective we-space, that leads to psychological safe space that then makes meaningful connections possible. Meaningful connections arise when people feel that they matter and this supports connection and creates a virtuous cycle that leads to belonging which reinforces meaning. Being meaningfully connected enhances our ability to be present and make sense of what is going on in reality, rather than rely on our internal cognition which operates as a closed loop system unless we are regulated (Varela et al., 2017).

To conclude, psychological safety leads to an understanding of **what** feeling safe feels like and a *safe container* can be, and meaningful connections tell us **why** feeling safe is important, then presence offers some ideas about ***how*** to go about creating a safe space that can support meaningful connection.

5.6.5 The practice of creating a safe virtual space:

The previous section describes what safe virtual spaces look like, and how presence contributes to how they can be facilitated. Here, we further explore the practices that staff engage in, to create a safe space. Understanding the practices, routines and behaviours that contribute to creating safe virtual spaces is about exploring what research participants describe they do. The Theory of Practice Architectures supports this exploration (Kemmis, 2022) across three areas of activity. An outline of the theory is presented in Fig. 5.4).

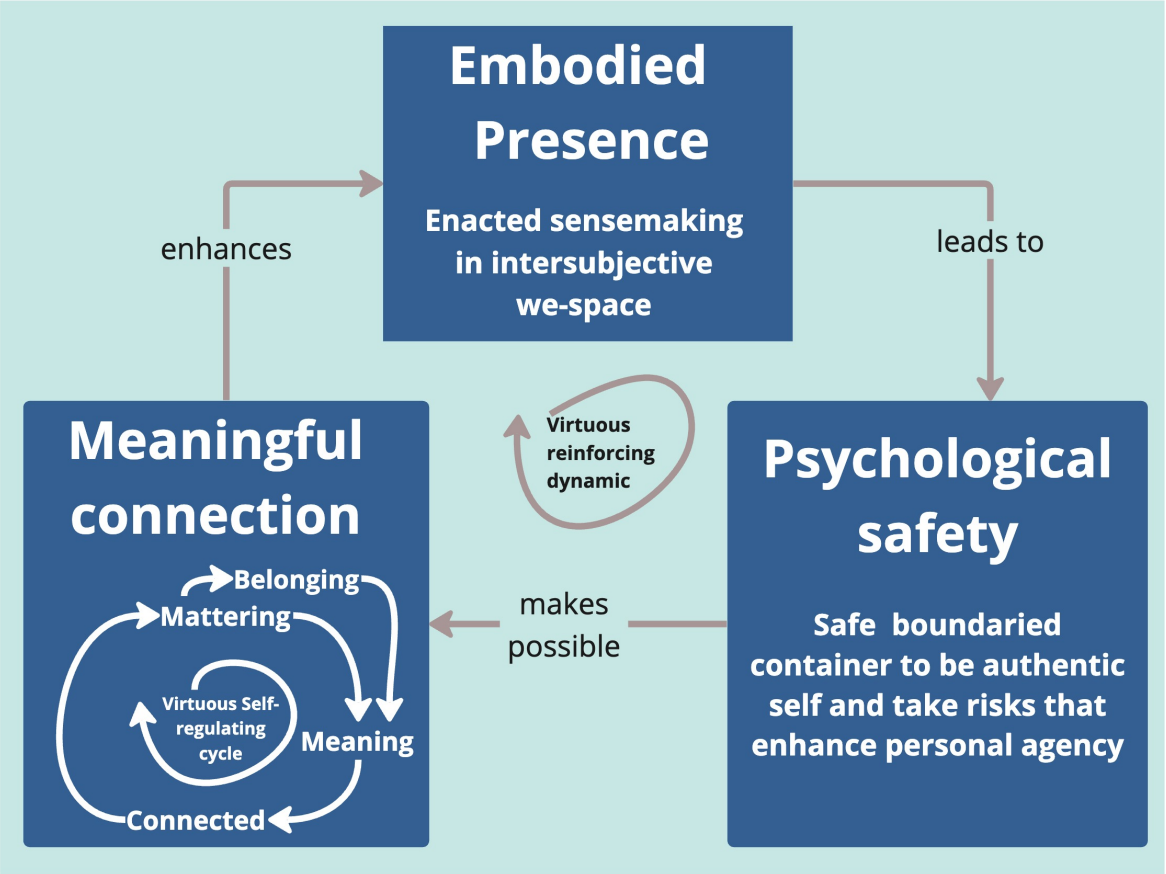

Figure 5.3: Virtuous cycle between embodied presence, psychological safety and meaningful connection

Doings describe the skills and capabilities that practitioners use to facilitate sessions, which includes making provision for the distinct nature of online encounters by developing technological know-how under the theme of Pixellated People (See Table 5.7). It also includes the need for services to have the capability to dedicate adequate staffing for sessions, which falls under the theme of Resourcing the Space.

The second element of practice is the **Sayings** or cognitive understandings that underpin practice (see Table 5.8). Three themes are evident here: enhancing agency of attendees of services, encouraging people to step beyond their comfort zone and take risks and creating clear boundaries around the space. Staff practices include candid exchanges around boundaries and personal concerns, and honesty about the trajectory of progressive conditions, as much as the creation of a positive space that enhanced well-being and belonging. **Doings** and **sayings** are enabled or constrained by the culture of the organisation and the personal dispositions of both facilitators and attendees, where their home environments limit what is possible.

Table 5.7: Practices: Doing

Practices: DOING	**Intersubjective Space/medium**	**Practice architectures**
Pixilated People		
Be inclusive: Broaden view of who can or might participate online	Geography and transport arrangements no longer a constraint	Access to technology
Scaffold learning to onboard new participants	Meet separately to establish rapport, assess resources required level of digital literacy	Time
Use technological know-how to facilitate session	Use breakout rooms for one to one conversations, mute or turn off camera when necessary	Access to technological support
Create background setting that matches session purpose	Attend to visual cues in background	A private and quiet space to run sessions
Check in with participants regarding level of privacy in their environment	Share etiquette prior to or at the start of sessions. Discuss at start of session, take action to deal with emerging situations	Organisational protocol for dealing with unexpected issues that may arise. Etiquette sheet, video for participants
Exercise awareness of self-presentation	Attend to how, as facilitator, personal actions may be perceived online	Time to prepare, reflection
Resourcing the space		
Decide on number of faciltators needed to create a safe environment	Negotiate within organisation	Adequate staffing to avoid burnout
Plan service Plan session	Use creative processes to design content that matches virtual format	Time Access to specialist resources for session e.g. art materials, cooking ingredients, music
Decide how many people can be accommodated in a given session	Discussion with colleagues	Potential number of attendees and facilatators available
Incorporate features of the site of practice in the design of sessions	Use the technology as an ally in facilitation	Access to technology and IT support

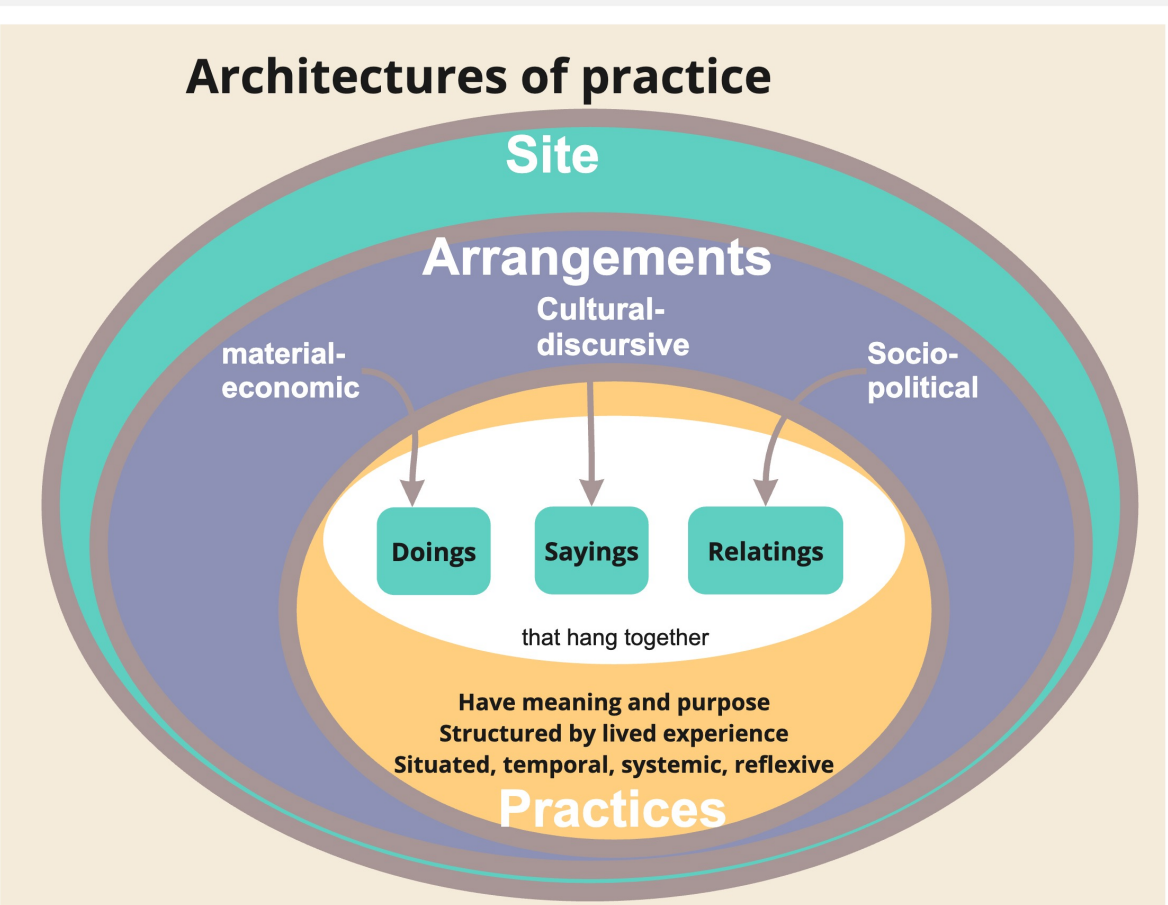

Figure 5.4: Theory of Practice Architectures

The third aspect of practice is **Relatings**, which encompasses values, feelings and emotions (see Table 5.9). These are the practices that contribute to creating meaningful connections, including presence and attention to the social field, as well as the conscious cultivation of a We-space founded on an understanding of intersubjective space. The Doings, Sayings, and Relatings of practice are bundled together with the personal disposition (habitus) of the practitioner to support enacting practice through activity and resources (material economic arrangements), language (cultural discursive arrangements) and through regard for the other (social-political arrangements) (Kemmis, 2022).

Theories of practice architecture also adds two further aspects of practice: the practitioner's use of their affective states to support the creation of safe space and the structural elements that need to come together to resource it. Adding these elements does two things: it includes the practitioner firmly in the system as much as the person with a disability, and secondly, it attends to the structural elements of creating safety that places the construct

Table 5.8: Practices: Sayings

Practices: SAYING	**Intersubjective Space/medium**	**Practice architectures**
Enhancing agency		
Encourage participants to make active and informed decisions about participation	Offer and validate choices	Flexibility and staff familiarity with participants needs
Encourage participants to take ownership and initiative	Make space for participants to co-lead, facilitate	Openness to democratic process and equalising power
Balance contributions in the space	Strive to give equal weighting to all voices	Culture of fairness, respect and equality
Encourage participants to be accountable for their participation levels	Discuss personal responsibility with participants	Balancing appropriate levels of autonomy with responsibility
Home Comforts?		
Make decisions about how far to push risktaking beyond comfort level	"Work the edge" of what is possible	Autonomy to work independently as trusted staff member
Encourage people to make their environment safe for participation	Discuss issue of protecting personal space, over-sharing	Checklist/etiquette re: protecting personal space
Boundary Setting		
Hold consistent boundaries over time	Be consistent, transparent and clear on what boundaries are	Having authority to set and hold boundaries
Decide whether session should be by open invite or curated	Discussion with colleagues and participants	Access to specialist knowledge, contributors with specific topic knowledge
Develop and agree expectations about behaviours in sessions	Use cues and reminders of agreements as appropriate	Agreed etiquette of acceptable/unacceptable behaviours co-developed with attendees
Name it when behaviour is out of alignment with agreed etiquette	Taking corrective action in group or one-to-one discussion	Etiquette protocols
Engage in learning between organisations	Participate in forums and events beyond own service	Organisational culture of openness to learning
Be adaptable	Be prepared to review boundaries as needed	Open discussion, reflexive practice

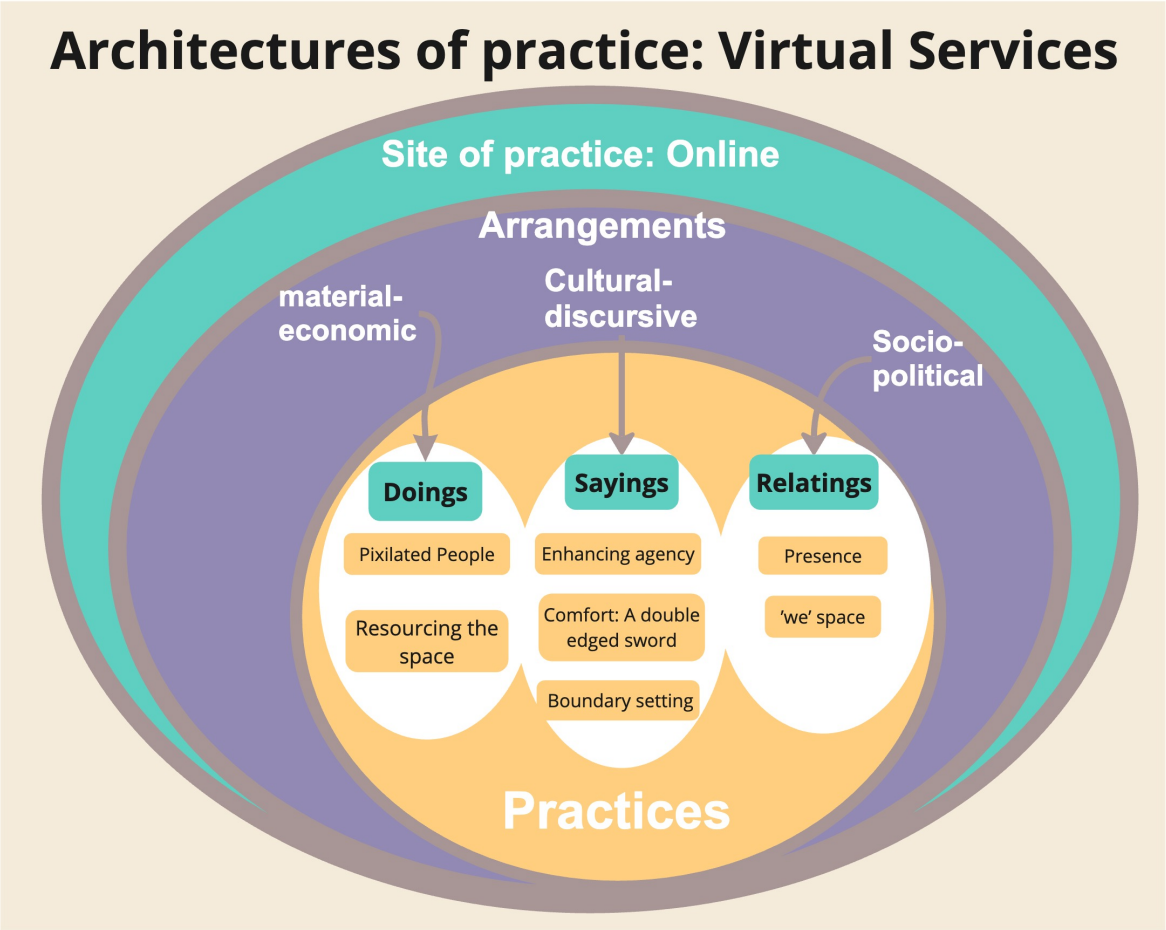

Figure 5.5: How Theory of Practice Architectures and World Cafe themes match

in context. These practices are entwined with the affordances offered of the Site of Practice, which in this research is the screen where the action happens (see Fig 5.5).

5.6.6 The virtual space as the site of practice

There are three prominent findings that suggest that creating safe virtual spaces calls for different practices than face-to-face settings. Firstly, it requires more conscious attention and embodied presence, including attention to different ways of 'being' as an individual staff member and 'being with' others in the virtual space. The experience of seeing our own image while speaking with others is a new experience that comes with an extra cognitive load as the feedback loop to adjust personal presentation is immediate. Having to concentrate on so many small presentations of others simultaneously is also a challenge. Secondly, what cannot be seen off-screen requires con-

stant vigilance. When working face-to-face, it is possible to close the door to have a one-to-one conversation if someone becomes upset. Online, it may be difficult to know that someone is upset, and privacy cannot be guaranteed. The safety of others who might be present but off-screen is a consideration as much as the privacy of those in the session, who may be sharing private information they would rather no one beyond their peers know about. This calls for greater sensitivity to the social field in order to read the room and make sense of what is going on. Thirdly, the very fact that some attendees experience a greater sense of control over their lives and are exercising greater agency over how they access services and lead sessions suggests that they are getting something different from usual in this space. The technologically mediated space supports a democratic space that suits some people well. They can regulate themselves through online contact enough to stay in connection in a meaningful way. Equally, the virtual setting does not suit everyone, which also attests to the fact that it is experienced as a different space to in-person services.

5.6.7 Social learning within the World Cafe

On a final note, it is also worth mentioning that several participants considered that participation in the World Café was a valuable way for staff who might otherwise feel isolated to come together and learn from each other. The intention set out to design systems research that could create spaces for social learning to occur can be considered effective based on feedback during the session, in the debriefing session with facilitators and subsequent engagements with participants through FreedomTech.

5.7 Conclusion

This chapter presents the design and execution of a World Cafe to answer questions around the conditions that give rise to a sense of connection and psychological safety online, and the practices that support the creation of safety. The findings conclude that psychological safety is a core condition for the effective running of virtual spaces but it cannot operate as a standalone concept. Nor is the current framing in the literature adequate to match the context of disability services where the relational dynamic between the person providing the service and the person accessing the service is key. Staff presence creates the conditions for psychological safety to arise which leads to meaningful connections that support a sense of mattering. These three

factors are entwined in a virtuous cycle and are supported by staff practices that are enabled or constrained by organisational norms. The virtual space is different from in person space and has resource requirements including personnel, time for planning, co-ordination, follow-up actions, referrals and reflective practice. These concerns are addressed in the next research cycle.

Table 5.9: Practices: Relating

Practices: RELATING	**Intersubjective social Space/medium**	**Practice architectures supporting practice**
Presence		
Being fully available to concentrate on the session	Being able to juggle multiple concerns simultaneously	Enough support within and outside the session
Engage in active sense-making	Responding to feedback, being prepared to change direction	Being open to emergence and self-regulated
Engage in deep embodied listening in absence of visual cues	Attending to the social field, checking out understandings – suspending judgement	Having authority to take appropriate action
Using authentic self in sessions	Being real and sharing self appropriately	Culture of openness to difference within organisation
Take risks	Being open to getting it wrong and admiting mistakes	Supportive non-blaming organisational culture
Being patient and calm	Self-regulation as facilitator	Good self care practices supported by organisation
Keep hold of sense of humour	Being able to laugh at self	Supervision and support within organisation
Adapt and respond to the moment	Being open to emergence	Having authority to take appropriate action
		continued on next page

Table 5.9: Practices: Relating - continued

We-Space		
Setting atmosphere of session as positive welcoming space	Balancing positivity with realness when difficult emotions arise	Authority of facilitator role
Set out to create a safe contained space	Hold awareness of importance of being connected to others	Balancing boundaries with treating people well
Hold everyone in the space in equal regard	Being appreciative of difference	Treat everyone equally regardless of how they present
Nurture connections with & between participants	Convey interest and care for participants as individuals,	Allowing the other to arise as a legitimate other
Acknowledging reciprocal nature of relationships	Learn from attendees, appreciate interdependencies	Level of sharing constrained & enabled by organisational role
Individualise communication	Conveying a sense that the individual matters	Demonstrate unconditional positive regard
Communicate clearly	Being real & honest in communication	Level of sharing constrained & enabled by role

CHAPTER 6

Viability and sustainability in Safe Virtual Spaces

The purpose of a system is what it does. There is after all, no point in claiming that the purpose of a system is to do what it constantly fails to do. Stafford Beer

6.1 Introduction

The purpose of this final research cycle is twofold. It seeks to validate the findings from Cycle 2 which proposed a reframing of what psychologically safe virtual spaces consist of and the practices used to support the creation of safety in virtual services. It also aims to develop an understanding of the governance arrangements needed to develop and sustain viable safe virtual spaces. The approach to addressing these concerns is presented in Figure 6.1, including the research focus, framing, selection of research questions, methodologies and detail on how the research is distilled. The case is made for designing a real-time Delphi Survey online using the Viable Systems Model (VSM) as a way of structuring the questions that can support learning about the conditions needed for viable safe spaces. The findings are discussed within the framing of the VSM in brief with the main discussion reserved for Chapter 7, where they are considered in the context of the overall research outcomes.

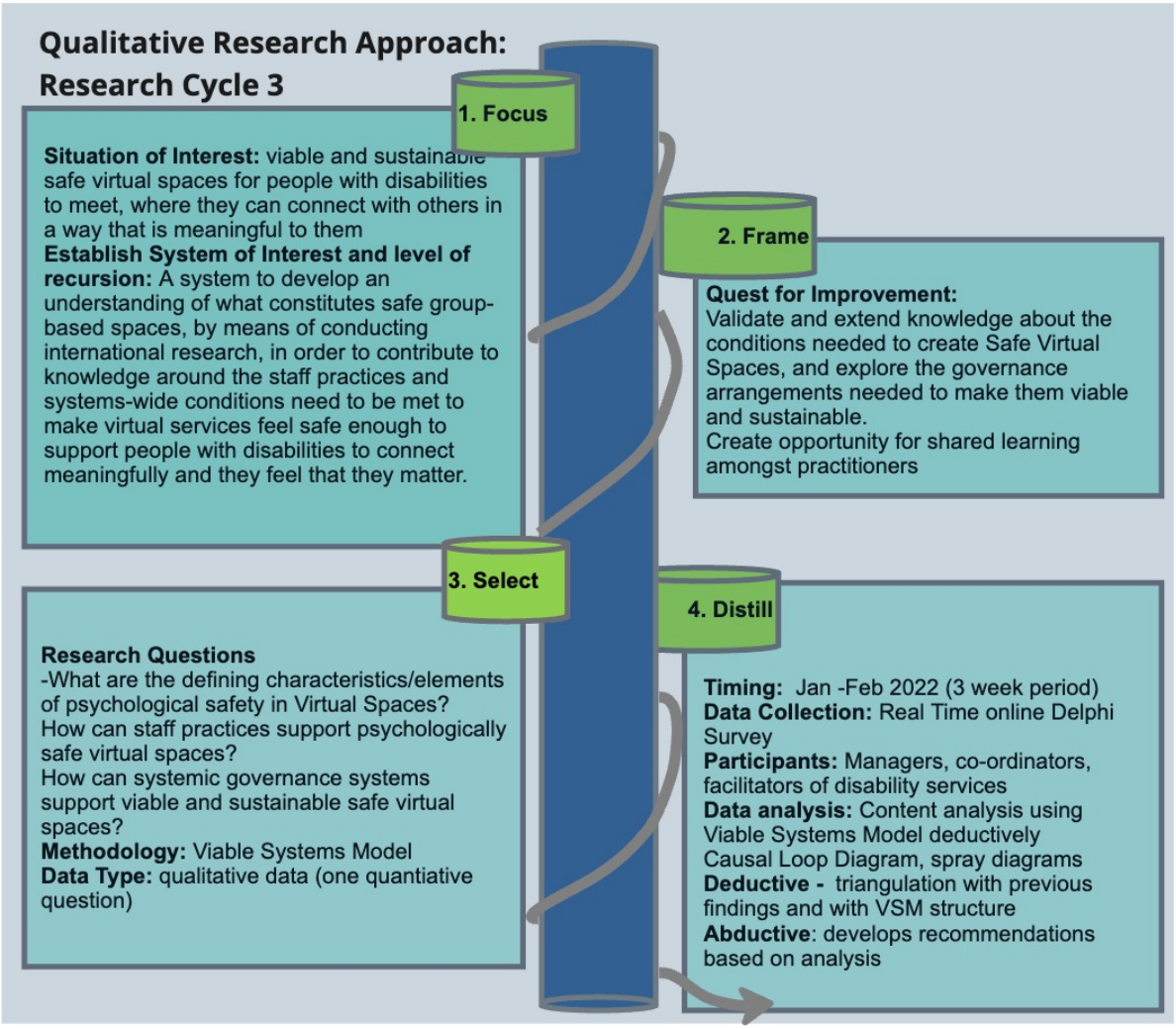

Figure 6.1: Research approach to Cycle 3

6.2 Research focus

The **situation of interest** is the development of viable and sustainable safe virtual spaces for people with disabilities to meet, where they can connect with others in a way that is meaningful to them. The system of interest drawn around this situation is:

> **a system to develop an understanding of what constitutes safe group-based spaces, by means of conducting research, to contribute to knowledge around the staff practices and systems-wide conditions that need to be met to make virtual services feel safe enough to support people with disabilities to connect meaningfully and they feel that they matter.**

This system is used to inform the research framing and questions.

6.3 Research framing

This final cycle aims to test the practices already identified, and test them in an international context, thereby contributing to knowledge about the conditions needed to create and sustain Safe Virtual Spaces. The process is also designed as an opportunity for social learning amongst participants to arise through exposure to each other's perspectives.

6.4 Selecting research questions

The research questions are developed from the situation of interest:

1. **What are the defining characteristics/elements of psychological safety in Virtual Spaces?**

2. **How can staff practices support the provision of psychologically safe virtual spaces?**

3. **How can systemic governance systems support viable and sustainable safe virtual spaces?**

The first question aims to create a deeper understanding of psychological safety as a systemic construct for creating Safe Virtual Spaces. The second question aims to validate the practices that support a sense of safety and meaningful connection in those spaces. The third question aims to set safe virtual spaces within the broader organisational context and ask how they need to interact with the rest of the organisation to become viable and sustainable over the longer term.

6.5 Methodology

This research was designed as a real-time online qualitative Delphi survey using the Viable Systems Model which calls for a review of research focus and questions. This section presents the rationale for both these choices and the iterative process that informed the development of the research questions.

6.5.1 Data collection method: Real-time online qualitative Delphi survey

The methodology chosen for data collection was a real-time, online qualitative Delphi Survey. A Delphi survey was chosen for several reasons. The Delphi method is most commonly designed as a series of sequential surveys, where feedback from each cycle is analysed and reduced, then fed into each subsequent survey round (Dalkey et al., 1969). The RAND Corporation developed it as an anonymous process for developing consensus amongst subject matter experts, whilst minimising dominant individual contributions and avoiding group conformity (Dalkey et al., 1969). Research on the effectiveness of Delphi suggests that collective knowledge is a better predictor of future states than individual opinion and that structured interaction is more effective than unstructured interaction (Woudenberg, 1991). It is suited to situations where there is little academic knowledge (Gupta & Clarke, 1996) which made it a good fit for this research. It can also support "*dialogue*" between participants dispersed geographically who can contribute at their convenience, whilst at the same time preserving anonymity (Linstone, Turoff, et al., 1975). This also made it suited to this international survey across different time zones. Whilst Delphi surveys can sometimes reduce participant accountability by encouraging "snap judgements", this was avoided by making the survey online and in real-time. This format also helped to address some common concerns around attrition, which is associated with the final rounds of a multi-round Delphi study (McKenna, 1994). This survey addressed these concerns as it was designed so that all contributions were transparent and it engaged a small number of participants, expected to be highly motivated to participate.

While a traditional Delphi survey is sequential and data is reduced over different survey rounds, this Delphi survey was designed differently. Firstly, it was held in real-time and this not only meant that panellists could participate asynchronously, it also meant they could see each other's contributions and change theirs as many times as they chose. Secondly, it was designed to embrace rather than homogenise multiple perspectives through consensus. Delphi is most often associated with quantitative data where it is regarded as an efficient way to achieve consensus, but it may also force it (Woudenberg, 1991). The design supported overcoming some of the issues associated with traditional approaches that do not allow further elaboration on responses (Fletcher & Marchildon, 2014; Goodman, 1987; Hasson et al., 2000), may exclude less popular opinions and neglect potentially valuable ones (Goodman, 1987; Green et al., 1999). The gradual removal of statements from the

context in which they are made may also result in context-free generalisations (Green et al., 1999). Delphi surveys are suited to qualitative social research, where contextualised interpretation, understanding and experience counts (Gupta & Clarke, 1996; Skulmoski et al., 2007).

A qualitative approach is also regarded as an efficacious method to engage multiple perspectives as panellists ccould articulate what is important to them in their own words and convey their sense-making processes (Braun & Clarke, 2021). They could also avoid the trap of reducing qualitative responses to quantifiable variables for statistical analysis (Terry et al., 2017). Keeping responses open has clear implications for data analysis, which can become cumbersome with qualitative data, and there are not many precedents for dealing with analysis (Fletcher & Marchildon, 2014). Deductive analysis using the Viable Systems Model, which is discussed in the next section, was regarded as the best way to reduce data.

A real-time Delphi survey also offers the opportunity for practitioners and experts to contribute to knowledge creation in real time and learn from other's contributions, rather than wait for research to be written (Fletcher & Marchildon, 2014). Fletcher suggests that this method makes it more democratic and promotes inclusivity across different levels of authority. In this context, it was a way to promote learning amongst panel members (Van Dijk, 1990) and inform and build practice, which was in keeping with the systems approach to research.

6.5.2 The Viable Systems Model and Safe Virtual Spaces

The Viable Systems Model can be used to design a system, or diagnose issues within an existing system (A. Espinosa, 2022). The model is attracting more attention as organisations seek to cope with increasing environmental volatility, as its recursive nature means that it can account for different levels of scale and complexity (Lowe et al., 2020). This makes it suitable for future-focused work on creating sustainable systems. There are specific features of the VSM that made it amenable to supporting an understanding of how practices and governance structures work together to develop safe virtual spaces. This section describes these features and how the model was deployed to design the survey questions.

The VSM is a method for discerning the minimum requirements needed to sustain a social or organisational system and ensure it can adapt and survive in a complex environment (Beer, 1979). It is based on the principle of viability and recursion. To be viable, a system must be able to sustain its own

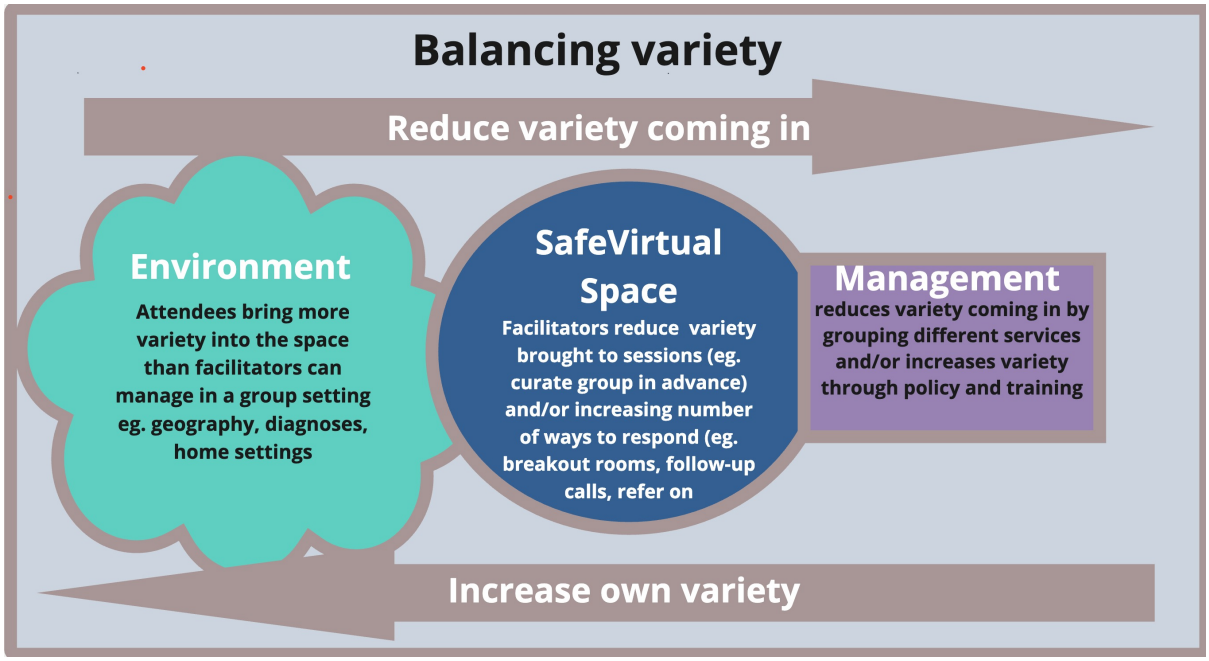

Figure 6.2: Balancing variety in Safe Virtual Services

existence and whilst remaining in relationship to its environment (Beer, 1979). Systems are recursive as they are embedded within larger meta-systems and have smaller systems embedded within them. This suggests that Safe Virtual Spaces could be considered a discernible construct, nested within wider systems at different levels within an organisation. The VSM is concerned with the enduring and adaptive structural integrity of a social system over time and developing more democratic and creative ways of interacting and adapting (Harwood, 2009). Adaptiveness is described as "*structural coupling*" with the environment, where the system responds to changes in the environment which, over time, leads to "*structural congruence*" between them (Maturana & Varela, 1987). This is aligned with the understanding of practices developed in the previous chapter, and theories of practice architecture in particular, where personal dispositions interact with the architectures that hold those practices in place and enhance or constrain what is possible, thus leading to a co-constructed system. Adapting well means that a system needs enough complexity and variety in the range of actions it can take, to absorb what the external environment can put in its path. This is referred to as Ashby's Law of Requisite Variety which states that "*only variety can absorb variety*" (Umpleby, 2009). Balancing the complexity equation can happen at either side of an interaction (Ashby, 1960). In terms of virtual supports, participants, potential participants, the pandemic and other environmental factors could be seen to exhibit a greater level of variety than safe virtual spaces could

deal with. This means that managing services involves a process of reducing the variety brought to a session through curating groups in advance and increasing the number of ways to respond (See Fig. 6.2). The safe virtual space has more variety than management who also need to reduce the number of competing demands on time and resources by grouping services together and developing policies and training. In terms of creating safety and connection, it could be about participants having the option to exit a session or move into a breakout room for a chat with staff, if they do not feel comfortable, as an example. It also suggests that staff need other ways of contacting participants who leave a session unexpectedly, or the option to refer to another team within the organisation.

6.5.3 Five systems in the VSM

The VSM describes five subsystems that interact to create a viable entity. These are depicted in Figure 6.3.

1. **Operations**: the primary activity of the system that provides value to potential attendees in the environment. This would include all the services provided by an organisation including safe virtual spaces.

2. **Co-ordination:** how primary operations providing services are coordinated to maximise collaboration and minimise competition for resources or scheduling clashes.

3. **Resource management:** managing the allocation of resources needed for operations and monitoring the effectiveness of the system. This level sits between operations and upper management and it negotiates between the two. The monitoring function provides an "algedonic" route for pain points in the system to be dealt with immediately where necessary. It is shown as a star and labelled "system 3*".

4. **Development:** forward planning that interacts with the future environment and horizon scanning to detect potential opportunities and risks.

5. **Governance arrangements and identity of the system:** agreeing organisational strategy and the purpose of the system needs to happen at a governance level. It needs to be closely aligned to what people do at an operational level. This is also where the tension between managing "in the now" and for the future are balanced as indicated by the arrows between 5 and the interaction between 3 and 4 in the diagram.

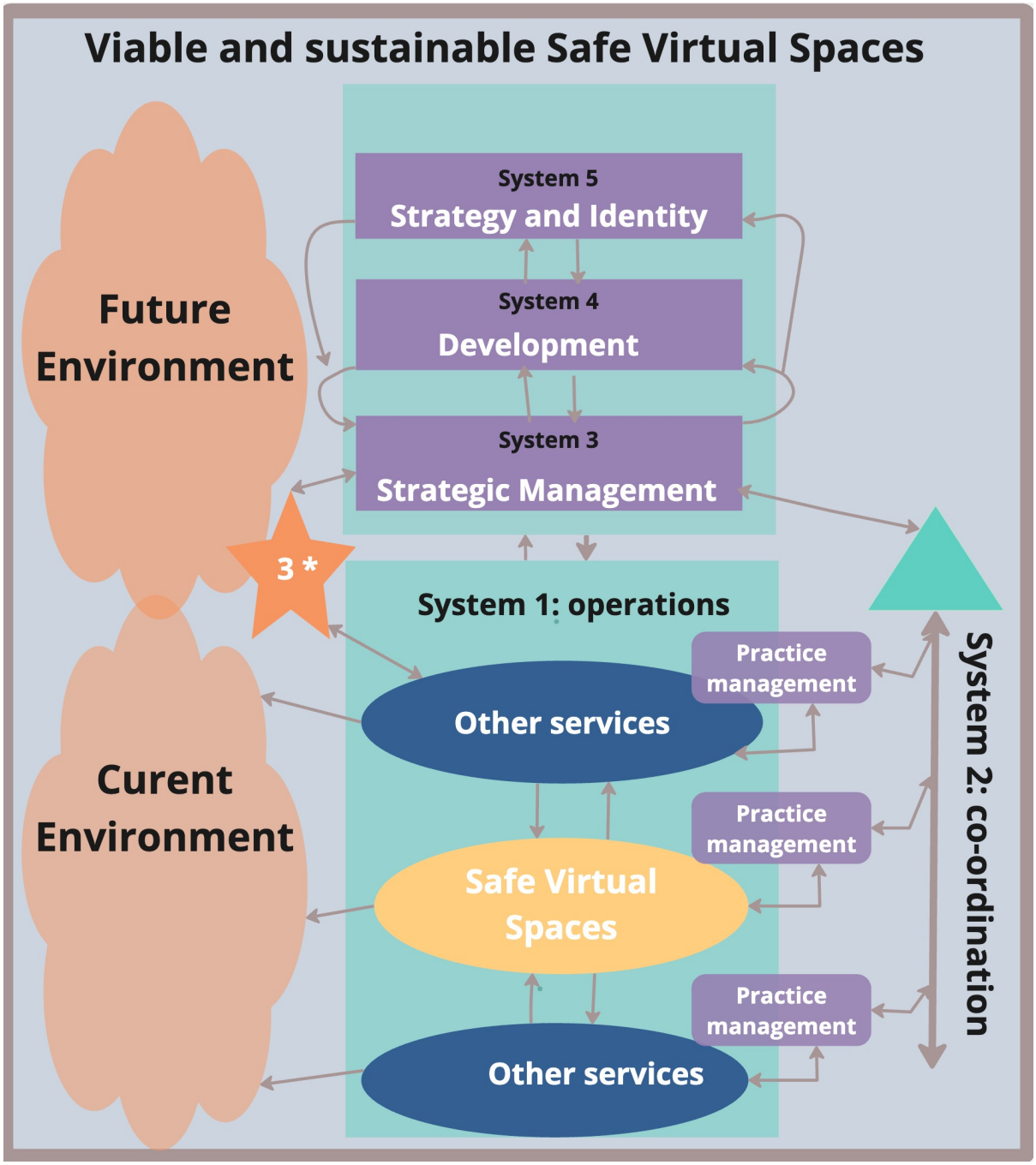

Figure 6.3: Viable Systems Model applied to Safe Virtual Services

6.5.3.1 Suitability for this research

The VSM was regarded as commensurate with the approach taken in this research in several ways. Firstly, it builds on practice theory by extending the notion of scaffolding suggested by Theories of Practice Architectures (Kemmis, 2022) to encompass insights into how to design for sustainability. It also accounts for gaps between practice and purpose: Beer coined the acronym POSIWID, which stands for `*the purpose of a system is what it does*" as distinct from what it purports to do. This puts operational actions or practices ahead of formal strategy as the decider of organisational purpose, and points for the need for both to be closely aligned.

It also supports the development of autonomy at different recursive levels of an organisation, and in doing so it distributes control throughout the architecture of the whole system (Jackson, 2019). This makes for a more democratic organisational structure where power is distributed throughout the system. It has been described as a descriptor of what an adaptive democracy might look like:

> a map of how people might be arranged and connected to involve them all in their collective adaptation to a fluctuating and ultimately unknowable world (Pickering 2004).

Pickering's description echos with the framing of psychological safety as a systemic construct grounded by the practice. The VSM is also a performative information system rather than a representational system (Pickering, 2004). Both concepts also stress the importance of the temporal nature of sense-making and of interdependence between functions as enacted in practice. The VSM model's complex systems also aligns it with an understanding of the innovation of virtual services as a Complex Adaptive System. While a CAS framing offers bottom-up insight into issues of self-organisation and adaptive management, the VSM creates a framework for evolving a structure to support the enduring viability of a system based on the same understanding of how complex systems work (Á. Espinosa & Porter, 2011).

VSM enhances sustainability in complex contexts by supporting:

- a balance between autonomy and cohesion across recursive levels in a system
- an understanding of management as overseer to ensure policy is adhered to, identity is sustained and resources are adequately deployed

- structural coupling within the context the system operates in, which supports internal adaptation where the environment is in flux
- engaging individuals to have more autonomy
- devolving power to the level at which people can get things done (A. Espinosa et al., 2008).

The VSM and Delphi survey The methodological congruency between the VSM and the Delphi survey method is less established. It can be argued that both address complexity and unknowns, and seek to create more viable futures, whilst acknowledging that doing so is not a precise science which must by necessity rely on expert contributions (Linstone, Turoff, et al., 1975; Pickering, 2004). One example of the combination of both approaches is a recent PhD thesis where a Delphi survey was employed to inform the development of a VSM informed sustainability index for online higher education programmes (Parsons, 2018).

6.6 Research design

The traditional Delphi process is often preceded by a process for determining priority issues such as interviews or literature reviews. These are then used to scaffold survey questions (Linstone, Turoff, et al., 1975). This survey drew on previous research cycles and the Viable Systems Model (VSM) to create a structure for the survey. The overarching design was guided by Soft Systems Methodology (See Fig. 6.4). The process for using the VSM as a performative model involved distinct stages which where incorporated into the research design (Lowe et al., 2020). Their development was iterative and are set out here in a linear format. The stages were:

1. **Develop research focus.** This involved defining the system-in-focus and distinguishing the level of recursion for this cycle. It also included an articulation of the transformation sought in the quest for improvement and clarity on who should be invited to participate in the research.
2. **Develop the survey.** This step involved identifying and assessing the functioning of the different subsystems within the system to frame research questions.
3. **Develop analysis strategy.** This included the alignment of the features of VSM and questions with content analysis codes and the development

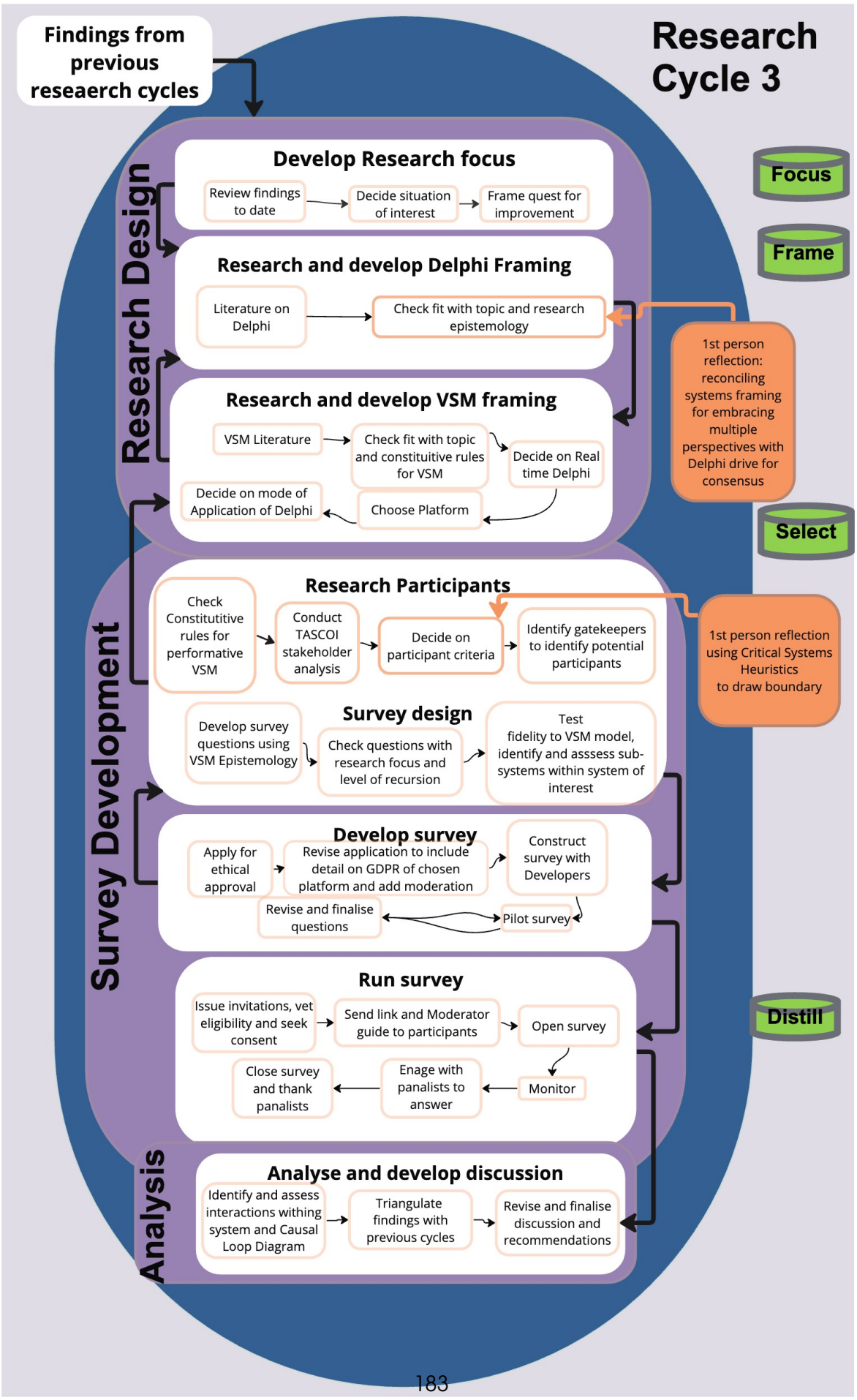

Figure 6.4: Research Design for Delphi Survey

of criteria to identify interactions between the different subsystems that could be used to analyse the findings.

4. **Survey logistics.** This included research and design of software, piloting, timing and developing moderation and etiquette guidance as well as paricipant recruitment.

6.6.1 Stage 1: Develop research focus, transformation and participant criteria

6.6.1.1 Research focus

This stage was comparable with the approach taken in the Soft Systems Methodology to structure the research inquiry that began in Chapter 3, and continued in this research cycle at the start of this chapter. As the design included cycling back and forth until the exact research focus was clear, the focus and research questions were also put through the VSM process to ensure rigour. Up to this point, psychological safety was considered a component of individual sessions, and a subsystem of in-person services within an organisation. For the purposes of this study, safe virtual spaces were viewed as a distinct subsystem within **System 1 operational service delivery,** which was a subsystem of the organisation. This distinguished them from in-person services (see Fig. 6.5).

6.6.1.2 Deciding on the quest for improvement

The next step was to decide on the transformation that the research sought to make in its quest for improvement. A TASCOI analysis offered a way to strengthen the definition of a system as a relational dynamic characterised by structural coupling (Hoverstadt, 2009) from a whole system perspective (Espejo et al., 1999). TASCOI is an acronym for Transformation, Actors, Suppliers, Customers, Owners, Intervenors. The TASCOI analysis is presented in Appendix F. The transformation this research sought was described as:

> **a shift from a self-organised and ad hoc consideration of how to design safe virtual spaces to a shared framework or set of principles guiding the design and development of safe virtual space within disability services.**

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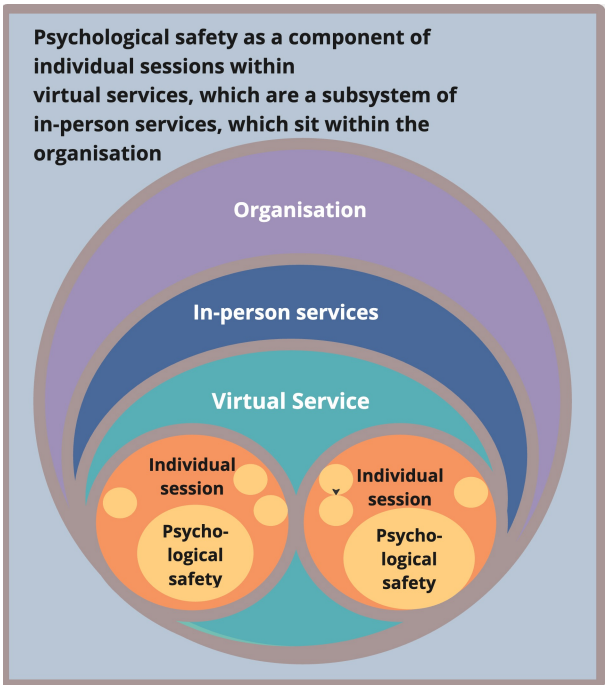

Figure 6.5: Situating Psychological safety as a recursive layer within disability services

6.6.1.3 Deciding on boundary for research participants

The TASCOI analysis also raised the question of who needed to be involved in the research. This prompted further inquiry as no beneficiaries of Virtual Services were involved to date. I conducted a Critical Systems Heuristics (CSH) analysis to review this decision. CSH is a reflexive heuristic designed around 12 questions to work through complex boundary decisions from an emancipatory perspective. It attends to power differentials in a situation (Ulrich & Reynolds, 2010). Given the concern with power dynamics within organisations that arose in previous research cycles, and the emancipatory potential of virtual supports, it was important to fully interrogate the potential involvement of people with disabilities in the research. The CSH analysis involved reflecting on three sets of questions. The first set of questions focused on the activity of running the survey (See Fig. 6.6). The second set related to how the survey would be conducted (see Fig: 6.7), and the third set was concerned with assessing if this was the right activity to engage in to yield the desired outcomes (see Fig. 6.8).

This research subscribed to the following "expertise" requirements for a Delphi survey:

- knowledge and expertise on Virtual Services

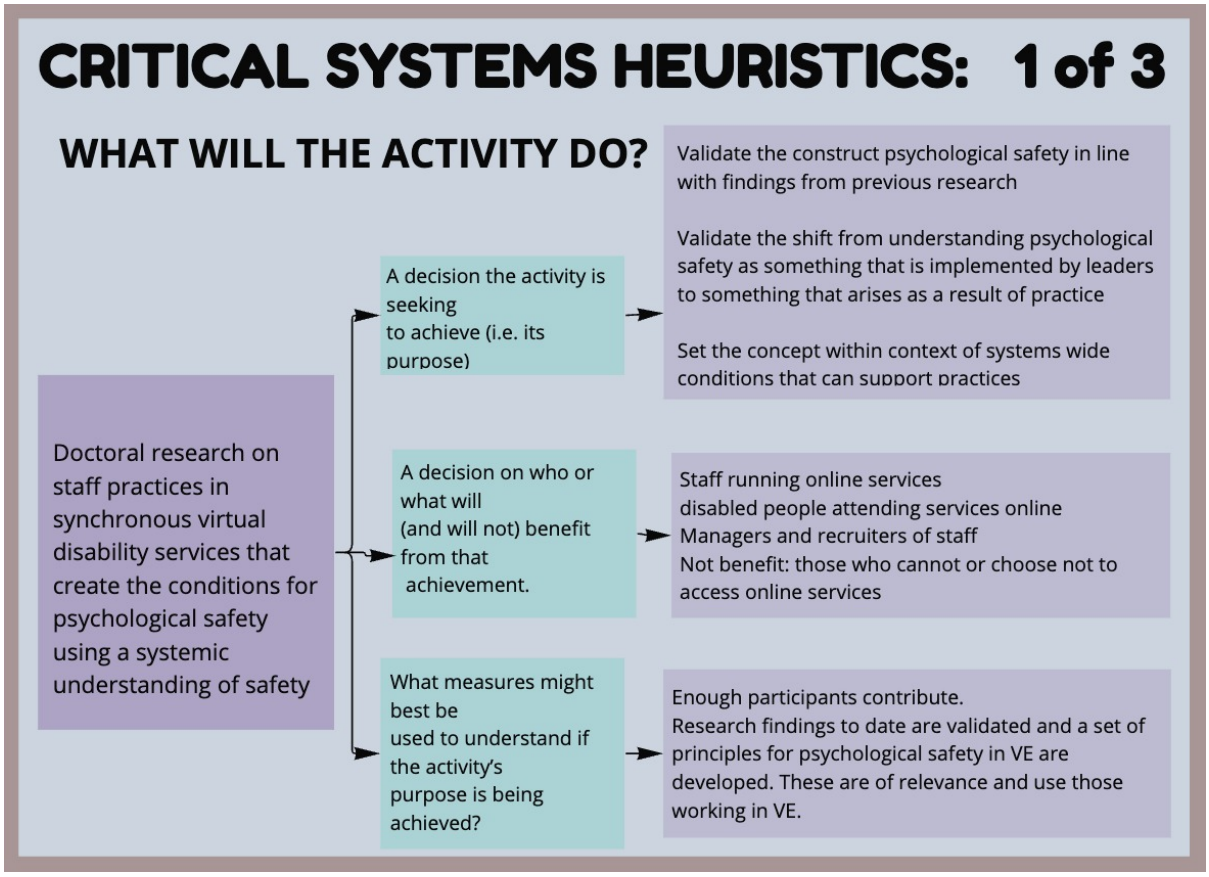

Figure 6.6: CSH analysis of participant inclusion 1 of 3 (Key: VE=virtual environment)

- having the time to participate
- having the capacity and willingness to contribute
- having an ability to communicate views online (Skulmoski et al., 2007).

Delphi survey participants were required to have demonstrable expertise in virtual services during the pandemic. Those who had been participants in previous research cycles were not invited to participate in this cycle. This restriction supported the intention to triangulate findings from previous research cycles. One of the greatest advantages of an anonymous Delphi survey was that it could be designed specifically to temper the potential risks associated with power dynamics within groups between people of different status. The potential risk comes from a gap between people who can articulate a perspective compellingly on paper and convey a strategic perspective, which may hint at a senior position, and those who might not have as high a level of literacy or command of English. For this reason, the criteria for participation included good proficiency in English. There may also be panellists who both attend virtual services and have a formal paid role as facilitators. While it should

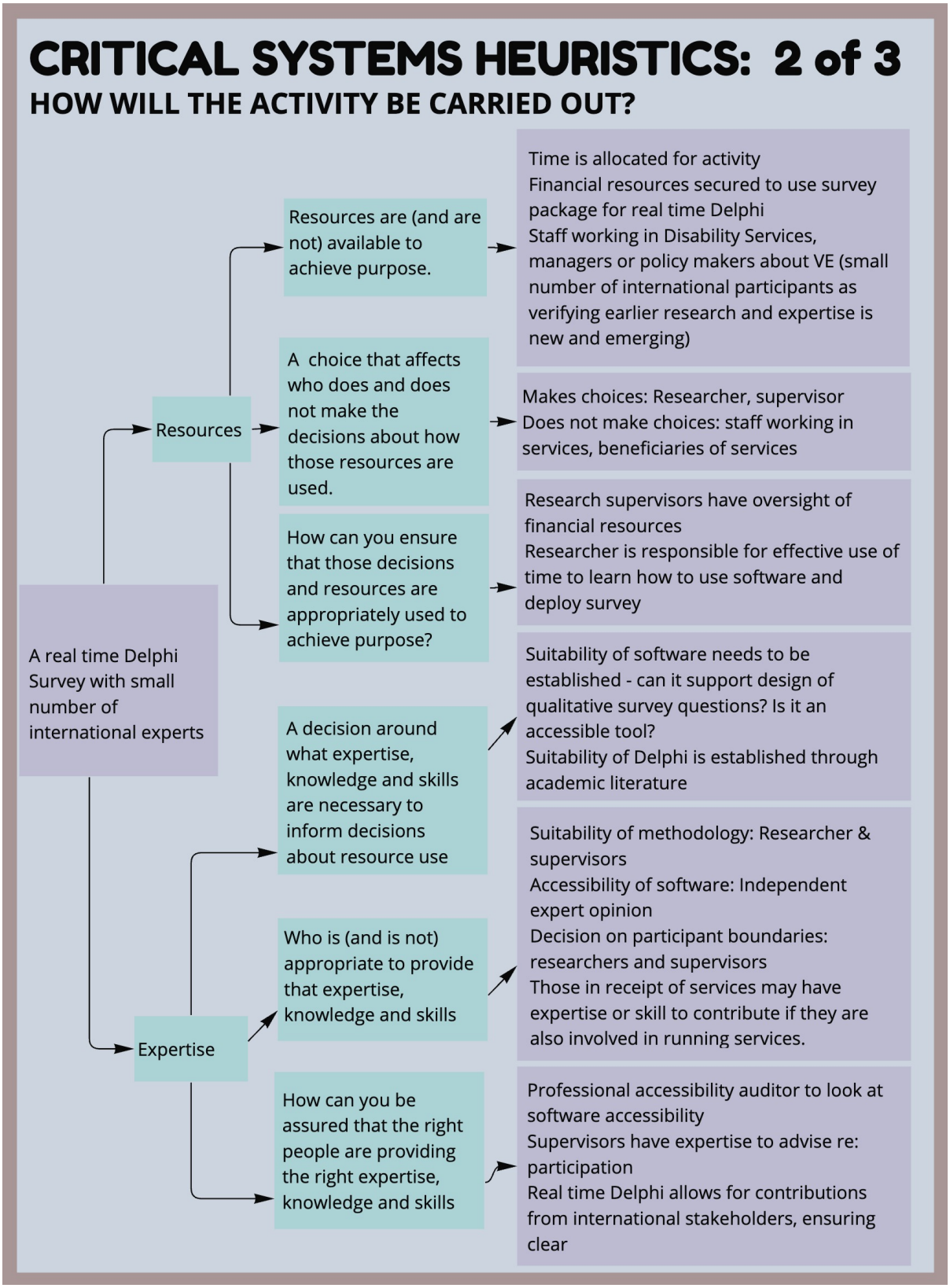

Figure 6.7: CSH analysis of participant inclusion 2 of 3

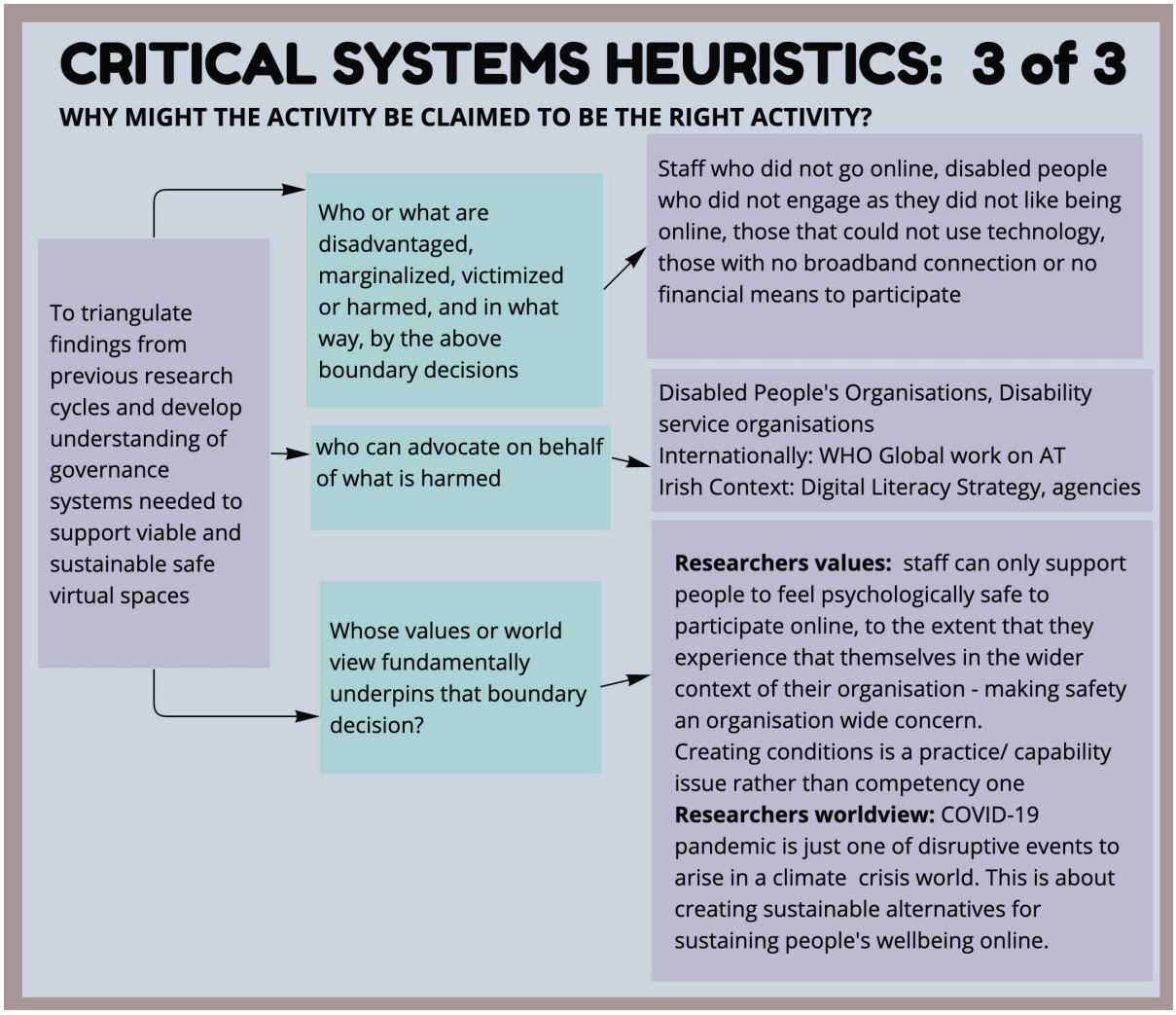

Figure 6.8: CSH analysis of participant inclusion 3 of 3

not be assumed that this might automatically create a power dynamic, moderation mechanisms were put in place to mitigate against skewed contributions. Research participants could opt out at any point, which was stated in the consent form they signed and in the survey instructions once they opened the survey. For further detail see Appendix B.

While the above measures were considered and taken to balance potential risk, the decision was to keep a consistent focus on mixing the participant group, for the following reasons:

- In a survey where everyone could see each other's responses, a situation may arise, where it could become unsafe to share openly.

- The focus of the survey was also on the running of a service rather than the experience of using it. Therefore the criteria for inclusion was having

an expertise in running services, which did not preclude people with disabilities participating, but it was dependent on role.

- It could not be assumed that panellists did not have a disability and attend different services and groups online.
- Disclosure of disability was invited when signing up to the survey and the survey must be accessible.

Participants from each of the following areas of expertise involved in virtual disability services were therefore invited to participate:

- **Policy-maker roles**: commissioner of services, regulator, policy advocate
- **Researcher roles:** researcher, academic, independent researcher in disability services
- **Designer:** Digital Assistive Technology expert, IT expert
- **Manager:** CEOs of organisations, managers of virtual services
- **Delivery:** facilitators, trainers of online services, including disabled facilitators

6.6.2 Stage 2: Develop the survey

The survey questions were developed to address three areas of interest (see Table 6.1). The first area of interest was concerned with validating the findings from previous research cycles:

- the operational practices that support psychological safety,
- what psychological safety makes possible and how to tell if a space is unsafe,
- how technology supports or inhibits a sense of safety and
- the stakeholder roles involved in creating safe space.

The second set were concerned with the five systems in the VSM. The practices above cover System one operational issues. Questions also address the coordination needed, management and resources, monitoring mechanisms, future trends and governance structures. These different concerns represent structural elements of a Viable Systems Model.

Table 6.1: Correspondence between VSM and survey questions 1 of 2

Research Design Correspondence with VSM		
1	**System 1:** Service Delivery at Operational level: delivery of service with enough requisite variety to deal with the environment	**Survey questions:** What actions do staff need to take to create the conditions of a safe virtual space? What staff ways of being and/or presence create the conditions for a safe virtual space? What role does technology play in supporting/inhibiting safety?
2	**Systems 2:** Co-ordination Harmonisation – Preventing recurrent conflicts amongst different operations within organisation by providing shared values, standards, and protocols for information, communications and processes.	**Survey Questions:** Describe what ideally needs to happen to support the coordination of virtual services so that they are experienced as a safe space? Who directly affects or is affected by virtual services and what is their role in creating a safe environment?
3.	**Systems 3: Managing Delivery** Self-regulation and synergies – supporting self-regulation for each operational unit and realising synergies amongst them.	**Survey Questions:** What resources are needed to ensure safety is sustained? Who directly affects or is affected by virtual services and what is their role in creating a safe environment?
	System 3*:Monitoring – informal monitoring of operational performance	**Survey Questions:** What becomes possible when the virtual space is experienced as safe? What signs indicate the space is unsafe? What role does technology play in supporting/inhibiting safety? What mechanisms need to be in place to ensure the space is safe?
4.	**Systems 4: Managing Development** Adaptation – Making sense of environmental changes to shape future	What future trends and external environmental impacts, do you think, are likely to affect the provision of virtual services in the next 5 years? Demand for virtual services will increase over the next 5 years. (Likert scale rating)
5.	**Systems 5: Identity and Closure** – creating corporate identity, ethos and policies to provide consistent framework for operations	Please describe any gaps between what is happening currently and how you think virtual services should be governed as part of the overall organisation?

Table 6.2: Correspondence between interactions within system and survey questions 2 of 2

Identify and assess interactions within system in focus		
6.	Resource bargaining: (Beach and Inui): negotiating expected results and providing matching resources	What resources are needed to ensure safety is sustained?
7.	Inter-operational management (S1– S2 – S3): managing operational complexity and enabling effective decision making	How do virtual services currently interact with the rest of the organisation?
8	Strategy development processes (S4 – S3): combining internal and external perspectives on feasible and desirable future developments, to support strategy development	What governance structures and policies are needed to support safe virtual services?
9	Maintaining balance (S5 – S4 – S3): balancing present and future orientations, balancing internal and external perspectives in order to keep stability	What kinds of supports would help staff develop their practice in creating safe virtual spaces?
10	Recursive governance: ensuring that each embedded organisation operates as a viable system itself with enough autonomy to self govern	Please describe any gaps between what is happening currently and how you think virtual services should be governed as part of the overall organisation?
11	Algedonic signals – raising alarms to trigger interventions outside of usual regulatory channels	What kinds of actions do staff need to be able to take to deal with unexpected occurrences during and after sessions?

Table 6.3: Glossary of terms used in Delphi Survey

Psychological safety: feeling safe enough to participate in virtual services, express self without being made to feel bad or being put down. It is also about feeling safe enough to take risks and try new things, and where boundaries are clear. It concerns both those attending the service and anyone else who may be in their immediate environment. **Meaningful connection:** arises when people are validated as an individual in the eyes of others so that they feel seen and heard and understood in their interactions. Meaningful connections feel worthwhile and involve an interdependency where both parties give and receive something in the interaction. **Presence:** the quality of attention in the moment to what is going on in the space. It is also about being present in a way that involves listening deeply to what is emerging in the moment, making sense in real-time, so that something new can emerge in interactions. **Practices:** professional ways of acting, saying things and relating that staff embody while running or organising virtual sessions. **Virtual disability services:** group activities held in real-time – e.g. support groups, peer support groups, classes, specialist information sessions, social get togethers – that are organised by a Disabled Person's Organisation (DPO) or service organisation and attended by people with disabilities. (*It is not about one to one therapeutic supports, or online supports that people access on an individual basis in their own time*).

A third set of questions were designed to elicit information about the interrelationships between the different parts of the structure (see Table 6.2). The concerns include: how resources are negotiated, interactions with other parts of the organisation, strategy development and balancing present and future concerns, recursive governance, and provision for what Beer called 'algedonic signals' or structures to take immediate and urgent action where necessary (Beer, 1984)citep.

The order of the questions in the survey can be found in Appendix B. A glossary of terms was also developed and included in the survey (see Table 6.3).

Note: The survey referred to virtual services and did not use the language of safe virtual spaces as this term would not have made sense to panellists.

6.6.3 Stage 4: Develop analysis strategy

This research cycle called for a combination of deductive and abductive logic to be applied to the data. A deductive approach would be suited

to triangulate findings from the previous research cycles on practice. It was also the strategy for the analysis of VSM-related questions. There is little guidance or agreement in the literature on analysing qualitative Delphi surveys that can be drawn on (Brady, 2015; Fletcher & Marchildon, 2014). Thematic analysis is recommended (Linstone, Turoff, et al., 1975), but there is no consensus around which specific approach to use (Brady, 2015). As RTA was already used in the previous two cycles, it was decided that content analysis, using matrixes, would be sufficient to triangulate findings on the construct of psychological safety and practices (Miles & Huberman, 1994). Given the strength of the VSM as both a structural and performative model, with its own constitutive rules for use (Lowe et al., 2020) including application of the Law of Requisite Variety, Structural coupling, and principles of recursion, it was important to see how the data corresponded with these constructs. This marks a shift away from *"statistical significance"* in the scientific literature (McShane et al., 2019), towards design and quality. This is in keeping with a systems approach to research where the emphasis is placed on quality design as Amhrein and colleagues suggest:

> factors such as background evidence, study design, data quality and understanding of underlying mechanisms are often more important than statistical measures such as P values or intervals (Amrhein et al., 2019)

In addition to tabular deductive analysis, diagramming techniques such as spray diagrams would be used to facilitate the familiarisation process and whole-driven systems thinking. Causal loop diagrams may be used to capture interrelationships between the different systems in action, particularly in relation to the one qualitative question about future demand. Abductive logic would then be deployed to extract principles from the data.

6.6.4 Stage 4: Survey logistics

The logistics included making decisions around survey software, piloting, criteria for judging acceptability of statements and developing moderation and etiquette guidelines. It also called for consideration of confidentiality and participant recruitment.

Software: The real-time online survey required specialised software (Varndell et al., 2021). Callibrum was chosen for this study from four options available on the market, because of its good range of features and question formats,

data analytics and user-friendliness. It was also chosen as the most accessible survey, a key ethical factor in this research. It is also GDPR compliant. The software required some set-up and technical training, which was supported by Callibrum.

Pilot: The survey was piloted with five participants to verify the time it would take to complete and also test the precise wording of the questions. These participants were doctoral students with expertise in either disability services or VSM, as well as FreedomTech colleagues with an expertise in online services. Survey questions were further refined and some technical glitches were resolved regarding the online user interface as a result. The survey was also tested for accessibility.

Time commitment: Panellists were given an individualised link to the survey and invited to answer the questions from their own perspective. Once they completed a question, they could see the responses of others and could then review and change theirs. The estimated time for first completion of the survey was 50 minutes. They then had the option to review other participant contributions and amend their own contribution throughout the three weeks that the survey was open. The questions remained the same throughout. They were not obliged to change their answers but could offer further comment, or change them based on what they learnt from other contributions.

Criteria for judging acceptability of statements: As this was a Real-Time Delphi Survey, the criteria for acceptability of statements was bound by the time period that the survey was open for, but there also needed to be some assurance that panellists were engaged and their statements changed as they read other's contributions. The decision to keep the survey open for a three week period was made to give everyone enough time to engage, but not so long that people might lose interest and momentum would be lost. As the software was novel, it was also important that they remembered how to access and move through the survey from a logistical perspective. This timeframe was also aimed at respecting the time commitment of panellists. As part of their agreement to participate, they were requested to revisit the survey a minimum of three times and review other people's contributions and see if they wished to amend their answers (total time commitment requested: 120 minutes). Panellists were advised that they may receive between one and three reminders to return to the survey to review their answers, depending on their individual response rate. The time commitment for each review of

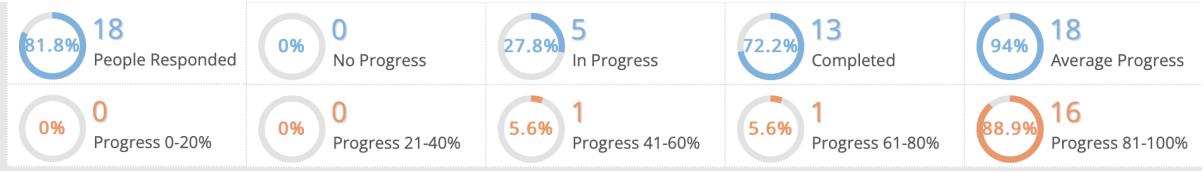

Figure 6.9: Delphi survey completion rate

data was estimated at 20 minutes per review. There was also a chat function within the software where they could contact me as the researcher directly with any questions. Statements were considered acceptable once panellists reached the minimum requirements for participation: they logged on and changed some of their text at least three times and iterated and developed some statements further, in the time period that the survey was open.

Survey moderation and etiquette While the risk of derogatory or discriminatory contributions on the survey were likely to be minimal, an etiquette document and moderation was prepared and the forum was moderated (see Survey Etiquette in Appendix B).

Confidentiality Panellists were known only to the researcher and supervisors who also had access to the survey. It was designed this way so that I could send reminders if needed and to ensure appropriate level of moderation in line with ethical online behaviour.

Recruitment Participants were recruited via a network of people known to, or directly involved in, the community of practice run by FreedomTech and through invitations issued through the following umbrella organisations: the Disability Federation of Ireland, the European Association of Service Providers for Persons with Disabilities, and the European Platform for Rehabilitation, as well as through the Assisting Living and Learning (ALL) Institute.

6.7 Distilling the survey

The survey was conducted between the 16th January and 5th February 2023.

6.7.1 Participants

Twenty one eligible participants agreed to take part, and 20 logged into the survey. One potential participant had already participated in a pre-

vious research cycle, and another asked to join after the survey had commenced, which precluded them both from participation. Two participants did not make any contribution (one responded to a reminder message to say participation was no longer feasible and the other did not respond to reminders). They were removed from the survey and 18 people participated with 16 completing the survey questions in full and two in part (See Fig. 6.9). The minimum requirements for judging the statements to be acceptable was met across 18 participants: all participants viewed and engaged with the survey a minimum of three times, and adjusted their answers, between 3 and 11 times. Their statements were considered accepted once the survey closed.

Reminders were sent weekly to those who were slow to engage, and also towards the end, where panellists were asked to review their contribution to ensure it reflected their final position in light of other contributions they read, and this was effective in prompting participation. As moderator, I did not need to intervene on any points of discord across contributions. For the participant profile see Appendix C

6.7.2 Data analysis

The data was analysed primarily using a deductive Content Analysis approach which was considered sufficient for making replicable and valuable inferences from the data (Krippendorff, 2004) without losing context or a sense of the whole.

The following steps were taken with some variations depending on the question:

Familiarisation: Familiarisation began with the development of spray diagrams for all the central ideas associated with each survey question. It was common for questions at the start of the survey to attract the bulk of the answers, while the detail got thinner towards the end of the survey. The nature of the survey meant that not all answers were in full sentences and they often held a dense amount of information that sometimes answered a different question. Spray diagrams supported a process of familiarisation with the data whilst retaining a whole systems perspective. Key nodes were identified in the spray diagrams where something was mentioned several times by participants making the same point.

Data Reduction: The codes were predetermined and drew from two sources:

- **Confirmation of previous research findings:** The first question this research sought to address was to ascertain the characteristics of psychologi-

cal safety and the extent to which they corresponded with the findings of previous research cycles. The second question concerned the staff practices that support psychologically safe spaces. Both questions were aimed at triangulating the findings from previous research cycles. Therefore the codes used were the features of psychological safety, meaningful connection and presence outlined in Table 6.5 and the practices of *'doings'* presented in Table 6.7, *'sayings'* presented in table 6.8 and *'relatings'* outlined in table 6.9.

- **Coding for the analysis of the VSM:** The VSM has distinct constitutive rules that make it amenable to developing quality design using whole systems thinking. The process of analysing the data was about looking for instances where the data fits the model using a deductive approach. The codes were descriptors of the 5 systems in the VSM (see Table 6.1, and evidence of different types of interactions (see Table 6.2).

Matrix tables were developed with the raw data and then reduced to key concepts that corresponded with the question being asked. The analysis also drew on different combinations of questions in the survey and cross-referenced them so that similar data on an issue is drawn from wherever it appears in the answers (See Appendix G for example). Care was taken to ensure that data that fell outside these codes or contradicted them was also considered by including space for their inclusion on the table.

Categorisation: The individual meaning units were used to develop categories where this supported a deeper understanding of practices. In some instances, data was categorised in accordance with ideas around psychological safety and practices. For example, a deeper understanding of embodied presence as a practice was developed through this process, and triangulated with the findings from the previous research cycles. For other questions, the categorisation process was centred on the organisation of the VSM. For example, resource management was categorised in terms of the people, technical resources, time and infrastructure drivers which the VSM considers are important drivers of complexity and therefore key to consider together when analysing a viable system.

Analysis using abductive logic: Once the deductive analysis was complete, it then became possible to apply abductive logic to draw conclusions from the data and develop principles to inform future service design. This process was used to re-contextualise data in a way that animated the living system of supports using whole systems thinking ((Buckle, 2018). It involved standing back from the data and the content analysis, and then drawing on re-

flexive practice and systems concepts to discern patterns and interrelationships within the data. All the principles drawn from the content analysis were based on systems laws (Hoverstadt, 2022) associated with the VSM as well as the constitutive laws laid out in developing a performative VSM analysis (A. Espinosa, 2022; Lowe et al., 2020). The Law of Requisite Variety, Structural Coupling and Recursion are strongly associated with the VSM (Ashby, 1960; Beer, 1984), but I also looked out for evidence of feedback loops and drew on the systems competencies laid out in Chapter 3 (see Table 3.2) to perceive order in complexity. For example, the concept of homeostasis was applied to the data around managing safe virtual spaces and the data on stakeholders offered an opportunity to locate where they fit into the VSM model.

Additionally, the Law of Requisite Variety added a rich nuance to understanding the role of technology as an amplifier of psychological safety (see Table 6.10). This process called for a strong understanding of Systems Laws, researcher competency in perceiving complexity and reflexivity. The Abductive process was, therefore, both an art and a practice grounded in a systemic research approach (Edson et al., 2016).

System dynamics: One question called for a different approach to analysis. The question about future demand yielded a rich set of concerns, all of which painted interconnections between different concerns, opportunities and risks. Reducing the data so it could be interpreted and understood, called for a qualitative Causal Loop diagram (Reynolds & Holwell, 2020) and the application of Systems Archetypes to see where the salient issues in the data lay.

6.8 Findings

The survey yielded a substantial amount of data, and the major threads are presented here as the most salient outcomes that can inform the future design of Safe Virtual Spaces. The findings are presented in several parts:

- Operations – psychological safety and meaningful connection
- Operations – staff practices
- The role of technology
- Stakeholder roles
- Coordination
- Management

- Future development
- Governance

All participants are represented in the quotes in the findings.

6.8.1 Operations – Psychological safety and meaningful connection

This section addresses the question of the defining characteristics of psychological safety in Virtual Spaces which is entwined with practices. As the focus of the research was on safe virtual spaces, the findings around psychological safety and the practices that support them formed the operational element in the VSM. The findings here triangulated the findings from the previous research cycle and confirmed that psychological safety was important, and was reliant on staff practices, particularly presence, that set up conditions that were conducive to people feeling safe. A felt sense of safety can lead to meaningful connection and mattering.

From a VSM perspective, System 1 is the reason an organisation exists. Here services were provided to people outside of the organisation who formed part of the environment. Staff working at this level had on-the-ground knowledge of how their services operated and where risks and opportunities were likely to emerge. They were in constant contact with the environment, each other, and management as well as other services operating at one level above and one level of recursion below them. From a VSM perspective, organisations would be well served by granting Operations as much autonomy within their role as they can, without having an adverse impact on other units or on the "whole" organisation or system.

The survey approached psychological safety from the perspective of what could be observed in practice, i.e. what actions staff took to make the space safe or unsafe, and how safety was supported or curtailed by the behaviour of others. A summary of the key factors indicating a sense of psychological safety is presented in Table 6.4. It corresponded to the findings of previous research cycles and suggested the following: psychological safety was about **being** oneself and seen and heard in relationship with others, which led to a felt sense of being included as part of a community. This affective state supported **doing** more: more positive risk-taking and new **emergent** possibilities for what they could do and a greater sense of belonging. The benefits were transferable to other areas of life, and as the following quote suggests,

Table 6.4: Psychological safety

How people are when they feel safe: BEING
Participants feel seen and heard for who they are (not judged)
Free to express themselves
Enhanced mood, outlook
Feel included, community
Be in relationship with others
What they can now do when they feel safe: DOING
Create meaningful connections
Give space to each other
Take calculated risks
Work/learn together on shared purpose
Develop new life skills including digital skills
Work in, or contribute to running sessions
What becomes possible when people feel safe EMERGENT
Enhanced sense of self, new identity
Sense of ownership of service
Sense of belonging to a community
Leadership skills
Equity of participation and contribution

people with disabilities attending services were also taking on the role of being active contributors to other people's experiences, which pointed to an inter-subjective relational dynamic:

> *Technology can open up new possibilities for people to be involved in different parts of life, to experience many of the learnings that you would have in the real world e.g. developing friendships, learning about health, having a voice about important decisions that affect them and how to share your personal information online. These life skills can be transferred to many areas of your life. The virtual platform has helped people learn how to help create a supportive environment for their peers and begin to understand what kind of environment they need to feel engaged and comfortable, and how to express this. Facilitators have learned how to support this and it is not without its challenges.* (*Panellist 13*)

The quote conveys a strong sense of enhanced agency amongst attendees,

Table 6.5: Behavioural indicators of a lack of safety

Observable behaviours that may suggest a lack of safety in a session	**Patterns that may suggest a lack of safety over time**
- Low level of engagement - Distracted participants - Lengthy silences - Short closed answers - Excuses to leave session - Facial expression, body language or sounds indicating unease, anxiety or dissatisfaction - Keeping camera off - Overly silent or overly occupying airtime **Behaviours that contribute to making the space unsafe:** - Talking over people, not listening - Making value judgements - Communicating aggressively - Taking out frustrations in the space - Singular dominating voices - Secret side conversations - Disrespectful attitude towards others - Inappropriate or offensive language - Bullying - Ghosting	- Drop in leadership and enthusiasm - Drop in attendance - Poor return rate - Unexplained return to day service only - Physical loss of balance in exercise session **Facilitator related behaviours:** - No legitimate/paid facilitator/not enough facilitators - Unable to facilitate everyone's full participation. - Lack of presence and attention - Missing cues in the space - Not following guidelines - Over-controlling or hierarchical chairing - Lack of respect for the space and those attending - Lack of interest - Burnt-out/exhausted

and the idea that facilitating at this level was demanding. When asked what signs indicated that a space is unsafe, panellists responded that this arose when participants did not feel supported or understood, had a perception that they would not have their needs met – either explicitly or implicitly, or felt scared to speak or give their opinion (see Table 6.5). Observable behaviours included low levels of engagement amongst those who felt unsafe, as well as behaviours, such as being talked over, or judged, that made the space feel unsafe. Facilitators noted patterns in participation, including poor return rates over time. Facilitator-related issues could also lead to a lack of safety: these included practices, which are discussed in the next section, but they could also be governance-related concerns (see Table 6.6). A sense of safety also called for supporting arrangements relating to coordination, staffing resources, the role of technology, the participant's environment and direct evaluation feedback.

Table 6.6: Contextual indicators of a lack of safety

Coordination:
- Inaccessible information
- No feedback mechanisms
- No follow-up
- Lack of clarity around rules of engagement
Staffing resource:
- Insufficient staffing leading to missing red flag issues
- Breaks in continuity of service
Tech-related boundary concerns in VS:
- When group is not closed and can be accessed by anyone
- Unsolicited messages from strangers
- Suspicious requests for personal information
- Links to unsafe content
- Hidden/Deceptive recording
Participant Environment:
- Unexpected events in participant environment causing distraction
- People in participant environment leading to lack of privacy
- Placement of people off screen
Monitoring:
- Negative evaluation feedback
- Negative feedback from participant or family

6.8.2 Practices that support safe virtual services

The practices that generated a sense of psychological safety were compared with the World Cafe findings using a cross-case content analysis matrix (Huberman et al., 2014). There was a strong correspondence between the practices about *Doings* (outlined in Table 5.7), about *Sayings* (see 5.8), and *Relatings* (see Table 5.9). Practices were geared towards creating a space for attendees to develop a sense of personal agency:

> *staff realisation that everyone has the potential to lead and opportunity must be provided. Plan and lead with participants – consistency in offering opportunities to contribute* (*Panellist 5*)

There was also a sense that staff were experienced facilitators supported by organisational structures to have enough autonomy to facilitate the space as appropriate in the moment:

> *Staff are well trained with experience of facilitation. They are empowered and have agency to intervene where necessary. Their knowledge of facilitation gives them the certainty of how to maintain a safe space and service. This looks like: steering discussions*

> *away from a dominant individual – this also looks like asking questions/directing conversation to people who have been quiet or silenced by the domination (intentional or otherwise) – this means having a set agenda for the space, not necessarily a shared agenda but a framework for the staff/leadership.* (*Panellist 9*)

The above quote also illustrates a shift from the precarity associated with the early development of virtual services towards greater integration into the modus operandus of organisational practices. This represented a change from the theme identified in Cycle 2 "*growing wings on the way*" to an expectation that training should be provided and that facilitators needed to develop a level of expertise to facilitate online. Along with policies, practices were the most mentioned aspect of running psychologically safe virtual services. Additional practices from the survey data are presented in Tables 6.7, 6.8, and 6.9. They point to the extent to which there was an expectation of training and pre-packaged resources to support the set-up of a new service.

Table 6.7: Practices: Doings

Practices: DOING
Pixelated People
Consistency of facilitator background
Encourage Cameras on, use of the Raise hand function, chat function
Resourcing the space
Staffing: Extra staff to support inclusion depending on comprehension and communication skills of attendees
Having access to a template on how to set up a new service
Evaluation and continuous improvement – seek feedback
Have access to training for good presentation skills
Evaluate suitability of person to participate, and suitability of space, falls assessments, ensuring participants are aware of risks of participation.
Managing people, mentoring, supporting sharing airtime, collaboration

6.8.3 The role of technology in creating Safe Virtual Spaces

The role of technology was assessed on two levels: first, a spray diagram was developed, gathering data from across all the questions that elicited reference to technology. This was then condensed into a matrix to understand how technology amplified or curtailed a sense of safety. The data suggested that technology opened up the opportunity to participation to a wider group

Table 6.8: Practices: Sayings

Practices: SAYING
Enhancing agency
Speak up for rights (including knowledge of UN CRPD)
Highlight and showcase skills of participants
Be able to facilitate and mediate disagreements
Being clear – about rules, information, GDPR, limitations of confidentiality
Agility with tech constraints to sustain flow of session

Table 6.9: Practices Relatings

Practices: RELATING
Presence
Match emotional energy in the space
Build rapport, setting the tone and bringing energy to space
Allowing for time-lags where interpreters are supporting session
Creating pauses for people to ask questions
Being prompt and reliable
We-Space
Diversity training to support awareness of difference in the space, incl language barriers, cultural difference,s diversity, resource differences.

of people and ensured people could access sessions suited to their needs. Technology led to increased confidence amongst people with disabilities accessing services but also had the potential to result in misunderstandings and conflict where communications were misread.

Getting the basics right was important: technology must suit the person, be accessible and intuitive to use. Having technology that is "plug in and play" impacts on comfort levels, which influences how safe people feel to participate. Camera angles and good-quality sound are also important. There was also a shift in digital literacy evident in the responses since early 2020, as responses suggested that people should not have to learn new skills to participate and that dealing with safeguarding issues could be overcome with the right training and support. Closed, invite-only sessions, use of the Waiting Room and verification of identity of who was joining, as well as basic internet safety training, enhanced security. A new concern around surveillance was raised in the survey, that did not feature strongly in previous studies. Us-

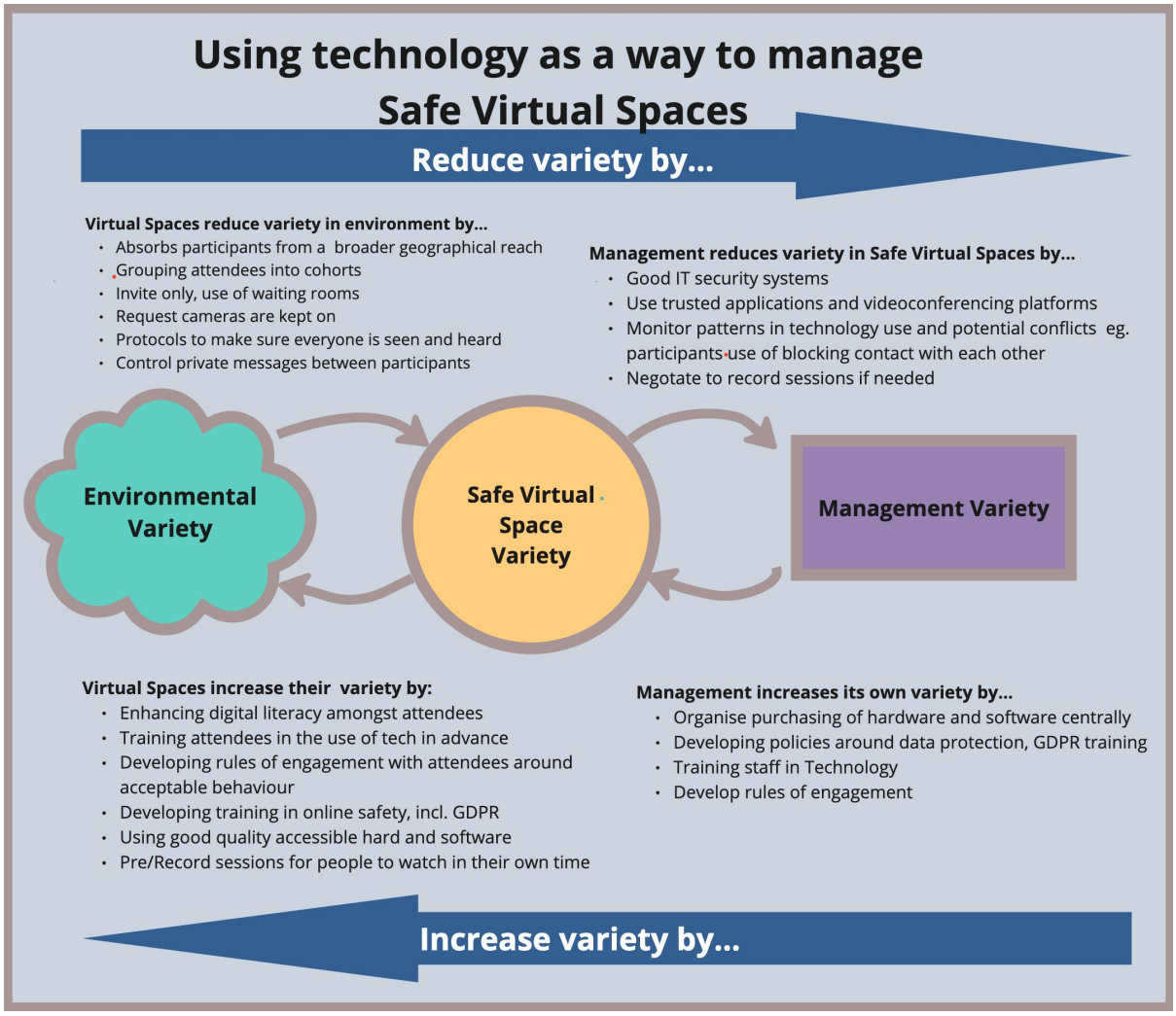

Figure 6.10: Technology as a way to create requisite variety

ing technology to monitor participation was seen as a double-edged sword. It protected and monitored users, as much as it could be used to facilitate harassment, and other forms of online abuse. For one panellist the threat of being secretly recorded inhibited a felt sense of safety. Technology also made it easier to

> *monitor the number of times an individual is blocked by others as an indicator that there may be a low level or significant issue* (*Panellist 15*).

For others, consensual recording sessions were about having access to the recording after the session, so that they could replicate an activity and re-watch a session to do it again in their own time. One survey panellist cautioned that

> *Technology is only as good as the people who are facilitating or running the events. No amount of good tech can overcome poor facilitation and inadequate leadership* (*Panellist 14*).

Where it was used well, it created what one panellist described as a `*democratic space*' where everyone had 'equal real estate' on the screen including the speaker, yet the power to work the technology rested with the facilitator:

> *All participants, in the call, but some have more power than others! by this I mean everyone has equal 'screen real estate' and presence on a virtual call in gallery mode. But power is vested in people in administrative roles in that they can manage the view* (*gallery, speaker or just screen*)*, can mute, rename and exit people etc* (*Panellist 8*).

This quote is also an example of how technology could be used to manage Safe virtual spaces in line with the Law of Requisite Variety (see Fig.6.10).Here technology was regarded as a good way to absorb a huge amount of variety from the environment including cutting across geography but also by having control over the mute button at an operational level. Management could also reduce variety by monitoring patterns of technology usage amongst attendees, using trusted platforms and recording sessions if it helps regulate what is happening in sessions. Management could also increase their own variety through central purchasing mechanisms, policies and training. At an operational level, enhancing digital literacy amongst attendees, training, and repurposing recorded content would increase variety.

6.8.4 Stakeholder roles

The question about stakeholder roles and who was directly affected or was affected by virtual services led to the development of Figure 6.11, which mapped the roles onto the Viable Systems Model. Here the attendees, peer groups, family members and care givers were named as belonging in the external environment, where they are in a relational dynamic with virtual services. Some attendees were also in paid roles and co-facilitated sessions alongside facilitators, guest presenters and those providing technical and professional therapeutic or educational support. They were situated in the model as a distinct operational unit that also had day services and other services, managed by coordinators or local managers who in turn are managed by System 3 management. One area of disagreement that arose in the survey was whose responsibility it was to ensure that the space was experienced as

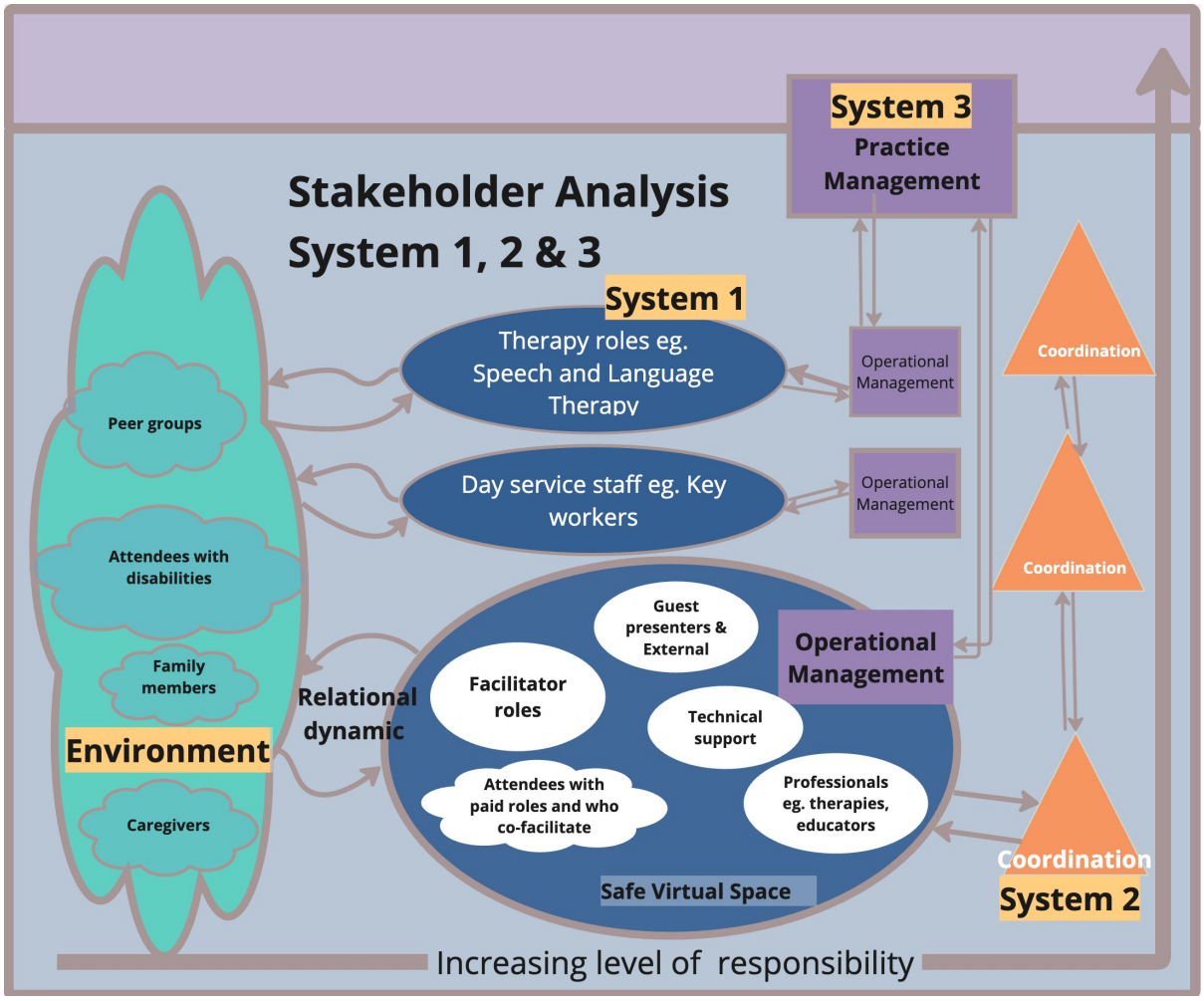

Figure 6.11: VSM Stakeholder Analysis

safe. While some panellists were of the view that participants are responsible for ensuring that they were safe themselves, one stressed the following:

> *Staff need to be well informed and prepared for the unexpected (!) Meet people where they are at – it is not up to the participants to tell you the space feels unsafe. It is up to you to be the watcher, to be the barometer of the space* (*Panellist 9*).

The above quote referred to the level of perceptual skill facilitators needed in an intersubjective space, while other participants were concerned with pragmatic issues they could not control, such as other people in the participant's space and fall hazards. They did not see that they could assume responsibility for ensuring the safety of attendees.

As stakeholder positions shifted from being in the 'outside' environment to 'insider roles', the level of responsibility to the space increased, and as the roles shifted from facilitation to management, this increased more, whilst at

the same time, the enactment of the space happened in the relational dynamic between the environment and the safe virtual space. This is depicted in the arrow running along the bottom and right side of Figure 6.11.

6.8.5 Coordination

System 2 is responsible for coordinating the various activities of System 1 in the VSM. It acts as a control centre, monitoring the performance of each of the operational systems and making adjustments as necessary. The purpose is to restrict complexity by identifying where there is too much complexity that can be destabilising and reducing it to a level where differences between operations can be sustained (Beer, 1979).

Survey responses indicated a need for coordination to avoid duplication and enhance co-operation between teams, create consistency throughout the organisation, and ensure that virtual services complement other services. It was also a way to coordinate information about who should be invited to attend what session and ensure facilitators had appropriate information where necessary about attendees, such as age, ability and time since diagnosis. Each group needed a stated purpose that was seen to serve a specific need, and a detection process for ensuring appropriate attendance for each group:

> *A participant should not be in more than one group at a time, so it is necessary to carry out a good detection of needs so that each person participates in the most appropriate group* (*Panellist 6*).

Attendees were also involved in co-design and coordination efforts, which sometimes included other agencies in the wider environment.

> *Co-designing the service with attendees as well as ensuring that they have the information they need about what to expect and what is expected of them in a session, also requires coordination between staff, management and attendees. Coordination may also be needed with external agencies including advocacy networks and peer groups operating in the same or similar space* (*Panellist 7*).

Good communication processes and structures supported coordination: it supported pragmatic responses to issues that arose in sessions and also raised awareness of the value of virtual services and helped avoid competition between them. Communication with other support staff was needed if an issue

arose within a session that called for a referral to another internal or external service. Supervision also supported coordination. There was also a suggestion that dedicated website content could support internal awareness-raising of the value of virtual supports as much as scheduling: this also related to giving virtual services a distinct identity, which is a System 5 function. Other organisations used WhatsApp to support communication between operations and management:

> *We used WhatsApp groups and Google drives to project manage everything from on-boarding information for new staff, daily staff roles and responsibilities and any relevant information that could change at any moment. This gave 10 staff spread across the service and Managers access to the transparent Message board on WhatsApp and open access to the resources whenever they need it* (*Panellist 12*).

These responses suggest that coordination between different functions and levels within and beyond the organisation is needed to ensure the smooth running of services, and that virtual supports are being run alongside other services and managed within the same processes with modifications.

6.8.6 Managing resources

System 3 management sits between service delivery and coordination (Systems 1 and 2) and future planning and governance (Systems 4 and 5) and mediates between them. It manages by making sure that Systems 1 and 2 have access to the resources and policies they need to function effectively, and are accountable for how they operate. It also makes sure that policies developed at System 4 and 5 level are shared with practitioners on the ground. To distinguish between these two orientations to management, I use the terms "*practice management*" to describe managing service delivery function at System 1 and 2 level and "*strategic management*" to refer to System 4 and 5 functions. Practice management is about giving services enough autonomy and stepping in only when operations are underperforming and ensuring services co-operate rather than compete for resources. It is also about seeking synergies across services and managing people, their performance, having adequate accountability mechanisms and ensuring staff have the appropriate operating guidelines and technology they need to do their job. Management at this level is concerned with people, performance, resources, and infrastructure and mechanisms that uphold or-

ganisational policy. The findings relating to each of these resource management issues will be considered in turn.

1. Resources: Practice management needed to successfully identify and negotiate with *strategic management* for the resources they required, which included people, technical resources, time and infrastructure. One panellist called for adequate staffing including dedicated personnel: there was broad agreement that at least two facilitators are needed for an online session:

> *specific role allocated to oversee the use of virtual services is very beneficial. This is an important part of the service and has the potential to be used in lots of ways to improve people's quality of life. This coordinator has the responsibility to ensure that there is consistent use of the virtual space and that activities are coordinated in a way that keeps the users of that space comfortable, engaged and safe* (*Panellist 2*).

> *We ensure there is a ratio of two hosts online for each activity. This is so one can lead a class, and the other monitors the 'room' to make sure people are ok, to encourage them or to look at different ways to engage attendees* (*Panellist 3*).

Not only were two staff regarded as necessary to run a session, continuity of staff was also important:

> *Continuity and a reliable virtual service so the same support staff and the same VS link are the first two things needed to ensure safety. This ensures the participants know where and who is involved. After that it's recognizable or familiar staff and participants and the space and time to be to get to know them. When participants feel welcome they stay. When they feel valued they stay and they contribute. In order for this to happen you need the right amount of staff to facilitate the VS. There is no fast rule as to how many staff is enough but a fast rule for me is a minimum of two support staff per activity. However I would advocate that more VS move towards a co-facilitated / peer facilitated sessions as possible.*(*Panellist 12*).

The above quote also suggested a shift towards more co-facilitated sessions, thus drawing on the resources of participants. Another panellist took this suggestion further and called for more positions for people who have been

attending to step in, in more formal paid roles. People with complex communication needs may also need another person beside them to support their participation.

Having the right technical resources is also key: this included access to hardware and software, as well as a private space to conduct sessions. IT needed to be up-to-date and also required personnel support:

> *To have the device/technology kept current, with updates schedule regularly to ensure smooth operation. That there is available tech support on both sides, to ensure any issues are resolved quickly* (*Panellist 7*).

Infrastructural resources included physical space as much as access to appropriate IT systems:

> *A private space for sessions* (*for the participant and the practitioner*)*; a suitable device that can be dedicated for sessions* (*won't get calls or distractions throughout*)*; suitable safety software* (*e.g. virus detection etc.*) *for devices* (*Panellist 3*).

Threaded throughout this account was the need for time to plan, to support people to participate and to follow up on issues that may have arisen, as well as review sessions:

> *There needs to be opportunities for people with lived experience of disabilities the opportunity to lead or co-lead activities and showcase their skills and be paid for their effort* (*Panellist 3*).

Training was another resource that featured in many responses.

The survey findings led to a clear differentiation between what should be managed locally and what needed to be managed strategically and effectively, as shown in Table 6.10. While funding is a strategic management function, it may be that virtual services were not understood well enough at a strategic level for funding to be secured.

One survey response indicated a lack of understanding of the positive impact virtual services had, at a strategic management level, and indicated that this put access to resources in jeopardy:

> *Management should also play a role in sustaining these safe environments but unfortunately as with a lot of service provision they are far removed to the day-to-day and didn't understand the impact of the Virtual Service. Removing resources results in virtual services*

Table 6.10: Resource management

Resource management		
Balancing resources	Practice management	Strategic management
People	Adequate staffing: 2 people for each session Technology coordinator Supervision Raise capacity of attendees to co-facilitate	Funding for staff training
Technical	Good quality computer equipment as well as specific software that is easy to use. Adequate software platform Internet connectivity and good bandwidth at both ends	Effective ICT security systems
Time	Session preparation Support attendee to onboard Support attendee throughout session Reflection Make referrals	Funding for staff
Infrastructure		Funding for technology, dedicated office environment for sessions

> *closing and face-to-face opening back but no evidence of how it is better or if it's a safe environment* (*Panellist 9*).

The same panellist also suggested that a lack of secure funding also leads to internal competition for organisational resources:

> *They need to be better resourced: currently limping along on the goodwill of managers who fund them. Mainstreaming their funding is essential, so that they dovetail more seamlessly with traditional day, respite and residential services, and are not seen as a competitor for limited funding, as is currently the case* (*Panellist 9*).

This is an example of a disjoin between practice and strategic policy that interferes with operational issues, and threatens the sustainability of safe virtual spaces.

2. Managing policies: Policies include legal frameworks such as the UN CRPD, national policies and frameworks such as Disability Strategies and GDPR guidelines. It also includes internal policies and procedures that draw on national and international frameworks. The findings are laid out in Table 6.11 and they are again divided between *practice management* and *strategic management* roles. Policies around Etiquette for engagement within sessions are best developed at a practice level and agreed with strategic management. Strategic management needs to ensure that these policies are aligned with national policies and organisational policies and procedures. Online etiquette or Rules of Engagement include the following elements: how to manage the waiting room, use of passcodes, and etiquette guidance during sessions. There is also the issue of when, where and how everyone should be directed to review them, or be reminded of them. One panellist recommends they are flagged at every event and reminders referring to them are used throughout events. Ultimately there is the issue of balance to be achieved between creating the ground for free-flowing engagement and reigning in potentially tricky situations. Guidance developed with attendees is likely to be more effective in operation.

3. Accountability mechanisms: The VSM suggests that clear boundaries are needed to define the scope and limits of responsibility and autonomy. In virtual services, accountability mechanisms worked at two levels of recursion: staff needed to be accountable to management and there was also a need for an agreed level of accountability between attendees and facilitators. This required good communication and trust between management and staff confirming the need for psychological safety at different levels of recursion in the organisational system as this panellist described:

> *Trust across line management to enable staff to report/address concerns without feeling that it is a failure on their part* (*Panellist 9*).

At a practice management level, there needed to be agreement around online etiquette, and an expectation that attendees could find a suitable environment from which to join a session (see Table 6.12). They also included agreements about attendance and follow-up protocols, should people disengage. The consequences of poor behaviour, which may have made the space unsafe, also needed to be made explicit. This meant that staff needed enough autonomy to enforce the rules of engagement within sessions:

Table 6.11: Policies

Policy Management		
	Practice management	**Strategic management**
People	Online etiquette Co-design guidance Easily accessible safety data sheets (printed in case of internet connection interruption)	Risk assessment protocols Training for both staff and attendees on dignity and respect, UN CRPD, self-advocacy, adult protection Toolkit for staff and users Co-design guidelines
Technical	Policies to guide participant interaction with technology Monitor user behaviour and protect against malicious activity Training and support for users to understand and adhere to safety protocols **Socio-Technical guidance:** Online/virtual safety guidelines	Technical Antivirus and Malware software Privacy policies: to protect personal information and comply with GDPR guidelines Suitable safety software (e.g. virus detection etc) Scheduled updates of technology Appropriate technology licences. E.g. Zoom for Healthcare Mobile phones for staff Safety guidelines

> *Being muted, relocated, placed in waiting room, etc., represents an experience of involuntary action and may affect the sense of psychological safety. I have seen someone who did not respond to prompts and requests to stop talking and to allow time for others, being removed from a platform* (*Panellist 7*).

The progression of virtual supports since 2020 was evident in this contribution which placed responsibility to direct services on senior management:

> *To build a clear toolkit for the staff and to give clear and detailed instructions to the users* (*Panellist 15*).

Mechanisms were also required to ensure policies and procedures were adhered to at an organisational level. Here, accountability included delivery of sessions to the same agreed standard as other services:

Table 6.12: Accountability management

Accountability Management	
Between attendees and practice management	**Between practice management and strategic management**
Agree to online etiquette Agree expectations around suitablilty of home space Number of sessions to attend Agree level of contact if people do not attend, or leave suddenly Agree limits of confidentiality Agree consequences of poor behaviour	Agree standard of faciliation and delivery Agree Self-assessment of performance Agree monitoring and evaluation criteria Number of sessions to offer Agree purpose of individual session/service

> *A valuing at all levels of the organisation, of the work required to operate safely. Just as there are Occupational Health and Safety rules for bricks and mortar buildings, the same attention, and regular review, ought to occur for online environments* (*Panellist 8*).

There was however, a question around the extent to which virtual supports needed distinct accountability mechanisms from other kinds of services:

> *I agree with this contributor "It's fundamentally a policy and procedures issue, it may not be necessary to see this as hugely different from the wider range of mechanisms for effective use"* (*Panellist 3*).

Another contribution suggested that there was a need for standard operating procedures for virtual supports to ensure compliance with governance and standards.

Accountability at an organisational level could include agreed standards of behaviour, and regular supervision, but it also needed to include two other considerations: an ability to raise issues as they arose that needed to be dealt with more immediately as this survey contribution suggests:

> *All the staff have briefing and debriefing meetings at their best convenience: one short daily and bi-weekly clinical supervision. Staff have an internal WhatsApp chat to share what's going on or to ask for immediate help if needed* (*Panellist 6*).

In this instance, the WhatsApp group could be regarded to act as an algedonic emergency alert button which corresponds with the System 3 Star monitoring function (see Appendix H for more detail). Emergency response proto-

cols needed to be in place that could bypass immediate management structures to call out issues of immediate concern. Attendees needed to know how to bypass the facilitator as much as a facilitator needed to be able to bypass their immediate manager. Balancing practitioner autonomy to respond and adequate managerial controls are important in the VSM: staff needed training in how to handle the unexpected and to be given autonomy to make judgement calls to respond to what was occurring within preagreed boundaries. This often involved harnessing the feature of technology, e.g. muting or removing people from the space, but it was also about keeping channels of communication open.

> *If there are unexpected events, staff should take action during the session if they detect inappropriate behaviour by someone by inviting them to end their participation in the group privately. It depends on the unexpected event but the moderator should intervene immediately to reassure the members of the group.* (*Panellist 12*).

Another panellist suggested that not reacting in the moment was also a valid response:

> *Avoid personal opinions led by emotional involvement and they need to gain time to reflect and, if possible, tell users they'll get a response later* (*Panellist 6*).

Another suggested issuing yellow and red cards as used in sports but also creating sessions that are "free for all" and not monitored:

> *One useful technique is to issue a person with a yellow card as a warning if they behave poorly and then a red card for a second occurrence. A red card could lead to suspension of rights for a given time or even repeatedly if red cards are amassed. Inviting members of the group to feedback on whether a member is suspended or excluded may have some value. As the model draws from sporting activity it is likely to be readily understood and approved by the group. Consider designating some sessions as being "free for all" where adults can behave as they wish* (*with warnings before entering and age safeguards*). *But allow users to choose whether they only want access to "safe spaces" or not* (*Panellist 1*).

However, most responses did not favour granting this much autonomy to participants. Most of the recommended actions for unexpected occurrences

Figure 6.12: Consensus on future demand for virtual services

related to having the resources already referred to in System 3 Management, but provision also needed to be made for referrals outside the organisation, e.g. for counselling for critical incidents. The list of practices is presented in Table 6.13. Longer-term monitoring and evaluation mechanisms were also suggested in line with the organsiation's usual mechanisms, but thoughts were not developed here.

6.8.7 Future service development

Panellists were asked to predict the future trends of virtual services and their organisation's orientation towards responding to these trends. This was the one question that is quantitative in the survey. It indicated a strong consensus that the demand for future services would increase over the next five years (see Fig. 6.12). There was a high level of engagement with this question (17 participants engaged with the question making 34 revisions over the course of the survey, with a median consensus level of 8). The option to add a written explanation was also given.

The resulting data is presented as a *Causal Loop Diagram* (CLD) (see Fig. 6.13). CLDs are a way of visually representing interrelationships between different elements of a complex dynamic situation in terms of reinforcing or amplifying feedback (+) or attenuating or dampening feedback (-). They support sensemaking without reducing the complexity of the data.

The following points are numbered to correspond with highlighted areas

Table 6.13: Dealing with the unexpected

System 3 Taking action when unexpected occurrences arise.
Be resourced:
· Authority and autonomy to make judgement calls on situations, ask questions – call out what they see.
· Familiarity with and adherence to safeguarding guidelines and code of conduct, protocols for internet safety, rules of engagement.
· Organisationally agreed clarity around boundaries of what is acceptable and what is not acceptable behaviour from participants.
· Access to tech support in-house to support facilitation, as well as means to support people with difficulty logging in.
· Access to contact information and emergency contact information for all attendees, and a plan on when and why contact might be warranted.
· Access to named management person who can join session or be available for immediate follow-up.
Taking action within the session:
· Invite a participant who is upset or disruptive to join a breakout room for a chat.
· Ability to mute all or remove a participant, by putting them in the waiting room or turning off their camera.
· Ability to direct conversation in more appropriate direction.
· Keeping channels of communication open.
· Remind everyone about the agreed ground rules.
· Close sessions down, if necessary.
· Contact a manager who can join session
Follow-up after a session:
· Follow the organisational incident management procedures after the session.
· Access to a manager who can be available for immediate debrief.
· Access to multidisciplinary team members e.g. psychologists who can join online and have private conversations in the breakout room.
· Contact participants by telephone or email to address and resolve issue as soon as possible.
· Contact Keyworker and/or family if appropriate.
· Be contactable after a session for others who may have been triggered by the incident.
Review:
· Schedule reflection time with participants to address the issue.
· Escalation of the issue for review following the session.
· Set up opportunities for debriefing. Manager or other colleagues available for 1:1 interaction following virtual session
Critical incident management:
· Access external agencies where required: Health services, Employee Assistance Programme, Mentoring, Supervision, Counselling, for both service owners and staff.

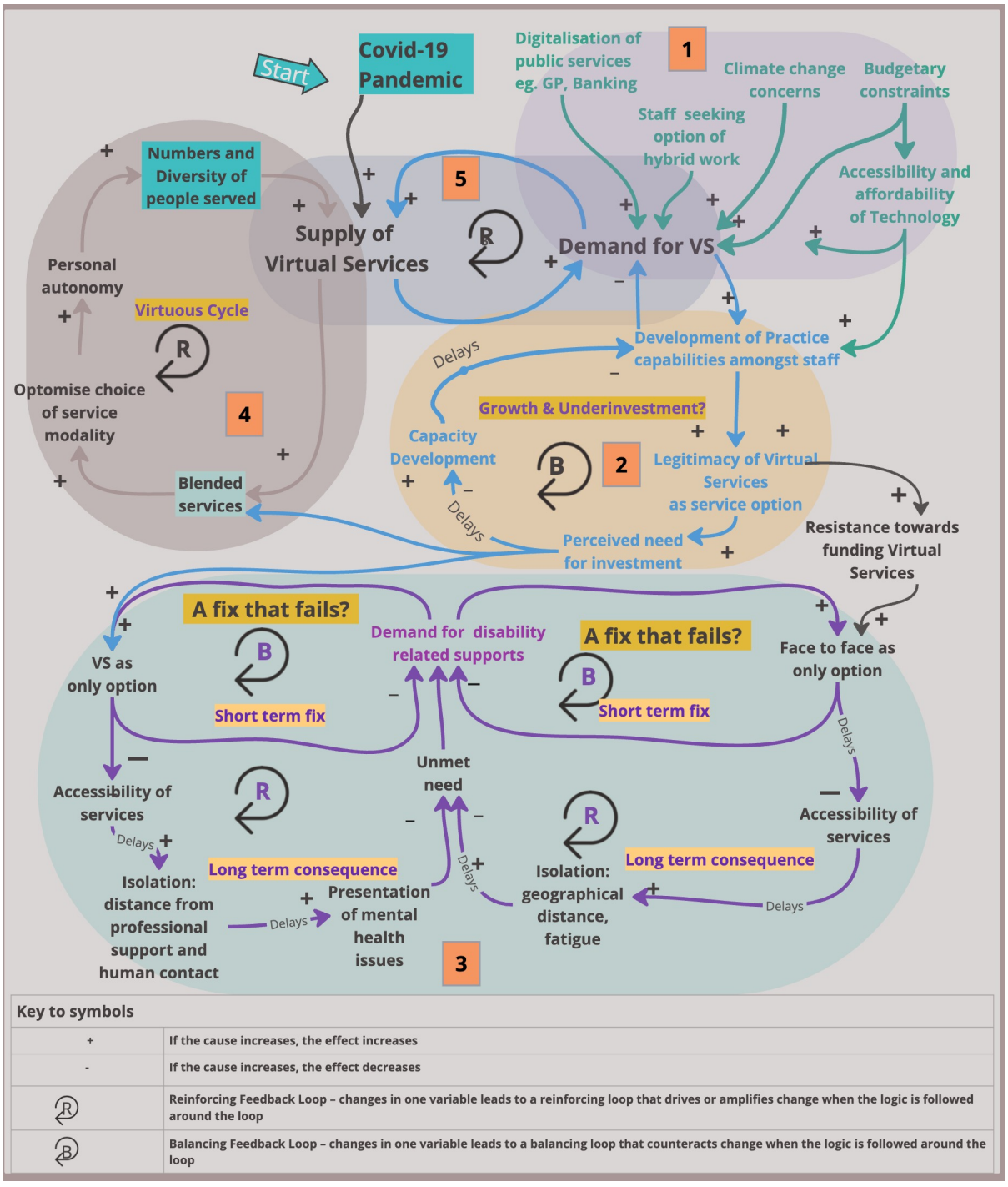

Figure 6.13: Future demand for virtual services as a *Causal Loop Diagram* (CLD)

in the diagram. They highlight projections into the future.

1. Drivers of future demand: While the demand for virtual services was driven by COVID-19, it was now understood in a broader context. The increasing digitalisation of public services, a growing movement toward remote (now hybrid) work and concerns about climate change impacted on how future trends for virtual services were understood amongst panellists. There was also an increasing expectation that increasing accessibility and affordability of technology could lead to a growing demand for virtual services.

2. **Growth and under-investment:** During the pandemic staff increased their practice capabilities for hosting online sessions which enhanced the legitimacy of virtual services as an option for service delivery, which in turn drove the need for further investment. A time delay in investment in staff capabilities, as face-to-face services reopen, may lead to the loss of those capabilities – which creates a balancing loop –curtailing the potential of virtual services in the long run. This can be interpreted as being akin to a "boom-bust" cycle, that might cause virtual services to lose progress, even where demand is understood.

3. **Fixes that fail:** National policy or organisational resistance towards diversifying service delivery models was seen as potentially leading to attenuating the choice to services to face-to-face services only. This could be seen as a short-term fix. In the longer term, it may decrease accessibility of disability services in a broad sense, as virtual options suit some people better than face-to-face services. It might result in increasing isolation, or the geographical distance people need to travel, which in turn may impact on fatigue levels, which would both drive greater need and then increases levels of unmet need. Unmet need was seen as likely to raise demand for disability-related supports over time, as it might exacerbate the level of support needed. Similarly, only having virtual services could be regarded a short-term fix that is not accessible to everyone, increases social isolation and exacerbates mental health issues. This also raises the level of unmet need. This suggests reducing the choice to an either or option is a short-term solution that in the long run could be regarded as "fixes that fail". A fix that fails is a short-sighted solution that treats the symptoms of a problem rather than the root cause. In this instance, making a binary choice between service models could increase need rather than meet demand.

4. **Virtuous growth cycle:** A virtuous cycle could be created through blending both in-person and virtual services. It would optimise the choices available and increase personal autonomy leading to a greater number of

people's needs being served. As the supply and uptake of virtual services increases, so too does demand, creating a reinforcing feedback loop that supports a wider range of people than one option alone.

5. Supply and demand: The data pointed to a virtuous cycle of increase where the development of virtual offerings should increase the demand and that demand could lead to a greater supply. The reciprocal relationship between supply and demand would ideally be balanced so that supply could meet demand. This would represent a mature system.

In summary, the data pointed to a need to diversify service delivery models to embrace a hybrid approach, if demand is to be met in a rapidly changing external environment.

6.8.8 Strategy, identity and sustainability

System 5 in the VSM is about governance and organisational identity: this is where organisational purpose is decided on, and it closes the loop between governance and practice. This means that it is responsible for ensuring that practices at an operational level align with the overall purpose of the organisation. One of the main tasks of governing into the future was summed up in this contribution which called for governance mechanisms that:

> *recognise that virtual spaces have the same relevance as the physical / real ones and support them not only as a temporary substitution of the latter. This will also give users the perception that both services are important, relevant and not a cheap solution not taking care of them in the "right way"* (*Panellist 16*).

The survey data was split between those organisations that had fully integrated online service provision into their suite of services, and those that had a long journey to travel towards integration. The resource needs and relevance of virtual spaces were largely absent from existing governance structures in some organisations and greater policy alignment was required for greater integration. One panellist indicated that virtual services were *`hanging on by a thread'*, dependent upon the goodwill of management but not yet integrated into the organisation. Another suggested that funders needed to be brought into the conversation about sustainable funding, which also indicated a need for a review of how face-to-face and virtual services interact within a coherent policy framework:

> *I think a lot of work needs to go into developing governance structures and policies, I think the needs are relatively unrecognised. The*

> *legitimacy of developing these structures and policies and funding and resourcing these needs to be established within organisations and with funders. Greater thought will be needed on how existing policies, procedures and governance structures are adapted to incorporate the reality of virtual services. The lens of the virtual service needs to be applied what already exist to support service development and implementation. There is a risk that all separate policies could be developed which would miss the opportunity to fully integrate virtual services into an organisation's service provision model* (*Panellist 1*).

One panellist described the interaction between virtual services and the rest of the organisation as *'patchy'* even where it was fully integrated into the strategic planning process:

> *Those staff who were involved from the get-go communicate its intent effectively but many senior managers are not tech confident and don't understand the extent of the impact on participants. A lot of the challenge in this area is due to the fact that disability services are so stretched in every domain, that insufficient time is available for comprehensive induction, technical training, support and mentoring. Having said that, the profile of Virtual Services at senior management level is high, and it features as a key objective in our operational and strategic plans for the coming 5 years* (*Panellist 9*).

Another panellist suggested that disabled people using services needed to be part of the co-design while senior management needed to understand the role of virtual supports better.

> *The funding bodies and governance or quality bodies need to take a step down and truly understand these services to support positive risk-taking while ensuring mitigating risk and appropriate resources are also available for the VS. These governance models and policies need to be co-designed with participants and peer facilitators and would benefit from being live documents with the ability to update when necessary* (*Panellist 8*).

This contribution illustrates the principle of good governance at system 5 level in VSM which suggests that people from all areas of the organisation need to be represented in the development of strategy and policy (Beer, 1984).

6.8.9 Identify and assess interactions within the system

In addition to describing the structure of the organisation, the VSM is concerned with communications within the organisation that create or constrain internal variety. Six issues that need to be resolved in order for a system to become viable include:

a. Negotiating expected results and providing matching resources

b. Managing complexity at a practice level and avoiding conflict between services

c. Combining practice management and future planning functions to develop a comprehensive understanding of what needs to happen at a strategic level

d. Balancing present and future orientations, balancing internal and external perspectives in order to keep stability

e. Granting Virtual services enough autonomy to function independently

f. Developing a process for escalating issues apart from the usual reporting processes.

Creating safe virtual spaces forms the purpose of this research which may be different from the stated purpose of a virtual session in any one organisation. The findings of this survey suggested that even though the stated purpose of an individual session may be specific to the group or organisation, that an underlying purpose was to create a safe space for people to have a meaningful experience.

There was some indication that conflicts arose between services where they were not understood by other staff, and panellists raised the need to enhance communications around the value of virtual services.

Most organisations exhibited a strong management function at System level 3 and some virtual services had this recognition embedded at a governance level. The greatest gap was in the development capacity of organisations which, in an ideal situation, needed to scan the horizon for future threats and opportunities. This is a System Level 4 function. A strong strategic management system needs both to manage in the here and now and for future sustainability (A. Espinosa, 2022). System 5 mediates between calls for resourcing the now with calls for resourcing foresight in the organisation. While panellists were clear that the demand for virtual services will rise, there was a gap in terms of how organisations proposed to address that demand. In VSM terms, where System 4 is too weak it must be strengthened so that managing for the moment is balanced with future need (Á. Espinosa & Porter, 2011).

Where the governance of the organisation is not aware of the potential of virtual services to mitigate against future threats or add to the potential of the organisation, it could be assumed that the future planning function of the organisation is weak. As a pattern arcross contributions to the survey, System 3 management appeared to be holding most of the responsibility for ensuring the sustainability of virtual services, but a lack of forward planning at System 4 could be seen to prevent it from gaining traction at a strategic level. Where this happens, governance at System 5 could not adequately integrate virtual services with confidence.

Virtual services did appear to be operating with a strong level of autonomy where they had the resources to run independently. As psychological safety is a concern for everyone in the space, having access to an *"emergency cord"* to call out urgent issues can be regarded as vital if safety is to be maintained.

6.9 Discussion

The survey findings suggest that demand for virtual services is set to increase, driven by climate-change concerns, and increasingly volatile environments, and aided by increasing accessibility and affordability of technology. This is in line with emerging literature on the need for digital innovation in disability supports (McCausland et al., 2023; E. M. Smith et al., 2022). Long term viability will depend on developing a distinct identity and integration with other service models in VSM terms (Beer, 1984). However, this study points to a time-lag in terms of it becoming fully integrated and gaining parity with other service models in some instances, but there was some indication that it was beginning to occupy a more regularised position within some services. This was evident in the call for integration with other delivery models and the call for staff training and facilitation expertise. There is some distance to travel for full integration, however. Futures planning, as a System 4 function, was weak within contributions, making it potentially difficult to juggle both current and future need (Hoverstadt, 2009).

Closure is fundamental to an organisation identity and coherence (Beer, 1984). This refers to the organisation capacity to maintain internal boundaries and distinguish itself from the environment. It is about maintaining integrity amid external influence and disturbance: without it, organisations may struggle to have a clear identity leading to confusion, inefficiency and difficulty in achieving objectives. The survey indicated that virtual services were not yet to

be bedded down as an integral part of organisational identity, and the survey findings stress the importance of this in order for Virtual services to be viable and meet future demand. Even when included in the strategic plan of an organisation, it could remain on the periphery, either vying with other services for resources with little understanding of its importance or potential.

The findings also confirm that psychological safety is intertwined with meaningful connection (King & Hicks, 2021), mattering (Costin & Vignoles, 2020) and belonging (Baumeister & Leary, 2017). This triangulates findings from the first two studies (O'Donnell et al., 2024) and develops theory around psychological safety as being something that moves beyond being instrumental for workplace innovation (A. C. Edmondson & Bransby, 2023) to placing it in a wider context. This is evident in how people are when they feel safe: they feel seen and heard, free to express self, be included and part of a community and in relationship to others (A. Edmondson, 1999; Kahn, 1990). This gives rise to meaningful connections, and calculated risk-taking. It also leads to the emergence of an enhanced sense of self, ownership of the space and a sense of belonging (see Table 6.4). Facilitators of virtual services are also alert to signs that the space is not safe, which may relate to other attendees' behaviour, facilitator-related behaviour, or a number of contextual factors, including a lack of clarity about the rules of engagement, or home environments (see Table 6.6).

Safety is also dependent on staff practices. The doings, sayings and relatings build on the theories of practice architectures, identified in the previous research cycle (Kemmis, 2022). The additional practices identified here indicate a "*bedding in*" and enhanced confidence and higher expectation of staff operating virtual services, but the core facilitation practices needed match across both contexts. The findings provide rich detail on the kinds of considerations that services need to make to set up a service including the range of actions that need to be considered to deal with unexpected events (see Tables 6.5 and 6.6) and harness technology as part of the facilitation process (see Fig. 6.10). No one can make another person feel safe as every person is making sense of their experience through their personal appreciative setting (Vickers, 1970), and is acting from their own agency (Moore, 2016). Instead, efforts can be made to ensure that practitioners are fully present to pick up cues, and watch for patterns of behaviour that indicate that people feel comfortable participating or not. Psychological safety and staff practices form a key part of creating a safe space for people to interact. The degree to which people feel safe or not to step into that space continues to rely on personal characteristics, feedback loops (Bretherton, 1985, 2013) and what is

permissible in their habitus (Bourdieu, 2017). The issue of who is responsible for what aspect of safety in online settings calls for explicit communication between facilitators, the organisation and attendees, about where the boundaries are. Power is important: those in authority are charged with the task of creating a space that is conducive to others feeling safe (O'Donnell et al., 2022). This does not mean that those attending a service will experience it that way as, from a systemic perspective, no one can know or understand everything about someone else's history or state of mind or current context (Reynolds & Holwell, 2020).

Staff are in a better position to meet their responsibilities and duty of care to those they support when they do what they can to set the conditions for safety to arise. This relies on a strong sense of being present so that they are in a position to read what is going on in the space to the best of their ability (Pomeroy & Herrmann, 2023).

Responsibility can best be understood as a balance between multiple concerns, that needs to be contextualised to each setting. There is a need to balance autonomy and responsibility on an ongoing basis if attendees are to develop the level of agency that they need to participate and engage in healthy risk-taking, that contributes to transferable learning they can take to other areas of their lives. This is in keeping with the Law of Requisite Variety (Ashby, 1960).

6.10 Conclusion

The development of a Viable Systems Model for sustainable Safe Virtual Spaces offers insight into how best to sustain the innovation into the longer term. Further discussion on developing a VSM is presented in Chapter 7, where it is integrated with a high-level overview of the findings across the three research cycles.

CHAPTER 7

Safe Virtual Spaces supported by systemic practice

This idea – that it is from art that all work ensues – needs to be borne in mind, if we want to reshape and reform society, because it will also have a bearing on economic questions and issues to do with legal and human rights. (Beuys, 2007)

7.1 Introduction

This chapter starts with a discussion on the meta-framing and context in which this research took place, and some key concerns about the past, present and future of virtual services. It then presents key findings that relate to the research questions:

1. **How can psychological safety be understood in the context of virtual services?**

2. **What staff practices support the conditions for psychologically safe virtual spaces where people with disabilities can meet online and experience meaningful connection?**

3. **How can systemic governance systems support psychological safety in Safe Virtual Spaces?**

Consideration is also given to power and practice, a concern that is threaded throughout this research. The contribution to knowledge is presented,

along with potential areas for future research and research limitations. It concludes with a personal reflection on the journey and looks forward towards future practice.

7.2 Summary of key findings

Key findings include the following: psychological safety is key to the viability of virtual services, and needs to be contextualised to disability services, where it is most usefully understood as a systemic construct reliant on staff presence and leading to meaningful connection, mattering and belonging. This makes having a psychologically safe space an end in itself, and a distinct service model, rather than instrumental to a business purpose. The framing proposed here is Safe Virtual Spaces rather than services. This reframing puts psychological safety to the fore of the design regardless of the purpose of an individual session and attends to power dynamics in the space. Psychological safety acts as a homeostat for viable services. The research also identifies practices that support the enaction of Safe Virtual Spaces, including the development of technological know-how. Practices are driven by embodied presence and an awareness of the social field. A practice turn is needed in how psychological safety is enacted as part of a relational dynamic between people, technology and environmental and contextual conditions (See Fig. 7.1). These three factors lead to structural coupling between all three, whilst keeping the human-centric focus. Finally, governance arrangements to support the development of Safe Virtual Spaces are presented using the Viable Systems Model to produce principles for design that can be adapted to context. The importance of balancing autonomy and control is key to fostering innovation, supporting agency and effective management of services. The research concludes that virtual supports are a viable complement to face-to-face services. They are also in keeping with the move to increasing the level of digitalisation of many services, beyond the disability arena, and critical to sustaining viability in human-centric services into the future.

7.3 Governing digital innovation: past present and future concerns

There has been a shift in how virtual services are regarded between 2020 and 2023 when the final study was conducted: what was a precarious innovated response to the pandemic, driven from the ground up, is now be-

ing integrated, but is still a peripheral feature of disability services. Virtual services are key to the future viability of disability services and creating the conditions for innovation in the sector is key to the long-term continuity of services. The context in which this research took place is constantly evolving with the flux of time. The research projects, conducted over a three-year period, chart the development of virtual services, which peaked at the height of the pandemic. Many have now returned to face-to-face formats. Day services began to open and gradually operate at full capacity in Ireland over 2022, and many services continue to operate hybrid supports. The WHO announced the official end of the pandemic status of COVID-19 in May 2023, some months after data collection concluded. The success of virtual supports now has a substantial body of supporting literature presented in Chapter 2. However, the longer-term sustainability of virtual services is less secure. During the first wave of the pandemic, there was an increased use of technology amongst people with ID, with researchers urging day services to adapt to develop new ways of delivering services (McCausland et al., 2021; Shakespeare et al., 2022). The shift towards resuming face-to-face services leads to sometimes polarised views between those who wish to return fully to in-person supports and those who found that virtual services work well for them. Irish health services acknowledged the innovation of online responses, but gave direction in October 2022 that day services are in-person services that operate from nine to five from Monday to Friday, within pre-Covid funding (HSE, 2022), leaving Irish organisations faced with making decisions about how to use scarce resources. This situation is replicated in other countries where the return to in-person services was welcomed (Bignal, 2022). There are also concerns that the potential transformation of services associated with the rapid development of digital literacy skills and the significance of the virtual response is not being adequately considered (O'Sullivan et al., 2021; R. O. Smith et al., 2018). It may be that, in the understandable rush to reopen services, that much of the gains of digital innovations are being lost.

The pandemic illustrated the level of adaptive innovation that lies dormant and untapped both amongst staff and those accessing disability services. The loss of innovative capability, digital skills and the practice skills needed to facilitate online is problematic on a number of fronts. Firstly it constricts the choice of how people access services which is a right under the UN CRPD. Secondly, the increasing digitalisation of public services, remote working and increased online social interaction spurring the development of digital health and social service competency frameworks amongst staff is at odds with restricting access to virtual options. Thirdly, it ignores some of the sustainability

issues already facing disability services including funding challenges. Recruitment and retention of staff, already an issue prior to the pandemic, continues to become more difficult across Europe (Bignal, 2022) and in Ireland, which impacts on the level of services being provided (Wheel, 2023).

The loss of innovative practices and skills developed during the pandemic – which are needed if organisations are to remain viable and sustainable – is a concern. As climate change, political unrest, ongoing pandemic risk and war attest, we no longer live in stable conditions, and no one sector or group of people are immune from what is now commonly called the polycrisis (Morin, 1992) in which we now live. The gap between the assumptions made at a national level about continuity of services are at odds with a futures perspective which suggests that the uncertainty and volatility we are experiencing is not just likely to continue but may in fact accelerate.

The findings from the Delphi Survey are clear: demand for virtual services will increase (see Fig. 6.13). This level of foresight includes recognition that returning to face-to-face services only is a short-term fix, which speaks to a tendency to revert to being a closed system rather than an open one with the requisite level of agility to adapt to changing environmental conditions. Adaptation begins with the idea that disability organisations, like all complex living systems, have boundaries, and how open or closed those boundaries are determines the extent to which they can innovate when necessary. The ability to self-organise is either seen as a source of resilience (Meadows, 2008), but an alternative view proposes that all systems are self-organising, but only some are adaptive (Ashby, 1960). This is because even isolated systems change by obeying unchanging rules of engagement and reorganising themselves internally, but remain closed. Adaptive systems are open to the exchange of information with the environment. The implication is, that to survive, it is necessary to change the rules by which a system interacts with its environment (Umpleby, 2009).

This is, however, not the level of discourse happening within services, where the framing of a funding crisis in disability services reduces the proposed level of intervention to the least effective leverage point in the transformation of a system (Meadows, 2008). The absence of explicit strategic policy guidance on how to reorganise services during the pandemic may have created a void with enough constructive ambiguity to prompt innovation (Inkpen & Choudhury, 1995). The renewed reliance on strategy and policy post-pandemic, whilst welcome, can also impede change where they become embedded in the organisational mindset and stifle creativity and responsiveness (Mintzberg & Waters, 1985) or block out organisations' "*periph-*

eral vision" to real-world conditions (Inkpen & Choudhury, 1995). The significant decline in interaction between organisations and service users during the pandemic (D. Chadwick et al., 2022) supports the idea that the drive to innovate does not come from external national strategy making, but from internal culture within organisations which determines the degree to which they are open to new information. Cultural and behavioural repertoires act as a "stock" from which new patterns of behaviour can emerge, and so if the culture is open, organisations are more likely to adapt and innovate (Meadows, 2008). Open systems are more likely to be able to model the complexity in the external environment and survive than closed organisations. From a viable systems perspective, the greater the diversity in the system, the more likely it is to be able to adapt and survive. This means that virtual supports are an important service model that needs to be incorporated into mainstream services as a choice.

Organisations that can take in new information, and respond to it, are engaged in a double-loop thinking process, where they can make radical changes to their internal structures when the threat of the pandemic called for transformation. Conversely, organisations that remained closed because they internally rearranged existing parts, without actively engaging with technology, were engaging in single-loop thinking processes that ensure innovation and creativity are also curtailed (Ashby, 1960). Learning is rarely linear, nor does it happen in a unified way, which means that while learning may happen across an entire organisation, it is more likely to occur in individual pockets or services within organisations that can withstand the discomfort of stepping out into an unfamiliar space. Organisations that adapt were able to learn and evolve to increasingly complex emergent conditions, and may have been propelled by an anxiety that surpassed the anxiety associated with inaction (Schein & Bennis, 1965).

It is also important to consider what the findings may have looked like if virtual services did not find traction with either attendees or staff, and there was no expectation that they should continue post-pandemic, or an anticipated demand. Such a finding would have called for reconsideration of the extent to which they are constrained by single-loop thinking. This may include, where they were treated as a carbon copy of face-to-face services, or implemented from the top down rather than innovated through adaptive practices. It would also have prompted further investigation into staff attitudes as the literature indicates that pre-pandemic online supports found traction within disabled communities and staff attitudes were the main barrier (Finn, 1999; Seale, 2014).

7.4 How can psychological safety be understood in the context of virtual services?

The findings point to the importance of creating a safe space for people to come together and connect in a meaningful way. The features of psychological safety identified in this research correspond with the description in the current literature (A. Edmondson, 1999; A. C. Edmondson, 2018). It is about being able to speak up, and contribute to situations with candour (A. Edmondson, 1999). The literature is clear: people need to feel safe, in order to develop agency and take calculated risks (Schein & Bennis, 1965). A recent paper calls for more action-oriented research that involves a shift from describing *what* psychological safety is, to developing a deeper understanding of *how* to create the conditions for safety to arise (A. C. Edmondson & Bransby, 2023). This research succeeds in meeting this challenge, as it involves shifting from a descriptor of *what* it looks like, to developing an understanding of *how* to factor it into a specific context (virtual services) and further contexualising it in terms of its antecedents and outcomes. This research also addresses the importance of psychological safety as an end in itself rather than a means to work on a shared work purpose, which is the dominant framework in the literature (A. C. Edmondson & Lei, 2014; A. C. Edmondson et al., 2016; Frazier et al., 2017).

The way in which the construct of psychological safety has been deployed has changed over time. Although current use of the concept tends to isolate it as a measurable variable in a workplace setting (A. C. Edmondson & Lei, 2014; Lee & Edmondson, 2017; O'Donovan et al., 2021), a previous formulation linked it to psychological meaning and psychological availability as a way to understand employee engagement (Kahn, 1990). I claim, in this research, that it cannot and should not be isolated as a stand-alone construct. I propose reframing psychological safety as a systemic construct that contextualises it as being reliant on an antecedent (presence) and the potential that emerges from it (meaningful connection, mattering and belonging). Where Kahn refers to the idea that work should have "psychological meaning" that supports autonomy, control and creativity, the idea of meaning in virtual supports relates to meaningful connections between people. For this framing, I draw on research that suggests that mattering to others is critical for human survival (Costin & Vignoles, 2020; Siegel, 2020). Kahn also describes psychological availability as being resourced enough to be present at work without distraction, where the role is a good fit for the person, and this research draws

on emerging literature on presencing (Pomeroy & Herrmann, 2023; Senge et al., 2005), to explain it as an embodied presencing in the digital space. The understanding of psychological safety in the literature and in this research remains the same. The key is how the three constructs interact.

It is also an issue for considering whose safety is important. In terms of disability supports, I suggest that people have a need for safety regardless of their role: it is a valid expectation for people attending services, as well as staff at a different level of recursion in the system of service delivery. Virtual services are driven by a relational dynamic which includes both the giver and receiver of services, and in some cases where people with disabilities also co-facilitate or lead sessions. This calls for a reframing of the construct to make it fit for use within disability supports. The three research cycles lead to an understanding that a virtuous cycle is created when sessions are facilitated with a strong sense of presence, which creates the conditions for psychological safety to arise and meaningful connections, which are associated with mattering. This level of investment in the human-centric dynamic means that a felt sense of safety is the ends rather than an instrumental means to achieve a stated goal such as profit. Where this occurs, the purpose of the online encounter becomes less important than the act of connecting (Costin & Vignoles, 2020) and the sense of belonging associated with mattering (Baumeister & Tice, 1990). This is not to assume that virtual sessions are purposeless: sessions can have any purpose, but the achievement of purpose arises from a felt experience of safety. Creating the conditions where it may arise is therefore important.

A systemic construct relies on three key systemic orientations: an understanding of the interrelationships that arise in the situation, engaging with multiple perspectives and worldviews and making critical boundary decisions about what is in or out of the system, what should be included or excluded and taking action to constantly reflect on when and where these boundaries need to change (Reynolds & Holwell, 2020; Williams & Hummelbrunner, 2010). These three elements are in evidence in this framing of safe space (See Fig. 7.1).

Interrelationships: Understanding interrelationships and interdependencies is about making sense of what is going on in the social field by attending to the intersubjective space through embodied presence. For attendees to feel safe, staff must also feel safe and connected whilst at the same time holding organisational responsiblities. Staff are also engaging in taking risks as they encourage risk-taking behaviours that promote a greater sense of agency for attendees. This framing considers both the facilitator and at-

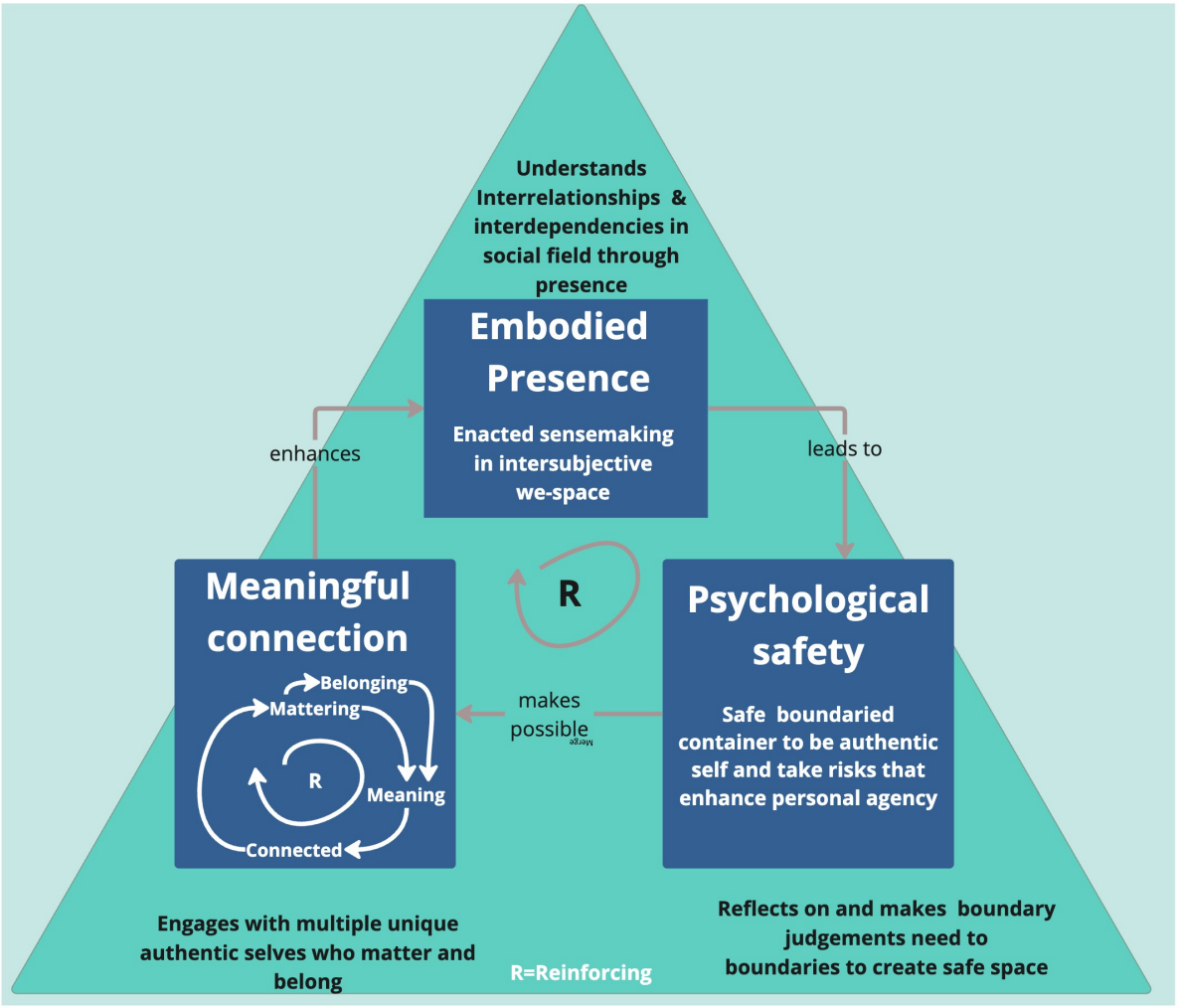

Figure 7.1: Safety as a systemic construct

tendee, as both are part of the system.

Multiple perspectives: Where people feel safe, it is possible for those with different perspectives, worldviews and ways of being in the world to come together and be seen and heard in a way that conveys a sense of being meaningfully connected and mattering. This has much in common with unconditional positive regard in person-centred therapy which describes an attitude of caring in a non-possessive way and accepting the other without conditions attached to that acceptance (Rogers, 1995).

Boundaries: A big concern in creating psychological safety is attention to the container that creates the conditions for safety. A container is, by nature, a boundary object that puts parameters around acceptable or unacceptable ways of being in space. This is often referred to as the affordances that promote or constrain certain behaviours (Lewin, 1951). This may refer to the role of technology in amplifying or constraining options, and it may also

relate to the need to constantly recalibrate the line between too much and too little comfort, in the service of learning and growth. These framings suggest that the boundaries are not fixed but need to be constantly negotiated and tailored to each situation.

It can therefore be concluded that embodied presence, psychological safety, and meaningful connections form a coherent systemic whole and are indivisible components of safe spaces.

7.5 The art of practice

There is a need to shift social sciences from the "*enactment of nineteenth-century realities*" to grapple with the complexity and ambiguity of the world as it is (Law & Urry, 2004). This calls for a shift from first-order scientific approaches where implementation of services can be organised objectively, to a second-order approach that recognises the relational dynamic is key to an effective service, and practitioners cannot remove themselves from that dynamic. Extending the construct of psychological safety to be systemic necessitates a practice turn in how psychological safety is generated: it supposes that creating the conditions for safety and connection to arise is dependent on practitioners' doings, sayings and relatings (Kemmis, 2022; Kemmis & Grootenboer, 2008). Practices describe everyday rituals and behaviours that produce and reproduce social order (Nicolini, 2012), influence, and are influenced by the intersubjective nature of being in the world (Kemmis et al., 2012). This makes creating a safe container an enacted, living and temporal construct, situated in context and characterised by a sense of co-arising (Macy, 1991). I suggest that this makes it an art, rather than a science. The practices that support a sense of embodied presence online are laid out in Fig 7.2. These practices describe what is required for a given session.

Sensemaking requires a strong sense of embodied presence that supports the generation of psychological safety, which creates space for meaningful connection and a sense of mattering. Embodied presence also engages with the same three interdependent orientations that make it a systemic construct. Firstly, systemic practice involves being embodied and present to the interrelationships at play in a situation, which may operate across different levels of the system, engaging with multiple perspectives to be inclusive and learn what actions to take and how to take them. Making critical boundary judgements about what to include and exclude from consideration in designing virtual services and taking action to stabilise situations when things go

Figure 7.2: Presence as practice

awry in a session is also key.

Practices also describe the habitus, or range of possible behaviours available to practitioners, which is dependent on personal dispositions (Bourdieu, 2017). This means that behaviour is shaped by personal Weltanschauung (P. Checkland & Poulter, 2020) and worldview that give rise to a consistency of action (R. C. Chia & Mackay, 2023). This is compatible with attachment theory where each individual can be regarded as a complex system (Bretherton, 2013). People self-regulate, not just by drawing on their own resources, but also by tapping into the value of the relational dynamics they find themselves in. Optimal self-organisation involves cultivating a capacity to monitor and modify behaviours with an openness to engaging with the environment, and be in meaningful connection with others.

What is permitted by the habitus, is also nested within an organisational system (Hoverstadt, 2022) which also has its own cultural repetoire of potential actions (Meadows, 2008). The interplay between the practitioner and the organisation forms another recursive relational dynamic as part of the interrelationships between different levels of the system. This suggests that services need to be infused with a sense of safety if staff are to adapt and innovate so they remain viable: this principle underpins all aspects of running a disability service online, including consideration of technology as the site of practice, and all other activities involved in planning and coordination services (see Fig. 7.1). This marks a distinction between psychological safety as a reified construct to recognising that it is indivisible from practice. Together, practices create the conditions for safety using technology as a self-producing or generative autopoietic process.

7.5.1 Technology as the site of practice

Reframing technology as the site of practice serves a number of purposes: it places significance on the screen without ignoring it or letting it get in the way of a session. It creates the 'container' for a session and calls for clear boundary decisions around who needs to be invited into a particular space. It also supports a more egalitarian space where everyone has equal space on screen. It contributes to the democratisation of disability services through maintaining a relational service and avoiding the traps of "digitalism". Deliberate and creative harnessing of technology as a tool amplifies an organisation's ability to widen its reach and attenuate the complexity in the external environment (see Fig. 6.10 presented in Chapter 6). Important for this research is the finding that it is experienced differently from face-to-face services: it en-

hances agency for some and does not suit others. However imperfect connecting through technology is, it works well for some, who now seek greater choice about accessing services in the future.

7.5.2 Technological know-how

This research also proposes that practice-led know-how is a better fit for developing digital skills than competency frameworks or skill-based training on developing an online presence. In a rapidly changing environment, where external operating conditions are changing quickly and technology is progressing exponentially, it is important to support openness to learn. The interviews in the first research cycle found a strong link between the willingness to learn in service of staying connected and learning and adapting in real-time. Competency frameworks are to be welcomed as a recognition of the importance of digital skills in care settings (CORU, 2019; Hilty et al., 2020). Some suggest that competency frameworks can only impart foundational skills but are ill-suited to a fast-changing world (Jamil, 2015) where they end up "cultivating dinosaurs struggling to develop the skills of the past" (Antonacopoulou & FitzGerald, 1996).

Tomorrow's professionals need a greater level of agility and dexterity to respond to the digitalisation of work and increased automation (Susskind & Susskind, 2023), and to sustain human-centric supports. While competency-based frameworks may support foundational learning, when framing them as objective quantifiable skills that need to be learned by individuals and evidenced out of context, they have less utility and versatility than skills that are driven through co-constructed social learning in practice settings (B. Carroll et al., 2008). Here tacit knowledge and enacted sense-making lend themselves towards greater embodied and authentic engagement than competency frameworks based on intellectual skill alone. I have elaborated the work of Carroll (B. Carroll et al., 2008) and added research findings (see Table 7.1). It may also create a tolerance for taking action in the midst of many unknowns, without getting "*stuck*" (Lewin, 1942) or *"ossified within hardwired routines*" (R. Chia & Holt, 2006).

7.5.3 Safe Virtual Space

Safe virtual space arises when the practice of creating the conditions for safety, the site of practice and environmental and contextual conditions cohere as part of a relational dynamic that is autopioetically generated. This leads to structural coupling between all three elements to produce a con-

Table 7.1: Comparison between Competency and Practice

Competency orientation to digital skill acquisition	**Practice Orientation to learning**
Objective	Constructed
Individual learning	Social learning
Quantifiable	Openness to learn (and fail and try again), Learn through doing
Independent of relationship	Socially defined and driven by human-centric motivation
Independent of context	Situated
Based on Reason	Tacit knowledge, enacted sensemaking
Intellect driven	Embodiment and authentic engagement

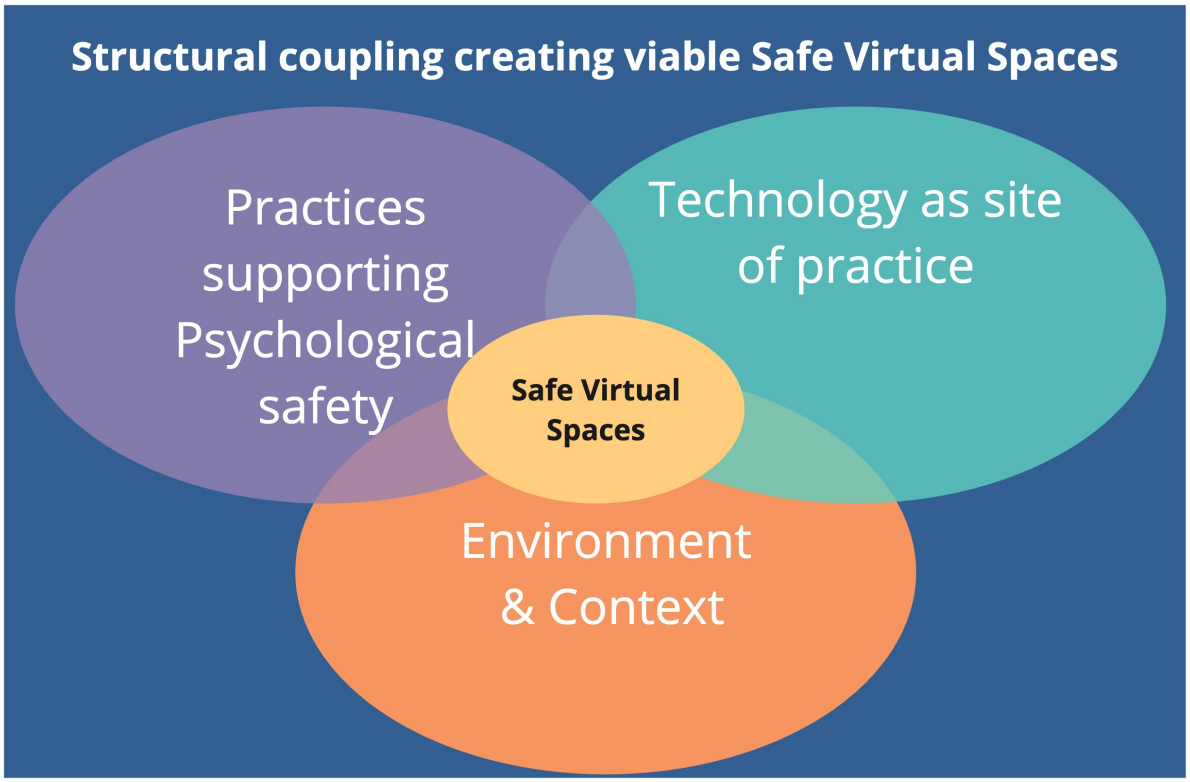

Figure 7.3: Safe Virtual Space

tainer for a Safe Virtual Space (see Fig. 7.3). Structural coupling occurs when a complex system adjusts its structure to match the external environment in which it operates through constant interaction.

7.6 Systemic governance systems to support Safe Virtual Spaces

The findings of all three research cycles inform principles for the design of viable and sustainable Safe Virtual Spaces, based on the Viable Systems Model. A viable service is one where people get their needs met on a short- or long-term basis. A sustainable service can adapt to changing environments and needs. The VSM democratises governance and distributes power by giving practitioners enough autonomy to do their jobs well. This ensures enough requisite variety in the system to deal with the complexity of creating viable safe virtual spaces.

Policies that constrain complexity and competition need to be negotiated at different fractal levels of the system. This includes negotiations on etiquette between attendees, practitioners and practice management; negotiation of policies between practice management and strategic management and so on. When virtual services first mushroomed at the beginning of the pandemic, they were observed to operate as Complex Adaptive Systems (CAS), and over time moved from an outlier position (Research Cycle 1) to operating within the usual governance arrangements of organisations (Research Cycle 3). The survey data indicates a shift in thinking from understanding virtual supports as a response to the pandemic towards a future-focused rationale for sustaining them. Staff are no longer "growing wings on the way" as they were at the innovation stage: there is now an expectation of expertise and an expressed need for policies and training.

Harnessing learning by adapting and innovating through the lens of Complex Adaptive Systems leads to an understanding that governing for real-world complexity, on an ongoing basis, is about balancing autonomy and control within the system. This constant calibration supports both people and systems to be open and self-regulate enough to sense-make and take adaptive action. While virtual services might no longer operate as CAS, it is important that the adaptive practice capabilities developed when they first started are retained and nurtured if the emancipatory potential for attendees is to be realised. Each of the five functions in the VSM are next discussed and a discussion about how Requisite Variety can be harnessed to create enough autonomy and control in the design of Safe Virtual Spaces.

Operations: Safe Virtual Spaces (System 1) All virtual services can be assumed to have the creation of safe virtual spaces as a core operational pur-

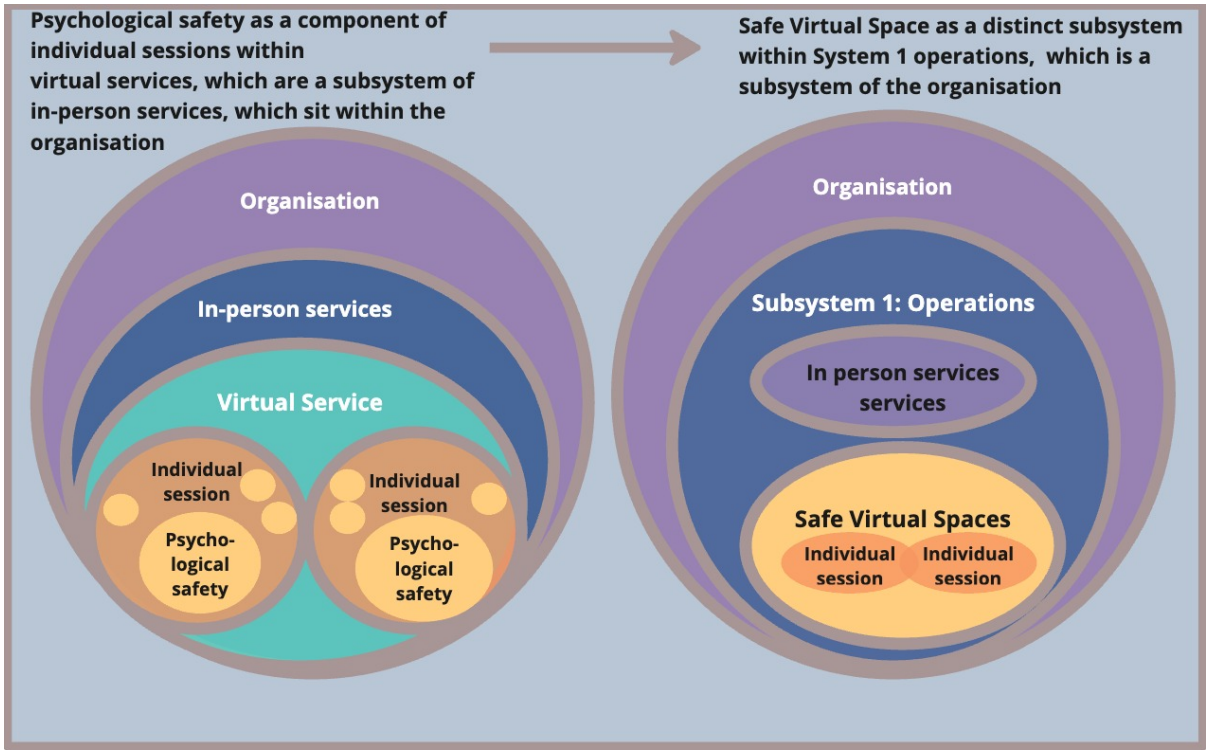

Figure 7.4: Safe virtual space as a distinct subsystem 1 within VSM

pose (see Fig. 7.4). Regardless of the stated purpose of a virtual session – and there may be many different kinds of session activities – reframing the higher level purpose as creating a safe virtual space offers a deep rationale that gets to the heart of what virtual services are all about. Safe virtual space can therefore be regarded as a distinct sub-system within the VSM, where they need to permeate all aspects of virtual support rather than be a component of individual sessions (see Fig. 7.5).

Placing it as a central purpose gives credence to the importance of safe space in all types of virtual disability supports and elevates the significance of virtual services beyond the exercise session, or choir practice, art or information session, where its importance and potential can be lost. The implications for this are twofold: firstly, it means that Safe Virtual Spaces need parity of esteem with face-to-face services. It is a distinct service model, which, to be viable, must have a place alongside other services, rather than being subsidiary to them. There is a clear rationale for this: it supports attenuation of the complexity of the range of potential attendees across different conditions, stage in their journey, age, interests and geographical backgrounds. It is also a distinctly different service model to face-to-face services as it calls for embodied presence, attendance to the social field and it supports a high level of agency amongst attendees as discussed in Chapter 5. Secondly, it

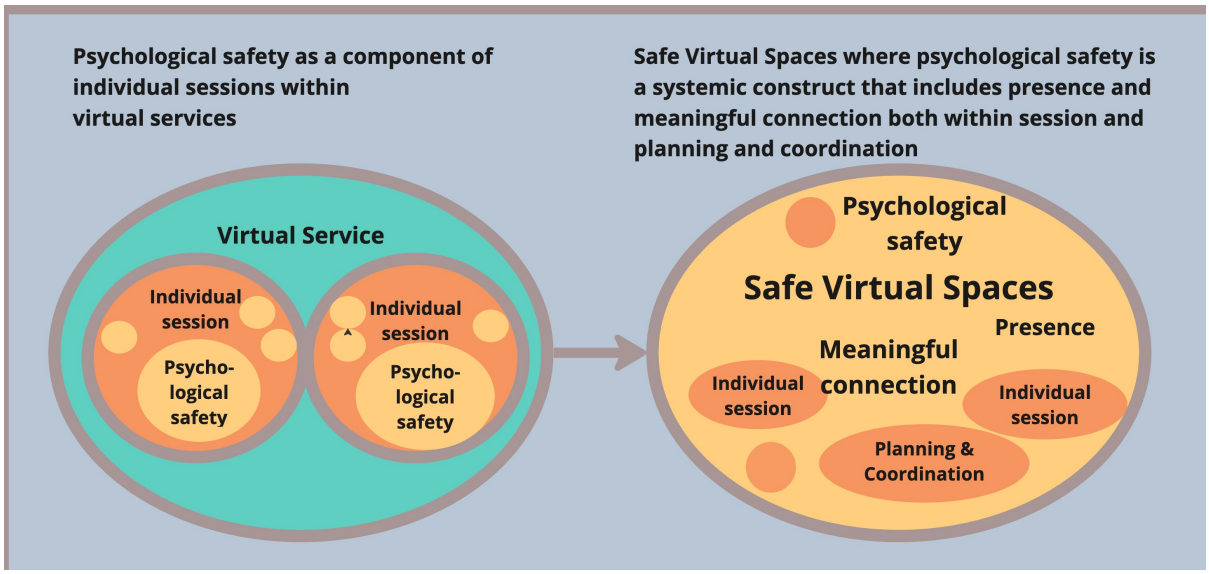

Figure 7.5: Safe Virtual Spaces as a purpose

Figure 7.6: Psychological safety as homeostat in Safe Virtual Spaces

means that psychological safety acts as a homeostatic mechanism which practitioners can use to achieve stability or requisite variety (see Fig. 7.6). They need to adjust their practices to enhance self-organising behaviours in sessions, agency amongst attendees and take action to dampen bullying and avoid top-down control. For example, they also need to watch out for patterns such as sudden unexplained drops in attendance. Enhancing synergies leads to meaningful connections and a sense of mattering and belonging, and sets the ground for co-facilitation, risk-taking and emergent learning. They may also need to take control action to dampen potential competition or conflict and the exertion of power over attendees (either from staff or other attendees), thus ensuring adaptability and stability in the face of external conditions. Psychological safety plays a crucial role in the purpose of a system, acting as a stabiliser that assures viability.

Coordination (System 2) Co-ordination is critical to the smooth running of Safe Virtual Spaces as patterns of behaviour set up here determine their successful integration into the business of the organisation. Good communication is needed to restrict complexity and clashes between services, enhance cooperation and maximise the need for consistency across complementary services. Good co-ordination, therefore, restricts complexity and autonomy where it is unnecessary, and clarifies the genuine differences between distinct service models (Hoverstadt, 2009). According to Hoverstadt, the "payback" for good coordination is greater autonomy, and less interference or firefighting. It also avoids competition or dichotomised value judgements about one service model being better than another (Hoverstadt, 2009).

Strategic management (System 3) Good management calls for an optimal balance between internal complexity to deal with a wide variety of need and the wider environment (See Fig. 7.7) and appropriate organisational back-up and accountability structures, to ensure that they are run to an agreed standard (Ashby, 1960; Beer, 1972). Services need resources, policies, monitoring and evaluation structures to operate effectively. Enhancing the capacity of virtual services to self-organise without too much top-down control, whilst maintaining standards of performance, is known as the "Control Dilemma" (A. Espinosa, 2022). While *strategic management* needs to be well-informed about what is going on at the operational level, micromanaging or being autocratic can hinder effective functioning and decision-making – both for service delivery as much as at a governance level. Therefore, attempts to exert

Table 7.2: Managing Requisite Variety in System 3

Requisite variety	**Manage Resources**	**Develop Policies and Procedures**	**Create Accountability structures and processes**
Balance autonomy and control by enhancing self-organising capabilities at a practice level	Ensure virtual spaces are adequately resourced	Develop policies and procedures that support effective staff practices specific to virtual spaces and integrated with organisational policies	Take action to control for oscillations in performance, that make the space unsafe
Balance collaboration and conflict by promoting synergies across services	Negotiate distribution of resources between virtual spaces and other services	Ensure good communication and information across delivery, coordination, and management to synchronize decision-making	Develop emergency response protocols for raising issues that either need an immediate response or breach unethical practice

too much control must be dampened. When the system is in balance, virtual services can self-organise and do what they do best.

The Delphi survey findings suggest that virtual services have a strong level of autonomy where they have the resources to run independently. Resourcing, policies and accountability mechanisms that enhance self-organisation and synergy are laid out in Table 7.2. An associated management task is to create synergies between different services to dampen potential competition and conflict. Negotiating for resources for virtual services as a new service model is vital for ongoing viability. The quality of communication and trust between staff and management determines the extent to which competition and conflict arise around the resources dedicated to VS, how communication and information flows and the level of trust between them. There is some indication that conflicts arise between services where they are not understood by other staff which calls for enhanced communications around the value of virtual services.

3 Star (system 3) As psychological safety is a concern for everyone in the space, having access to an algedonic "*emergency cord*" to call out urgent issues is vital if safety is to be maintained. Maintaining a safe space necessitates a mechanism for jumping a level of management when called for,

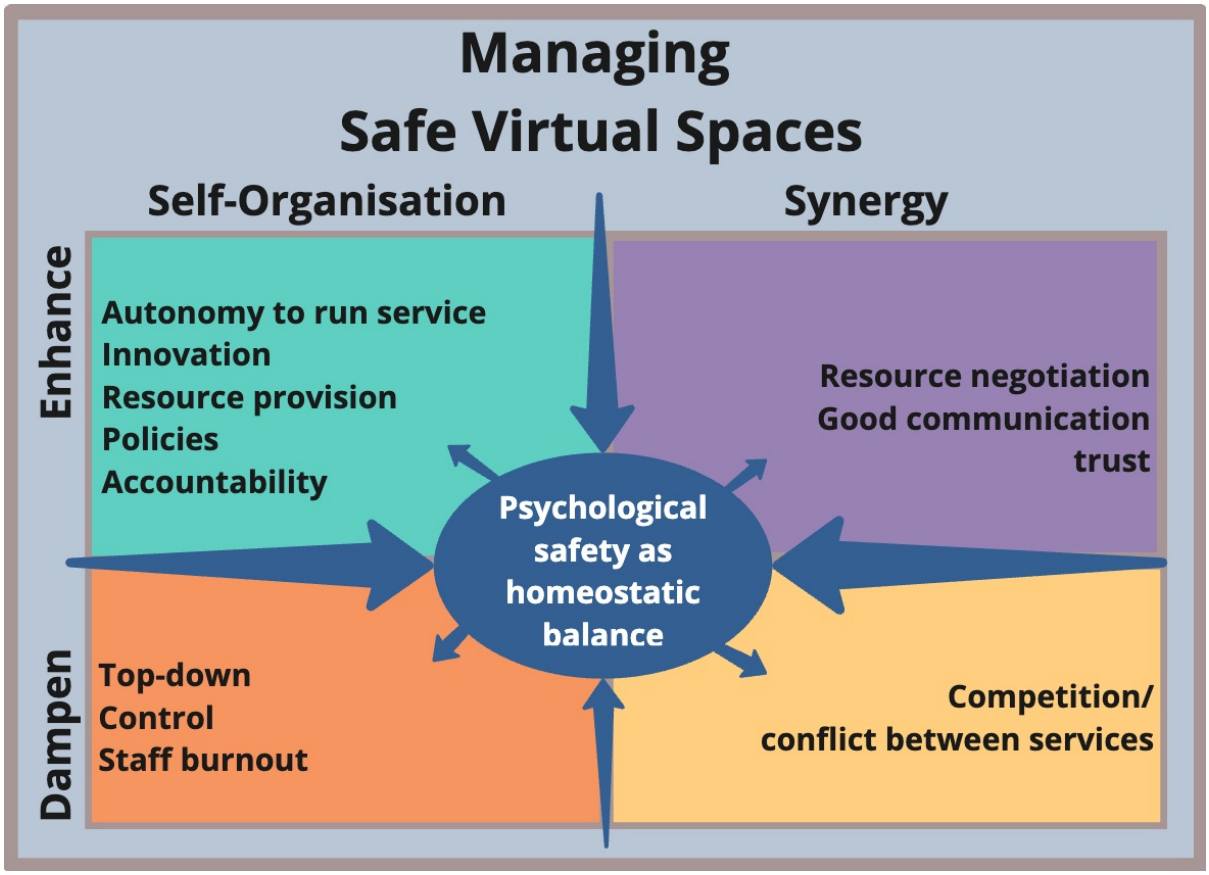

Figure 7.7: Managing Safe Virtual Spaces

either because an issue needs urgent attention, or where the issue is with the role holder that the practitioner usually reports to. When staff self-organised at the beginning of the COVID-19 pandemic they were able to jump different levels of authority to take action. Now that virtual services are more regularised, it is important to maintain this level of flexibility in a viable virtual space. This is the level at which sporadic monitoring of virtual spaces also needs to happen, where the purpose is to understand the reality of what is happening in practice.

Development (System 4) Strategic management is about both managing in the here and now and for the future. Ideally, organisations need a strong horizon-scanning capacity to identify future threats and opportunities. While most organisations represented in the Delphi survey exhibited a strong management function at System level 3, and some virtual services have recognition embedded at a governance level, there is a gap in the strategic foresight in many organisations. This is evident at the start of the pandemic in how unprepared organisations were for any disruption of services and lacked the technological capability or skills to go online. The Delphi survey findings sug-

gest a gap between practice capability and organisational capability to recognise and act on the perceived legitimacy of virtual services is an ongoing issue. Where organisations are fire-fighting to sustain current service provision levels, it can be difficult to set aside resources for future planning. While panellists in the Delphi survey are clear that the demand for virtual services will rise, there is a gap in terms of how organisations propose to address that demand. In VSM terms, where the development function is too weak, it must be strengthened so that managing for the moment is balanced with future need. Strategic management (System 3) is responsible for ensuring the sustainability of virtual services, but without forward planning, it is hard to gain traction. Where this occurs, virtual services cannot be integrated at an identity and strategy (System 5) level (Hoverstadt, 2009). Yet the sustainability of an organisation is dependent upon having strategic foresight. This calls for a balancing of resources for immediate and future need. It is the role of Strategy and Identity (System 5) to negotiate a balance between both concerns. Failure to do so, from a VSM perspective, can threaten long-term sustainability (A. Espinosa, 2022).

Identity and governance (System 5) This level of the organisation is responsible for setting the purpose of the organisation and taking responsibility to ensure that what the organisation does in practice reflects its stated purpose. Safe Virtual Spaces need a distinct identity closely aligned to organisational purpose. This is because the purpose of a system is what it does, not what it says it does (Leonard, 2015). This makes it both important that Safe Virtual Spaces are provided as part of an accessibility offering, and also puts a systemic understanding of psychological safety front and centre of any virtual offering. It is only through gaining parity with other services, and being seen as a complementary option in line with the UN CRPD, that they can gain legitimacy as a distinct service model. Beer (1985) suggests that "*closure*" about the organisation "turning back into itself" assures its identity and coherence and sets it apart from other organisations in the environment. It is also about maintaining integrity amid external uncertainty: without it organisations struggle to achieve objectives, and confusion and inefficiency ensues.

7.6.1 Developing a model for Safe Virtual Spaces

Safe Virtual Spaces are viable service models that have an independent identity from face-to-face services. Safe Virtual Spaces create a boundaried container where people can be their authentic self and take risks that

enhance personal agency, leading to meaningful connection and a sense of mattering and belonging. They call for facilitator practices underpinned by embodied presence that support enacted sensemaking in intersubjective we-space. They create a reinforcing feedback loop between safety, connection and embodied presence, though the felt sense of psychological safety is a subjective experience that arises as part of a relational dynamic to which everyone brings their own appreciative interpretation of the encounter (Vickers, 1970). The Law of Requisite Variety creates enough room for adaptation and innovation: it allows for complexity in the external environment to be met by a dexterity in the system to respond and to support structural coupling with the environment.

This research proposes seven principles to inform the systemic design of Safe Virtual Spaces based on the organisation of a Viable Systems Model. The principles represent the culmination of a rigorous process of distilling the data from the three research cycles and seeing how they come together to inform the key components of a viable system using Stafford Beer's model for viability and sustainability, which has been further elaborated upon as a perfomative model by subsequent scholarship (Espejo et al., 1999; Á. Espinosa & Porter, 2011; Lowe et al., 2020). The first principle is derived from the concept of homeostasis (Ashby, 1956) which was applied to the data around managing safe virtual spaces, presented in Fig 7.7. It attends to both System 1 (Operations) and System 5 (Identity and purpose), and represents the culmination of the concept of psychological safety as developed across three research cycles. The second principle is derived from combining practice theory and setting it within System 1 of the VSM model where it corresponds with the activity, or in this instance the practices that staff engage in, to provide the value offered to those accessing virtual services. The third principle is derived from findings around the role of technology which pulls together a principled approach to harnessing technology using practice theory, which regarded it as the site of practice (Section 5.6.6), and the Law of Requisite Variety (see Fig. 6.10) for the coordination of services. The fourth principle draws CAS and the findings from the research cycle (See Fig. 4.5). The fifth principle is based on System 2 in the VSM and is concerned with enhancing co-operation which was key to success in the early stages of the pandemic (see Section 4.3.1), and in setting the scene for successful online delivery in the World Cafe (See Section 5.5.1) and as a way to avoid competition for resources which presented a potential threat to viability in the Delphi survey (Section 6.8.5). Provision for appropriate management is made in principle 6. This corresponds with System 3 in the Viable Systems model and offers an

insight in how to manage for accountability whilst at the same time giving staff and facilitators the autonomy to respond appropriately with contextual awareness. The final principle draws on System 4 in the VSM model and is evidenced in all three research cycles: the interviewees in Cycle 1 expressed a desire to continue virtual services beyond the pandemic, and by Cycle 3, it became evident that the need for virtual services would grow. Currently, however, organisations vary in their capability to engage in futures planning and this is key to long term sustainability and viability of services.

1. **Use a systemic understanding of psychological safety as a homeostatic mechanism to ensure that purpose and practice align.** The overarching purpose of any virtual disability service is to create a Safe Virtual Space, regardless of the stated activity or reason for coming together, so that those attending can enjoy meaningful connection, feel they matter and belong, and enhance their sense of personal agency in a democratic space. Psychological safety acts as a homeostatic mechanism to ensure that identity of the organisation, purpose and practice align (*System 1 and 5*).

2. **Prioritise the art of embodied presence as a key practice skill.** Embodied presence underpins the practice of facilitating Safe Virtual Spaces: it supports enacted sense-making in the moment and being authentic, and supports connection and a felt sense of mattering and belonging (*System 1*).

3. **Use the screen as a container for creating a safe space, and to enhance practitioner options for design and facilitation.** The screen operates as the site of practice or the container for creating a safe virtual space; it amplifies practitioner options for facilitation and it also constrains unpredictable behaviours, supporting practitioners to re-establish equilibrium in a session.

4. **Give practitioners enough autonomy to self-organise and innovate.** Practitioners must have enough autonomy to self-organise, so they can innovate to meet the complexity in the social field and the external environment (including attendees, other organisations and environmental conditions) within agreed parameters (*System 1*).

5. **Foster clear communication to support cooperation across virtual and face-to-face models.** Good coordination, supported with clear communication is needed to amplify cooperation and dampen potential conflicts between different models of delivery and competition for resources (*System 2*).

6. **Balance autonomy with good management controls and accountability systems.** Practitioners must be able to bargain for resources, negotiate accountability systems and policies with management without being micromanaged. Management must balance autonomy and control through good monitoring processes to ensure an acceptable standard of practice is maintained (*System 3*).

7. **Invest in futures planning.** Horizon scanning plays an important role in ensuring sustainability: it identifies risks and opportunities in the environment that are critical to the sustainability of Safe Virtual Spaces Resources that must be balanced between current delivery and future need (*System 4*).

7.7 Power and practice

The issue of power is threaded throughout this research project, as it is an inherent feature of the social world (Bourdieu, 1990). Whilst acting as CAS, staff were able to take control and act-up, adapt and innovate within a policy void. This changed the relational dynamics between giver and receiver of services as well as between staff and organisations. Interviewees in Cycle 1 thought that organisations would need to "up their game" to hold onto people with disabilities after the pandemic and a year later, in Research Cycle 2, there continued to be a sense that virtual supports put more power in the hands of those using services and acted as a levelling process where services were often co-designed *with* attendees. Kemmis suggests that power is hidden in how things are done and how things are done are shaped by historical and global patterns of power (Kemmis, 2022). Enacting a practice turn in psychological safety gives greater room for manoeuvre within the habitus of an organisation, to access more tacit power and create the conditions for safety and greater agency amongst those attending. It also shifts focus to the art of consciously practicing in the moment, and closes the gap between policy and practice. Power is experienced in situ (Foucault, 2019), and when people

feel safe and can act with greater agency, there is an opportunity for making different choices and for advocating up through an organisation. Therefore, making psychological safety a key anchor of any virtual service also supports a greater sharing of responsibility for the co-created space. This also comes with greater responsibility amongst attendees to act in appropriate ways and contribute to co-facilitating or leading sessions. This is about expanding the social field or space in which people can take action and retain their autonomy within clear parameters. Psychological safety provides a homeostatic balancing function within services that point to the need for an ongoing enacted balancing between autonomy and control. It raises the tension between policy and practice: agency can only emerge where the habitus of an organisation allows it. Otherwise, people must step beyond the boundary into second-order learning, where there are no guarantees of success. It is about management relinquishing some control to services and using psychological safety as a homeostatic function at a management level, as discussed, but it is also about designing more democratic spaces that create the conditions for transferable learning.

7.8 Contribution to knowledge

This research is timely in addressing a gap in the literature on the transformation of disability services from almost exclusive in-person services to virtual services, at a time when they were destabilised due to the COVID-19 pandemic. Much research focused on the experience of living through the pandemic from the perspective of the person with a disability, or the need for more innovation around technology (D. Chadwick et al., 2022; E. M. Smith et al., 2022). Little is written about adaptive staff practices that support innovation and what can be learnt from them. This research views this perspective as critical to future-proofing disability services in an increasingly uncertain external environment. It also has insights for systems thinking practitioners and researchers.

This research makes a contribution to knowledge in five key areas:

1. It makes a practical contribution to the discourse about the future direction of disability services. Safe Virtual Spaces are vital for future-proofing disability services amid poly-crises and uncertainty, and demand is set to increase. This research makes a strong case for virtual options as a distinct service model to accompany face-to-face services that enhance user choice, in line with the UN CRPD, as they serve a broader spectrum

of people with disabilities than face-to-face services can alone. Secondly, it demonstrates how effective virtual supports can be, in a crisis situation, where there are no other options to stay connected. Thirdly, developing adaptive innovative practices and technological know-how is an important skill set for a sector with both funding and staffing shortages: this research offers insight into how Safe Virtual Spaces can be developed and governed as democratic spaces within organisations and the practices that support them. The design principles developed using the Viable Systems Model may also be extended to apply to an independently run community.

2. It makes a theoretical contribution extending our understanding of psychological safety to be a systemic construct that is both contextualised and practice-based. An understanding of psychological safety in a social care setting can act as a homeostat within a service regardless of the stated purpose of a given session and works at a recursive level between attendees, attendees and facilitators, and facilitators and management. It can be tested further in other settings beyond disability.

3. The practice turn in psychological safety also contributes to knowledge. Firstly, It grounds the purpose of what an organisation does as a human-centric relational dynamic, where practices are structurally coupled with technology and the environment to create the conditions for emergent outcomes, including greater agency amongst attendees. It responds to Edmondson's call for more research on how to create the conditions for safety that shifts beyond description of what psychological safety is (A. C. Edmondson & Bransby, 2023). It also offers a different perspective to competency-based practices in social care settings, which may result in too many time-lags between training and addressing immediate need that may be disconnected to particular operating environments, particularly in the midst of crisis situations.

4. This research also contributes to the discourse around "digitalism", in the absence of health innovation policies, where extreme digital connectivity is considered desirable in itself, without considering human rights and democratic practices that must accompany online engagements (Bayram et al., 2020).

5. Finally, a potential contribution to systems thinking may be that the systemic nature of psychological safety can be considered a thread for fu-

ture inquiry in the development of maturity models for systems thinking competencies and practices (Buckle, 2018).

7.9 Specific use of findings

This research was driven by the imperative to learn about innovations that sustain human contact through technology as distinct from digitalisation as a driving force, to inform how to create the conditions for human-centric innovation. It has achieved this objective. Further validation of the felt sense of psychological safety and its link with mattering and belonging needs to be tested with people with disabilities who attend, co-facilitate or co-design virtual services. Future research could usefully test the governance principles as a co-design process with staff and attendees of virtual services and policymakers. The World Cafe findings also indicate a need for social learning spaces. The link between embodied presence in the virtual world and psychological safety is a growing but largely unexplored area and warrants further investigation.

A paper is completed covering the first Research Cycle and awaiting publication. I also have plans to develop website content, blog posts and present findings to policy-makers and organisations to highlight a need for a future focus on services. Findings will also be shared with research participants, their organisations, and the potential of developing a shared virtual learning space will be explored. I also propose to share the learning with systems colleagues regarding the concept of taking a practice turn in psychological safety and its potential contribution to systems competencies.

7.10 Limitations

As with all research, some limitations must be considered when interpreting findings. These include the limits to extrapolating findings beyond the context in which the research took place and the influence of context on key design decisions. This limitation is explored in the proposed *quest for improvement* that this research sought, based on the three tenets of ethical research set out by Ulrich (Ulrich & Reynolds, 2010). These are to first start with a situation and try to understand it in context, secondly, to engage those involved in the situation in the research, and thirdly, to make the value framing for the research explicit. The *quest for improvement* is presented in detail in Chapter 3, Section 3.2.3. Social Desirability Bias (SDB) amongst participants (Bispo,

2022) and how it interacts with researcher bias are also issues to be considered. Some participants were also known to the researcher which called for reflexive management and placed a limitiation on the research findings.

Extrapolating findings and the quest for improvement

As the research is contextual and knowledge is developed within a relational context, the generalisability of the research findings requires further consideration. This can be viewed as a research limitation but it is also a feature of systemic research, where context matters and findings cannot be extrapolated from one context and implemented elsewhere without a nuanced understanding of the context in which they were generated and adaptation to a new context.

Systemic research is led by a situation arising in a particular context (Ulrich, 2001). It is about creating the conditions for change that are both systemically desirable and culturally feasible in that situation (R. Ison, 2017). The idea of systemically desirable outcomes in research is about demonstrating a nuanced understanding of the systemic nature of a complex issue and pointing towards systemically desirable ways to guide active engagement in the situation. Cultural feasibility can be understood as national, local or organisational culture, and it influences what is feasible within the cultural norms in that situation. A practical constraint on the scope of the situation studied is a geographical one. The first two research studies were conducted in Ireland and, even within one country, the culture across organisations varies considerably. The third cycle included international participants, from across Europe and Australia, which again limits generalisability beyond well-resourced Western economies and cultures. Regardless of geography, the complex patterns through which disability services are delivered, and the social structures that inform them, were already established and entrenched before the pandemic. Organisations operate within their milieu and are influenced by power structures that enable them to evolve or keep them constrained (Bourdieu, 2017). They are also characterised by either tight or loose coupling within a mesh of interrelationships, all of which cannot be known to the researcher (Maturana & Varela, 1987). It is, therefore, unwise to assume that new learning can be adopted equally well and in the same way across different organisations, making it unfeasible to standardise interventions on the assumption that they can be extrapolated and transposed from one context to another (Hawe et al., 2004).

The second *quest for improvement* is about involving those in the situation in the research. This research puts a spotlight on staff practices that were understood as supporting innovation in a particular context. Practices were

understood as the rituals, routines and behaviours that produce and reproduce social order and cultural norms (R. Chia & Holt, 2006), and the case was made for focusing on the doings, sayings, and relatings possible within the online environment (Kemmis & Grootenboer, 2008). It did not include beneficiaries of virtual services, and so the practices identified need further verification to assess the extent to which they do lead to a felt sense of psychological safety, meaningful connection and belonging. This is not the only limitation on extrapolating findings beyond context: using practices to produce generalisable competency frameworks is not advisable, as competency frameworks do not attend to the ability to turn a competency into a capability (Williams & Hummelbrunner, 2010). For example, a person may have the skill, but may not be resourced or supported to have the capability to exercise those skills in practice. What the focus on practices offers instead is guidance on how to create a human-centric relational dynamic and the governance structures that would underpin supportive environmental conditions for psychologically safe spaces. It relies on enacted practices that occur in the moment and are not amenable to being reified as competencies. This research offers a gateway to reflective practice that places responsibility on all stakeholders to reflect on how their actions influence what becomes possible or not. Therefore, the findings cannot be generalised as they place responsibility on the individual working in context.

Thirdly, the value framing utilised in this research is appreciative (Cooperrider et al., 2008), which emphasises strengths in practice and shifts from a deficit framing to bringing people together to learn from each other. As research and practice are intertwined in the real world (Chandler & Torbert, 2003), learning is always contextualised (Wenger, 2010). An appreciative approach also assumes that much can be learned from those who innovate in difficult conditions within evolving contexts. Time is always in flux (Vickers, 1970) and virtual services are evolving along with post-pandemic policies that do not remain static to accommodate a research project, or lead to generalisable results. Many services have, since the pandemic, returned to in-person services, and for those virtual services that remain, the operating context now and in the middle of a pandemic is different. Real world complexity also makes it difficult to isolate variables which would support counterfactual arguments (Lebow, 2000). Nonetheless, a study of those services that did not adapt, became 'stuck', or were confounded by policies or the lack them, would act as a complement and comparator to this research. It could strengthen an understanding of the potential of social learning across organisations and inform future upskilling of the workforce for greater resilience.

Key design decisions influenced by context

In discerning the boundary between the wide range of potential areas to focus research on and the eventual focus, there are inevitable limitations (Williams & O'Donnell, 2023). Two key decision points were influenced by the COVID-19 pandemic. Firstly, the pandemic acted as a constraint to conducting this research more closely aligned with an Action Research approach. Action Research emphasises learning in real-time with those working directly in the space and attendees of services. The nature of the pandemic and the precarity of virtual services restricted access to work with people on taking collective action. The decision was made to focus on a professional perspective and did not include attendees of services: it was not feasible to access people using services at the start of the pandemic when the interviews commenced. By the time the Delphi survey was conducted three years later, a Critical Systems Heuristics analysis suggested it would be unethical to mix the groups at that point. The pandemic meant that the research was conducted exclusively online and this curtailed the potential to do more hands-on Action Research with people.

Secondly, a decision on whether to concentrate on social learning or governance for the final research cycle needed to be made. The appetite for shared spaces for social learning named by participants in the World Cafe as a valuable way to learn forward together could have informed the direction of the research. The decision was taken to look at the governance systems instead because the sustainability of virtual services was becoming a greater concern at an organisational level as time progressed. Many services were at imminent risk of closure as face-to-face services resumed. It was also clear that the need for a social learning space could be fostered elsewhere (e.g. within FreedomTech's community of practice), but the case for creating and sustaining safe virtual spaces needed to be made first. This influenced the direction of the research, but, like all choices, also poses limitations on the extent to which it can be verified that social learning took place in the research. This level of uncertainty is commensurate with a systems approach to research which acknowledges that emergence is an inevitable part of working within complex situations, which continue to evolve beyond the lifespan or out of view of formal research (Edson et al., 2016).

The interplay between social desirability bias and researcher bias

Social desirability bias (SDB) is a complex phenomenon that challenges the authenticity of research findings (Bispo, 2022). Bias can be both intentional – through deliberate impression management – and unintentional, arising from deep-seated self-deception mechanisms (Bispo, 2022). In systems

terms, a dissonance between theory-in-use and espoused theory can also be at play (Argyris, 1994). From a systemic perspective, researcher objectivity is not possible either, making for a potentially entangled encounter between the researcher and the participant that may influence findings. Dealing with this interplay demands ongoing reflexive practice. It poses a complex interpretative challenge rather than something that can or should be eliminated. It is not always negative: it may also offer a window into societal norms and cultural dynamics (Edson et al., 2016). In systems terms it may lend a richer nuance to patterns of behaviour that people working in complex systems engage in (Buckle Henning, 2017)

To guard against biases affecting findings, I followed Bispo's (2022) and Ulrich's (2010) recommendations to maintain a critically reflexive stance, continuously examining my own potential biases and their potential influence on participant responses. This was most important in the interviews, where the intensity of the one to one encounter may present an opportunity for participants to strategically navigate their responses to align with perceived social expectations (Bispo, 2022). As other facilitators held the space in the World Café, and the Delphi survey was more impersonal, it was easier for me as a researcher to be critically reflexive with the data. I also discussed these issues with my supervisors and teased out any ambiguities about interpreting data.

It soon became clear that I was conducting research in a format that participants had more expertise with than I did, and this as it was also the topic of the research! This irony was something that I observed influenced my interpretation of the data, particularly when participants were very good facilitators online and used to putting themselves across well. It also meant that participants were used to being in charge of the virtual space so I had to take extra care to establish myself as the interviewer. Their skill was also a contributing factor to the success of the online World Café, where they were used to sharing online space. I observed the intricate interplay between SDB and potential bias play out in several ways, particularly in the interviews. One interviewee wanted to be viewed favourably by me; another positioned themselves as a confidante, using many of the facilitator tools associated with facilitating online to win me over. One participant whom I thought initially naïve and eager to please, over several listenings, became one of the clearest interviews, where they were driven by a clear motivation to serve the people they worked with rather than create a good impression.

Here are two examples where SDB was in evidence and how I dealt with it:

- I had a sense with one interviewee that they were very keen to be perceived as holding a high moral ground about their politics on disability. This included putting other organisations down using humour. Although I did not know the interviewee personally, we knew people in common. I sensed that they wanted to bring me over to their way of thinking. I ignored derogatory comments about other organisations and also used humour, to bring the interview back on topic (Bouwmeester, 2023). I also scrutinised the interpretation of this transcript very carefully to guard against being entrained by their perspective (Buckle, 2003) and not influenced by their political agenda. I detected a gap between their espoused theory and their practices and adjusted the coding to capture latent meaning behind the words (Braun & Clarke, 2023), also taking care not to miss the valuable contribution their experience offered the research.

- Another interviewee was keen to support the research and expressed a strong hope that their contribution was useful to my research. As the interview progressed, it became clearer that what I perceived as SDB, was driven more by latent anger with the lack of support higher up in the organisation and a need for their experience to be heard. Their motivation for the work online to be seen and appreciated was driven by a desire to see fundamental changes to the design of services, rather than being seen to be nice or good at what they were doing. I made room for this interviewee to get what they needed off their chest, and asked clarifying questions to keep the interview on track, as well as expressing a hope that the interview would also be useful to them.

While SDB was evident amongst participants, it is important to balance this with an understanding that people were giving freely of their time during a very uncertain time and that they also needed a space to reflect and hear themselves speak of their experience. Participating in the research gave a space for this and peer learning which is evidenced in the exchange that happened at the end of the World Café (which is quoted in Chapter 5, Section 5.5.4.1). While every measure was taken to reduce SDB and researcher bias, it can never be guaranteed that neither factor influenced findings.

Prior relationships with research participants:

Some research participants were known to me. Having spent a long time working in the field this was inevitable, particularly in the first and second cycle where participants were recruited through FreedomTech, the community of practice in which I was involved. The third cycle involved an interna-

tional group of participants and the recruitment net was cast wider with four more gatekeepers added in addition to FreedomTech. I was acquainted with three interviewees and had worked with another in a previous role. We were both in very different roles and organisations now and had not had contact for a number of years. I acknowledged this at the start of the interview and took great care to make a clear distinction between reacquainting ourselves and reestablishing relationship, and changing mode before starting the more formal interview. I was acquainted with three participants in the World Café and five in the Delphi Survey. As this was a new situation that everyone was living through, the usual constraints associated with assuming I knew certain information which they might skip over, did not apply. The same process of information and consent-giving was applied to everyone equally and there was no power dynamic between me as a researcher and any of the participants, either currently or historically. There was no sense that any participant might feel obliged to take part, and I was very careful to go through the information and consent form to stress that they were able to opt out at any time without consequence to the relationship with me or the university. I was clear about switching into researcher mode and followed the research guide without referring to any information we may both know outside of the research setting. While I did everything I could to mitigate against bias based on prior relationships, it does pose a limitation for the research as unconscious biases may also have influenced the interpretation of results.

7.11 Conclusion and reflection

The research concludes that a focus on developing staff practices alongside appropriate governance is needed to create and sustain systemically viable safe virtual spaces, that can support the wellbeing and mental health of people with disabilities, within the context of service improvements that are more resilient to future volatility.

The process of conducting and engaging with the participants in this research has been affirming and personally enriching. The formalities of the inquiry as an academic endeavour have brought a rigour to approaching the topic as much as they have constrained some of the creative potential of telling a story in a relatable way. I note that the Law of Requisite Variety is at play again here, maintaining the research endeavour boundaries, whilst opening up a unique space to deepen personal learning and research praxis. There have been times when I have had to remove myself from the screen

and find a sense of presence in my own life rather than write about it, as well as connect with others virtually. This included the development of an online community of practice for Social Presencing Theatre - known as the JAM – a group of advanced international practitioners who meet weekly online, to renew ourselves as we practice the art of facilitating embodied transformational practices online. This ongoing inquiry is juxtapositioned with research practice, which once data was obtained, became removed from the real world of service delivery. This has been a tension that I have found difficult to hold in the process of writing up the research. As I come to the end, I am aware of both arriving where I started, but now resourced with many insights and practical offerings that I hope shine through, which need practical application that fulfill the original intention of this research to contribute to the development of more democratic virtual spaces for connection and belonging. This research ends with a reaffirmed commitment to integrating research practice and using it as leverage for practical change, ground in practicing the art of making systemic change possible. This chapter begins with a quote from the artist Joseph Beuys who suggests that it is from the social art of living that all work ensues and concludes with the words of Bourdieu, who points to the irony that academic pursuit obscures the essence of the art of living, a practice to which I now return refreshed:

> *"It is an academicisation of the social 'art' of living that obscures the logic of practice in the very moment in which it tries to offer it."* (*Bourdieu, 2002, p. 19*)

APPENDIX A

SSM Problem Structuring Analysis

The following exploration is based on the work of Checkland (2020, 1999).

1. Something to do with…

Initial framings using the phrase "something to do with" were explored and the

the following framing had most resonance in informal conversations with colleagues in FreedomTech:

…understanding what staff are doing that is working…

Initial framings included:

…something to do with…

…staying close and staying away…

…community building online…

…creating virtual islands of sanity in the middle of a storm…

…understanding what staff are doing…

…getting technology to people…

2. Role, social and political Analysis:

Social analysis

CATWOE analysis

Table A.1: SSM Role analysis

Client: The individual or entity who initiates the research	**Funder:** Advance CRT funded by Science Foundation of Ireland **Supervisors:** who support and understand the rationale for the research **FreedomTech:** support the research as a sectoral learning process
Problem Solver: The person responsible for organising and executing the research	**Researcher:** Submitted research proposal concerned with developing online communities (research proposal written May 2019) and executing research
Problem Owner: Those concerned about or affected by the situation and outcome of research	People with disabilities who use disability services People with disabilities who use, or could use virtual services Families of people with disabilities (where they are also affected by closure of services) Staff supporting people with disabilities Organisations FreedomTech as an advocacy and learning collaborative Policymakers in government, health and social care, education National Health Emergency Response Team

Table A.2: Social analysis 1

Stakeholder	**Role**	**Norms**	**Values**
People with disabilities (using services)	Recipient of support, peer advocate, student, AT user	Often passive recipient of services, reliant on support or technology	Connection with others in day services Access to AT for education
People with disabilities who use, or could use virtual services	Potential recipient of support	Unknown: possibly without access, resources or capability to get online/chooses not to	Unknown Very likely to value in-person connection
Families of people with disabilities	Parent, sibling, child, cousin	Status quo	protective
Staff supporting people with disabilities	Giver of services	Not digitally literate	Caring, fixing, taking action
Disability Organisations	Provider with responsibility for safeguarding and employment of staff	Status quo, dynamically conservative, often stuck, under resourced and carrying on	Following Health service guidance (eg. New Directions)
3rd level colleges	Educators, providers of Assistive Technology	Adapt to online learning to keep colleges in business	Students have right to support or technology to access education
FreedomTech as an advocacy and learning collaborative	Advocacy around assistive technology	Collective learning across all services	Human rights, emancipatory potential of Assistive Technology
Policymakers in government, health and social care, education	Issues guidance and policy direction based on best practice (or not)	People have rights but need to be protected	Protecting life in emergency Sustaining supports through other means
NEPHT	Issues directives on when societal institutions can open/close	Medical needs trump all needs	Protecting life in emergency
Researcher	Investigative	The right to technology and self determination	Creating knowledge, learning, human rights

Table A.3: CATWOE Analysis

CATWOE	SSM(c)	SSM (p)
Customer: person affected by the Transformation	person with a disability. It may also include family members in some specific instances, where they too are very isolated, or experience difficulty supporting their family member	Disability organisations, policy makers, serving people with disabilities
Actors	Staff and volunteers already known to the service are ideally the people who should operate the service and deliver the Transformative action	Researcher and supervisors
Transformation	Not being able to access a service to accessing a remote service	From not understanding the logistics, innovation and potential value of Virtual services to developing knowledge that can inform organisational and policy developments
Worldview:	Some form of service or connection is better than nothing	Research supports informed decision making about digital innovation
Owner:	The organisations have the power to say yes or no to remote services and therefore are considered owners. The funders (often Health services) also have ownership and the power to support or constrain virtual services	Researcher and supervisors Organisations and funders (often Health services) also have ownership and the power to support or constrain virtual services
Environmental constraints:	Pandemic prevents face-to-face interaction, access to technology or broadband. Budgets and staff are not always available. Ongoing uncertainty	Research must be conducted online Accessing service users difficult due to adjusting to new-ness of VS, and living through pandemic.
	Virtual supports require staff and volunteers (A) to run the services that make up the transformation (T) that will affect people with disabilities, within the given constraints (E), which organisations and funders (O) have the power to support or stop.	Research requires researcher (A) to conduct research that can shed light on the logistics, innovation and potential value of VS (T) that will inform organisational and policy developments within given constraints (E), which organisations and policy makers have the power to support or stop.

APPENDIX B

Ethics Applications

B.1 Social Research Ethics Sub-Committee

Protocol for Tier 2-3 Ethical Review of a Research Project Involving Participation of Humans

(This form must be submitted via the online Ethics Module in RIS).

1. Applicant. Joan O'Donnell

2. Title. Delphi Survey to investigate the staff practices and governance structures needed to ensure that online disability services are psychologically safe and provide the opportunity for meaningful connection amongst participants

3. Research Objectives.

Irish Disability services transitioned from face-to-face to online services during COVID-19. Research completed explored this transition (ethics approval granted on 2 July 2020, ID: 2409706 - Appendix 3). A follow up study explored meaningful connection and psychological safety in sessions (ethics approval granted on 11 May 2021, ID: 2439235- Appendix 4). This application has also received ethics approval on 21 October 2022, ID: 2480841, which I now am making amendments to which are highlighted in blue.

Objectives for this application:

1. What are the defining characteristics/elements of psychological safety in virtual disability spaces?

2. What staff practices support psychologically safe virtual services?

3. What system wide conditions need to be met in order to create psychological safety in virtual spaces within disability services?

4. Methodology.

Delphi Survey: This research cycle is designed as a qualitative real-time online Delphi Survey. A traditional Delphi Survey has two or three rounds: the results of the first survey are analysed and form the basis of the second survey, and the results from that are distilled further for the third survey. The objective is to reach a consensus between subject matter experts for foresight planning on an issue around which little is known. Over time, the design has changed from postal surveys to online surveys and from sequential surveys to real-time options to account for high levels of drop off and to lessen the burden of participation.

This survey is a real time qualitative Delphi Survey: this means that it is run on line, and the survey platform is open for 3 weeks (with an option to extend if needed). This has several advantages as it means that participants have the flexibility to log on at a time that suits them, which means that they do not need to be in a set place at a set time. It also means that they can contribute in their own timezones and control the amount of time that they are able to commit to the survey. This Delphi survey is designed as a qualitative study which means that it will look like a discussion forum for participants. They can input as much or as little information as they wish and it also means that they can see eachother's inputs and learn from them, and can change their own input. The purpose of showing them eachother's responses is so they can learn from eachother, which is the main incentive for participating.

The nature of the survey means that specialist software is needed to:

a. allow panellists to see each other's responses

b. allow panellists to reframe and revise answers based on others contributions. In this way it resembles a forum discussion.

GDPR: The software chosen is SurveyLet run by Callibrum which is GDPR compliant. Calibrum complies with the EU-U.S. Privacy Shield Framework and Swiss-U.S. Privacy Shield Framework as set forth by the U.S. Department of Commerce regarding the collection, use, and retention of personal information transferred from the European Union and Switzerland to the United States. Calibrum has certified to the Department of Commerce that it adheres to the Privacy Shield Principles. This complies with Section 6d of the Maynooth University Data Protection Policy.

As a customer of Calllibrum, the resarcher has full control over the data and Callibrum enables GDPR compliance in the following ways:

- provides sufficient guarantees to the controller to implement appropriate technical and organizational measures designed to safeguard Customer data

- process data (that could include personal data) only to fulfil its obligations as related to the Services

- enable users to modify and delete individual data points

- enable users to modify and delete complete survey responses

- enable users to modify and delete the entire project (responses and survey definitions)

- provide security documentation that describes the processes and procedures for safeguarding the data

- sign a contract that governs the processing of EU personal data.

The researcher takes responsibility to delete data at the end of the research and ensure any downloaded data is saved on the Maynooth Server. This is reflected in the information and consent form. GDPR compliance will be afforded to all participants, and in line with their country requirements, where they exist. For example EU GDPR regulations both cover and extend the Privacy laws in Australia and Kenya's Data Protection Act (2021) was set in line with EU GDPR guidance. GDPR guidelines for each country outside the EU will be consulted to see what additional data protection actions need to be taken, if any.

Invitation to participate, consent form and link to access survey: This will be composed in Qualtrics. (see Appendix 1 p.15).

Issue to be explored: The governance and staff practices required to create the conditions for safe virtual spaces (see Appendix 2, p.19).

Task and time commitment: Participants answer open ended questions from their own perspective and once they have answered they can see the responses of others and are invited to review and change theirs. The estimated time for first completion of the survey is 50 minutes. They then have the option to review other participant contributions and amend their own contribution during the time that the survey is open. The questions remain the same throughout. They are not obliged to change their answers but may offer further comment based on what they are learning from what others say.

The survey will be open for three weeks (with an option to be added for additional time should response rates be slow). Participants will receive between 1 and 3 reminders to return to the survey to review their answers, depending on response rate. The time commitment for each review of data is estimated at 20 minutes per review, and is at the discretion of each participant. They are requested to revisit the survey a minimum of three times and review other people's contributions and see if they wish to amend their answers (total time commitment requested: 120 minutes). This is the only commitment being asked of participants who will not be asked to participate in

any further study and they can opt out of any follow-up. The main benefit to participants from taking part in this study is that they can learn from the international experience of running virtual services and they will receive a copy of the draft findings which may support them in their own work.

Confidentiality: Panellists will be known only to the researcher and supervisors but will be anonymous to each other, during the period in which the survey is live. It is designed this way so that the researcher can send reminders if needed and to ensure appropriate level of moderation in line with ethical online behaviour (see Survey Eitquette p.20).

Privacy: Once the survey is closed each participants data set will be given a code number which will not be linked to their name. Their contact details and consent forms will be stored separately from the data on the Maynooth University Server. Once the data is downloaded from the software, it will be stored on the MU server and the data will be deleted permanently from the software by the researcher within the 12 month period of the contract with the software provider.

Pilot:

4a. Where will the research be carried out?

This research will be carried out using SurveyLet an online survey tool which supports GDPR Compliance across European countries. The same protections will be afforded to participants from outside this zone.

Maynooth University does not supply or support a software tool that supports a real time Delphi Survey. As there is no MU supported option, I researched software options and amongst four options, found that Surveylet, a tool operated by Callibrum, has the strongest GDPR and accessbility scores, is used by many universities, international agencies and governments: https://calibrum.com/

They are also GDPR compliant: https://calibrum.com/calibrum-gdpr-compliance/.

The survey is aimed at both national and international participants and participants are reminded that not everyone will be answering in their first language. Participants will be invited from countries with a relationship with the ALL Institute in MU which includes: Australia, Kenya and Malawi, as well as European countries with a relationship with the European Platform for Rehabilitation and FreedomTech.

4b. Briefly describe the overall methodology of the project. The survey will be piloted with a minimum of 5 participants to verify the time it takes to complete and also test the precise wording of the questions. Survey questions may be amended on review of pilot results. These participants will be drawn from doctoral students with an expertise in either disability services or VSM

(eg. ALL Institute and ADVANCE CRT), as well as FreedomTech colleagues with an expertise in online services.

Analysis: Qualitative framework analysis will be used to test findings against Viable Systems Model (VSM), an established framework for assessing and designing viable constructs. The Viable Systems Model lays out the minimum conditions needed for an organisation or concept to be a viable and sustainable system. It maps a system across 5 domains:

1. operations – what people do on the ground to create value for beneficiaries

2. coordination – how operations are coordinated to avoid gaps and duplication

3. Management of resources and monitoring – how time and personnel are deployed for operations

4. Development – how the system interacts with the external environment and plans forward

5. Governance – the identity of a given system and its governance structures.

VSM looks for the interrelationships between the different functions above and does this at different levels (eg. you can look at the whole organisation through the lens of it being viable systems model or one department or function within an organisation). The objective is to ensure that there is enough autonomy on the ground and that the controls within the system are appropriate so that the system can be viable and act in accordance with its vision.

Delphi Survey: This research cycle is designed as a qualitative real-time online Delphi Survey. A traditional Delphi Survey has two or three rounds: the results of the first survey are analysed and form the basis of the second survey, and the results from that are distilled further for the third survey. The objective is to reach a consensus between subject matter experts for foresight planning on an issue around which little is known. Over time, the design has changed from postal surveys to online surveys and from sequential surveys to real-time options to account for high levels of drop off and to lessen the burden of participation.

This survey is a real time qualitative Delphi Survey: this means that it is run on line, and the survey platform is open for 3 weeks (with an option to extend if needed). This has several advantages as it means that participants have the flexibility to log on at a time that suits them, which means that they do not need to be in a set place at a set time. It also means that they can contribute in their own timezones and control the amount of time that they are able to commit to the survey. This Delphi survey is designed as a qualita-

tive study which means that it will look like a discussion forum for participants. They can input as much or as little information as they wish and it also means that they can see eachother's inputs and learn from them, and can change their own input. The purpose of showing them eachother's responses is so they can learn from eachother, which is the main incentive for participating.

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- sign a contract that governs the processing of EU personal data.

The researcher takes responsibility to delete data at the end of the research and ensure any downloaded data is saved on the Maynooth Server. This is reflected in the information and consent form. GDPR compliance will be afforded to all participants, and in line with their country requirements, where they exist. For example EU GDPR regulations both cover and extend the Privacy laws in Australia and Kenya's Data Protection Act (2021) was set in line with EU GDPR guidance. GDPR guidelines for each country outside the EU

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5. Participants.

5a. Who will the participants be?

Participation is open to those who fit the eligibility criteria up to a maximum of 30 participants.

Criteria for participation:

Panellists must have demonstrable expertise in policy-making, researching, designing, managing, delivering online disability services since March 2020. Participants will also be required to have a good proficiency in English.

· policy-maker roles: commissioner of services, regulator, policy advocate

· researcher roles: research, academic, independent researcher in disability services

· designer: Digital Assistive Technology expert, IT expert

· manager: CEOs of organisations, managers of virtual services

· delivering: facilitators, trainers of online services, including disabled facilitators

Every attempt will be made to balance equal numbers of participants from each practice area.

If any panellist withdraws from the survey before it commences, another participant who volunteers to participate will be selected from the initial list in chronological order of the receipt of their voluntary participation consent form.

Panellists will be drawn from an international pool of respondents. Those who have been participants in previous research cycles will not be invited to participate in this cycle. All panellists will remain anonymous to each other.

5b. Outline the recruitment process, considering any criteria for inclusion/exclusion. *Where gatekeepers are involved in the process of participant recruitment, please clearly outline procedures relating to their involvement.*

Recruitment: Participants will be recruited through an open invitation issued to networked organisations such as the European Platform for Rehabilitation, FreedomTech, the Disability Federation of Ireland, European Association of Service Providers and social media. All the above named oganisations have agreed to share information on this research. Recipients will be invited to nominate themselves to participate (if they have not done so already or pass the invitation on to another expert in their organisation who may be interested or to another organisation they feel may have a stake in this issue). The invitation will also be issued through social media.

Inclusion/Exclusion Criteria: Participants from each of the following areas of expertise who have been involved in virtual disability services will be

selected on a first-come basis:

· policy-maker roles: commissioner of services, regulator, policy advocate

· researcher roles: research, academic, independent researcher in disability services

· designer: Digital Assistive Technology expert, IT expert

· manager: CEOs of organisations, managers of virtual services

· delivering: facilitators, trainers, of online services

Proficiency in English will also be a criteria for participation.

Every attempt will be made to balance equal numbers of participants from each area.

If any panellist withdraws from the study before it commences, another volunteer will be selected from the initial list in chronological order of the receipt of their voluntary participation consent form.

Participants will be drawn form an international pool of respondents. Those who have been participants in previous research cycles will not be invited to participate in this cycle.

5c. What will research participants be asked to do for the purposes of this research study?

Panellists will be invited to participate in a qualitative online survey over the course of a three-week period, where they are asked to give their opinion and experience in relation to the following:

- Operational elements associated with creating safe virtual spaces, including questions around staff practices and ways of being that create the conditions for psychological safety and meaningful connection online

- Co-ordination activities associated with running services that are associated with making them a safe space to be

- How resources should be managed eg. time, staffing etc

- Developmental activities eg. perceptions about the role and potential demand for virtual services into the future

- Strategy and policies needed to create safe virtual spaces

5d. Conflict of Interest: ☐ Yes ☑ No

Please consider the basis of any potential conflict of interest and describe the steps you will take to address this should it arise?

There are no conflicts of interest issues associated with this research.

5e. Will the research involve power relationships e.g. student/employee/employer/c etc.?: No.

One of the greatest advantages of an anonymous Delphi survey is that it is designed specifically to temper the potential risks associated with power

dynamics within groups between people of different status. The potential risk comes from a gap between people who can articulate a perspective compellingly on paper and convey a strategic perspective which may hint at a senior position and those who may not hold such a high position or have as high a level of literacy or command of English. For this reason, a qualifying criteria for participation will be a good level of proficiency in English. There may also be panellists who both attend virtual services and have a formal paid role as facilitators. While it should not be assumed that this might automatically create a power dynamic there are moderation mechanisms in place to mitigate against skewed contributions.

While the risk of derogatory or discriminatory contributions on the survey are minimal as the survey is aimed at professionals with a knowledge around psychological safety, there is none the less a provision in the etiquette document and moderation protocol to remove offensive material, should this be necessary.

The forum will be moderated by the researcher and the emails prompting people to return to the survey can be modified to encourage participation, validate different perspectives, and remind people of the agreements that they made when they signed up to respect different perspectives if needed.

(*see etiquette and moderation protocol respectively*).

5f. Will the participants be remunerated, and if so, in what form?

Participants will not be remunerated. However, in recognition of the commitment to participate, they will benefit from both the live learning on the survey forum, as well as being the first to get a copy of the draft findings which can be of immediate value to their organisations.

6. Risk/Benefit Analysis

6a. Potential Risks: Please identify and describe any potential risks arising from the research techniques, procedures or outputs (such as physical stress/reactions, psychological emotional distress, or reactions) **and** for each one, explain how you will address or minimise them.

The content and questions asked are not focused on individual personal experiences or seeking sensitive personal information. The risk of provoking a stress reaction is negligible.

There is a small risk associated with this research relating to the linking of data to participants.

Every effort will be taken in how data is stored to disaggregate contribution

data from the contributor once it is downloaded from the software. The survey software is GDPR compliant.

The survey could be set up so that the researcher and PI do not have access that links

participants with their contributions. However, this would run the risk of not being able to adequately moderate the forum/survey or target prompts to participate if needed. In this instance, the risk of

not knowing who says what, as you would do in an interview situation for example, outweighs

the risk of not knowing.

The nature of the survey guarantees anonymity of contributors from eachother and is framed to

support positive and constructive reflection and learning.

The nature of the survey also ensures that the power dynamics between participants is kept ot a minimum. This is one of the main advantages of a Delphi survey in the literature.

To mitigate against participants making statements that may cause offence, they will be asked to agree to showing respect for other contributions in the consent form.

6b. Potential Benefits: Provide a list of potential benefits for this Research.

Please detail any potential benefits of the study which may be relevant to the participants/ your discipline /and/or the wider society.

This research has the potential to contribute to learning about how to run virtual disability services in a way that contributes making them safe places for attendees to connect and belong with peers and thus offer greater choice of participation in line with the United Nations Convention on the Rights of People with Disabilities. It will potentially do this by informing the development of principles to inform and guide service design and staff practices.

6c. Risk/Benefit Analysis: Taking into account your answer in section 9 (a) & (b) above, please provide a short justification for proceeding with the research as outlined in this project.

The benefit of conducting this research outweighs any perceived risk. The first two phases of this research indicated that online services gave people more choice and control over their lives, making the potential benefits extremely valuable for understanding what is needed for effective service provision.

People with disabilities and their families are entitled to choice around how they access services under the UN CRPD and virtual services offer one option that circumvents access issues associated with underlying health conditions, fatigue, poor public transport, geographical constraints on in-person

attendance, as well as those who are seeking more choice and control over the services they choose to avail of. It may offer a viable addition or alternative to in person services

7. Informed Consent.

7a. Confirm you are seeking and recording informed consent from participants. Who will be responsible for seeking and recording consent? Joan O'Donnell

When and where is consent obtained e.g. do participants get an information sheet and sign a consent form, keeping a copy for their records or is consent secured by another means?

Participants will opt-in to the research.

They will be asked to sign a consent form in advance of being given access to the survey. They will be invited to ask any questions in advance of participation and the consent process will be explained when they sign up. This research will use a consent as a process approach, with ongoing negotiation of consent throughout the research cycle. Participants will also be advised that secondary use of data is an option being sought in the consent form.

It is difficult to be definitive about the national origins of participants, but GDPR compliance will be afforded to all participants in line with their country requirements. For example EU GDPR regulations both cover and extend the Privacy laws in Australia and Kenya's Data Protection Act (2021) were set in line with EU GDPR guidance.

7b. If applicable, please also justify deceiving or withholding information from participants Not applicable

8. Follow-up. As appropriate, please explain what strategies you have in place to debrief or follow up with participants – especially in cases where information is withheld or deception is involved or where research has been carried out on sensitive topics, and/or with vulnerable persons.

This study will not involve any withholding of information of deception.

The Delphi survey design offers transparency of findings at each stage of the research cycle. The researcher will provide contact details for any participants who seek follow up information.

9. Data Management, Storage

9a. Anonymity

Who will be responsible for rendering the data anonymous? Joan O'Donnell

9b. Data Access and Security

Data must be stored in a safe, secure and accessible form, must be held for an appropriate length of time, to allow (if necessary) for future re-

assessment or verification of the data from primary sources, as outlined in the ***Maynooth University's Research Integrity Policy.***

· **Only the researchers listed on this application will have access to the personal information and data collected from participants** YES · **Electronic Information sheets/consent forms and data collected will be encrypted and stored on a PC or secure server at Maynooth University** YES · **Hard copy Information sheets/consent forms and data collected will be held securely in locked cabinets, locked rooms or rooms with limited access on campus** YES · **Please justify any exceptions to the information stated above** Participants will sign up to the survey software which will then also have access to their data for the duration of the survey. The researcher will download the datea to the MU server and be responsible for holding it in compliance with the MU Research Integrity Policy and ensuring anonymity of data.

Maynooth university does not support any real-time Delphi Software and there is no MU supported alternative. SurveyLet has safeguards in place that are GDPR compliant. It is used by many universities and international institutions such as the UN.

· **Do you plan to transfer Data outside of the European Economic Area?** Yes

· **If yes, please confirm you are doing so in accordance with Section 6 of the Maynooth University Data Protection Policy** YES

9c. Data Storage:

· **Are you planning to collect data on a mobile device (SB keys, smart phones; video recorders; audio recorders and/or laptops)?** Yes

If yes, to be compliant with Data protection Law, please confirm:

· Data collected on a mobile device will be protected with a strong password at a minimum, and/or encrypted if the device supports encryption

· Data will be removed from the mobile device as soon as is practicable · Data will be removed to a desktop PC or server in a secure location at Maynooth University

9d. Secondary Use and Processing:

Are you planning for any secondary use of the data? ☑ Yes ☐ No

If yes, please confirm you will obtain explicit consent for;

· Re-use and/or sharing of anonymous data at the beginning of the project ☑

Re-use and/or sharing of the identifiable data for any purpose other than the current research project ☐

· Depositing in an Archive such as the *Irish Qualitative Data Archive* or the *Irish Social Science Data Archive* ? ☐

o If yes, please give name and contact details for the proposed archive

9e. Data Disposal: Data should be destroyed in a manner appropriate to the sensitivity of that data.

Please confirm:

· Paper based data will be destroyed by confidentially shredding or incineration ☑

· Electronic files will be deleted by overwriting ☑

· Who will be responsible for destroying personally identifiable data? Joan O'Donnell

10. Professional Codes of Ethics. Please append an appropriate code of ethics governing research in your area to this protocol, and/or provide a link to the website where the code may be found.

https://www.apa.org/ethics/code/principles.pdf.

https://www.psychology-ireland.ie/articles/PSI Code of Professional Ethics_file_133.pdf

Supervisors Letter:

1 September 2022

Dear SRESC members,

We write in support of Joan O'Donnell's application for ethical approval for her research titled *Understanding the conditions required to co-create safe virtual disability spaces within virtual disability services.* This research cycle seeks to authenticate previous research findings by means of a staff survey. Joan has more than 15 years' experience working with complex social issues associated with disability from a social policy perspective. She also holds a BA in Psychology and an MSc in Systems Thinking in Practice. Since joining the Department in September 2020 she has completed a 5-credit module on `Ethics in Psychology Research and Practice' (PS631).

Joan's experience in disability policy means she is well suited to explore issues that arise in the transition to online disability services. She has reflected on the survey content and design to ensure the level of commitment asked is not burdensome and does not seek sensitive data. She has a sound understanding of data handling, storage and management requirements. She will have our support, as well as Departmental supports and facilities, to ensure that the research is conducted rigorously and with due consideration of the ethical challenges involved. Should you need to clarify any issues please do feel free to get in touch.

Kind regards,

Professor Mac MacLachlan

Professor Deirdre Desmond

B.1.1 Invitation to participate, Information and Consent form and sign-up details for Delphi Survey

B.1.1.1 INFORMATION AND CONSENT FORM FOR RESEARCH PARTICIPANTS

Delphi Survey

What is this survey about?

This survey is about a creating psychologically safe space in group settings in Virtual Disability Services. The purpose of the survey is to develop a rich understanding of the importance of psychological safety in virtual settings and the system wide conditions that give rise to the creation of safe and meaningful engagement online.

It seeks your views five areas on the practices that staff engage in to create conditions for safety as well as how those practices are co-ordinated, managed and monitored. It also seeks your perspective on the governance measures you regard as needed to create safety. Finally you will be asked to give your opinion on the role of virtual services into the future.

What is meant by virtual disability services?

The focus of this research is on group activities held in real time - eg. support groups, peer support groups, classes, specialist information sessions, social get togethers - that are organised by a Disabled Person's Organisation (DPO) or service organisation and attended by people with disabilities.

It is not about one to one therapeutic supports, or online services or supports that people access on an individual basis in their own time.

Who is it for?

The research is seeking participants who are working in the provision of virtual disability services, either facilitating and running sessions, coordinating sessions or managing them. You may also be offering IT supports or developing policies around virtual services. You may also at times attend virtual disability services, but you must have a formal role in facilitating or supporting them.

If you have already taken part in a previous cycle of this research, then you are **not** eligible to participate in this round. You are however welcome to pass this invitation onto a colleague who is new to this research.

How does it work?

The survey is run as a real-time Delphi survey. Delphi surveys are often run as a series of surveys where the results from one survey inform the ques-

tions for the next round. This is a real time Delphi survey, which means that the questions stay the same. You will be able to see others' contributions in real-time and revise yours in response to what you read. In this way it resembles a forum discussion.

What are you being asked to do?

You are being asked to participate in a survey which will be run on SurveyLet software. Once you have signed the consent form you will receive an email giving you details of how to access the survey. Please log on with the link given, which is unique to you and proceed to complete the survey. Once you have completed each question, you will be able to see the responses of those who have answered before you. You will receive reminder emails during the course of the survey to ask you to log in again, review others' contributions and amend your answers if you wish to do so. While you are not obligated to change your answers, you may wish to respond and build on others' contributions. You may disagree with others' opinions but are asked to do so in a respectful way and adhere to the Survey Etiquette which you will find in the survey.

How long does it take?

The survey will be open for a set period of three weeks from [insert date]. You can join the survey at a time that is convenient for you. The questions themselves will not change, but you are invited to return to the survey a minimum of three times or more if you wish, view the contributions of other survey participants and adjust your answers based on what you read. The total estimated time commitment is approximately 2 hours, and you are welcome to take longer.

You will receive a weekly reminder during the course of the three-week time period inviting you to return to view and reconsider your answers. You may also receive direct prompt questions directly from me as the researcher, if clarifications are needed or it may be useful to elaborate on further.

Who is conducting this research?

I am *Joan O'Donnell*, a *doctoral student*, in the ALL Institute: Assisting Living & Learning and Department of Psychology, Maynooth University. As part of the requirements for PhD, I am undertaking a research study under the supervision of *Prof. Malcolm MacLachlan and Prof. Deirdre Desmond*. This study has been reviewed and received ethical approval from Maynooth University Social Research Ethics Subcommittee and you may have a copy of this approval if you request it. This research emanates from research supported in part by a Grant from Science Foundation Ireland under Grant number 18/CRT/6222. The opinions, findings and conclusions or recommendations

expressed in this material are those of the author(s) and do not necessarily reflect the views of the Science Foundation Ireland.

How will my privacy be protected?

The researcher and supervisors are the only people with access to the names of who is contributing to this research. All participants are anonymous to each other.

What will happen to the information which you give? All the information that you provide will be held on Callibum server based in the USA (administrator of Survey) during the survey. Once analysis is complete, it will be kept at Maynooth University in such a way that it will not be possible to identify you. On completion of the research, the data will be retained on the MU server. After ten years, all data will be destroyed (by the Principal Investigator). Manual data will be shredded confidentially, and electronic data will be reformatted or overwritten by the PI in Maynooth University. GDPR guidelines on data privacy will be upheld at all times.

'It must be recognised that, in some circumstances, confidentiality of research data and records may be overridden by courts in the event of litigation or in the course of investigation by lawful authority. In such circumstances the University will take all reasonable steps within law to ensure that confidentiality is maintained to the greatest possible extent.'

What will happen to the results? All panelists will receive a preliminary analysis and draft copy of the findings from the research for comment if they agree to this in the consent form. They will also receive a final copy of the research findings. Findings may be presented at national conferences and submitted for publication.

What are the possible disadvantages of taking part?

I do not envisage any negative consequences for you in taking part.

Once you have given consent, you can still withdraw from participation at any point in this process, and you can also withdraw consent by emailing me directly: joan.odonnell.2020@mumail.ie. Withdrawal will not affect your relationship with the ALL Institute.

What if there is a problem? You may contact my ***supervisor, Prof. Malcolm MacLachlan at Mac.MacLachlan@mu.ie*** or Prof. Deirdre Desmond at ***Deirdre.Desmond@mu.ie*** if you feel the research has not been carried out as described above.

Any further queries? If you need any further information, you can contact me: ***Joan O'Donnell, or by email: joanodonnell.2020@mumail.ie.***

Consent to participate

The purpose and nature of the study has been explained to me adequately in the information sheet

.

I've been able to ask questions, which were answered satisfactorily. ☐

I am participating voluntarily. ☐

I understand that I can withdraw from the survey, without repercussions, at any time, whether

that is before it starts or while I am participating. ☐

It has been explained to me how my data will be managed and that I may access it on request. ☐

I understand the limits of confidentiality as described in the information sheet. ☐

I understand that my contribution will be seen by others during the time of the survey but my Identity will not be made known to them. ☐

I agree to be responsible for presenting my views in a respectful way and protect the ☐

privacy of individuals in my Organization.

I agree to being respectful of the opinions of other panelists in the survey and to contribute constructively, even where I may disagree with their views. ☐

I understand that my data, in an anonymous format, may be used in further research projects

and any subsequent publications. ☐

I agree that the researcher can contact me to share draft findings invite me to participate in ☐

any future research on this topic.

Thank you for agreeing to take part.

Appendix 2: Survey

(note: some wording may be adapted to give clearer instructions to work more clearly with the survey software but the substance of what is being asked remains the same)

Thank you for agreeing to take part in this survey. The purpose of the survey is to develop a rich understanding of the importance of psychological safety in virtual settings and the system wide conditions that give rise to the creation of safe and meaningful engagement online.

Firstly you are asked for some demographic information which will be kept confidential and will not be shared with other participants.

There are a total of 16 questions across five sections in the main part of the survey. They focus on the following areas:

Section 1: Staff practices within sessions

Section 2: Coordination of practices

Section 3: Managing resources, monitoring and evaluation

Section 4: Development and interaction with the environment

Section 5: Strategy, Identity and Sustainability.

Once you have answered a question, you will be able to see the response of others who have answered before you. You will be able to revise your own contribution in response to what you read. In this way it resembles a forum discussion. You can save your progress and return to it another time.

The survey will be open for a set period of three weeks from [insert dates]. You can input into the survey at a time that is convenient for you. The questions themselves will not change, but you are asked to return to the survey a minimum of three times or more if you wish, view the contributions of other survey participants and adjust your answers based on what you read. The total estimated time commitment is approximately 2 hours, and you are welcome to take shorter, longer, or withdraw at any time.

You will receive a weekly reminder during the course of the three-week time period inviting you to return to view and reconsider your answers. You may also receive direct prompt questions directly from me as the researcher, if clarifications are needed or it may be useful to elaborate on further.

If you have any questions, or require any support while completing the survey, please email me: joan.odonnell.2020@mumail.ie.

Consent:

You have already completed the consent form agreeing to take part in this research.

You can withdraw from participation at any point in this process, and you can also withdraw consent by emailing me directly.

You may also contact ***Prof. Malcolm MacLachlan at Mac.MacLachlan@mu.ie*** or Prof. Deirdre Desmond at ***Deirdre.Desmond@mu.ie*** if you feel the research has not been carried out as described above.

If you need any further information, you can contact me:

Joan O'Donnell by email: joanodonnell.2020@mumail.ie.

Research information

This study is being conducted by Joan O'Donnell, a doctoral student, in the ALL Institute: Assisting Living & Learning and Department of Psychology, Maynooth University as part of the requirements for PhD, being supervised by Prof. Malcolm MacLachlan and Prof. Deirdre Desmond.

This study has been reviewed and received ethical approval from Maynooth University Social Research Ethics Subcommittee and you may have a copy of this approval if you request it.

This research emanates from research supported in part by a Grant from Science Foundation Ireland under Grant number 18/CRT/6222.

B.1.2 A. Etiquette For Panellists:

Note: this Etiquette statement will be included in the survey software and ties in with the consent form.

Please take responsibility for creating a positive and constructive environment where everyone can contribute their opinions freely, in line with the agreement in the consent form.

By taking part, you are asked to follow the etiquette laid out here:

· You are invited to share your responses to the questions in this survey openly and reflectively.

· You are encouraged to offer your opinions, be speculative and risk making judgements that stretch your thinking.

· You can also respond to other comments and pose questions that reflect what you read in other responses.

· Please protect your personal and organisational anonymity as well as the anonymity of anyone you work with.

· You are encouraged to share examples where they illustrate a point, but please ensure that individuals are not identifiable.

· Please make every effort to stay on topic. If you are unclear about the meaning of a question, please feel free to say so and ask for clarity.

· You may express your disagreement with another contribution. However, you are asked to do this in a constructive and respectful way and the other contributor is under no obligation to respond to you.

· If you are offended by a comment, please contact the moderator before responding.

The researcher (Joan O'Donnell) will act as the moderator for this survey. This means that she is repsonsible for ensuring that contributions adhere to the etiquette set out here and to which you agreed in the consent form. *The moderator reserves the right to edit or remove any responses that are disrespectful or may cause offence.*

Section A

A2: Personal Data:

The data from this section will not be shared with other participants.

A1 Gender:

Male

Female

Nonbinary

Not listed

Prefer not to say

A2 Country:

A3 Personal Disability status: (Please tick as many of these as you wish)

Autism Spectrum Disorder

Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)

Blind/Vision Impaired

Deaf/Hard of Hearing

Developmental Co-ordination Disorder (Dyspraxia/Dysgraphia)

Intellectual Disability

Mental Health Condition

Neurological Condition

Physical/Mobility Disability

Significant Ongoing Illness

Speech and Language Communication Disorder

Specific learning difficulties (dyslexia or dyscalculia)

Other

No Disability

Prefer not to say

A4 Which of the following catagories best describes your role in VE (tick all that apply to you).

Policy-making: commissioner of services, regulator, policy advocate

Researching: research, academic, independent researcher in disability services

Designing: Digital Assistive Technology expert, IT expert

Managing: CEOs of organisations, managers of virtual services

Delivering: facilitators, trainers, of online services

Other: Please specify

What other information about your involvement in Virtual Services can you share (text box)

A 5 What groups of people does your virtual service support? (Please tick as many of these that apply)

Autism Spectrum Disorder

Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)

Blind/Vision Impaired

Deaf/Hard of Hearing
Developmental Co-ordination Disorder (Dyspraxia/Dysgraphia)
Intellectual Disability
Mental Health Condition
Neurological Condition
Physical/Mobility Disability
Significant Ongoing Illness
Speech and Language Communication Disorder
Specific learning difficulties (dyslexia or dyscalculia)
Other (please specify)
All the above
Not applicable

A6 Please give a brief description of your service, including, for example, the different activities, number of activities over different time periods and who different virtual service activities are targeted for.

Information for Section 1-5

The following sections ask questions that you are invited to revise at a time that is convenient to you. Once you have filled in your answers, they will become visible to others who have already completed theirs. As part of this Delphi survey, you are being asked to review others contributions and consider yours in light of the issues they raise. You are welcome to revise your own answers on the basis of what you learn from other contributions. You may agree or disagree with other perspectives. All opinions are welcome, once they are respectful of others. Please be aware that some people may be responding in a second language or have a different stakeholder role from you. At all times, consider how you are contributing to creating a safe virtual space for yourself and others within the forum space.

Glossary: (Presented in Chapter 6 text)

Please take your time to consider your answers. Please feel welcome to point out any gaps between how it is right now and how you think it should be.

B.1.3 B. Moderator Protocol:

It is expected that panellists in the Delphi Study will be genuinely interested in supporting this research constructively and act in a respectful and caring way towards other panellists. It will be assumed that any infractions of etiquette represent a genuine misunderstanding of what is being asked rather

Section 1: Staff practices within sessions
This section is about how staff are in sessions and the things that they do to co-create a safe space with, and for participants
1. What are the things that staff need to do to set up a safe virtual space? *Please list as many actions as you wish.*
2. What staff ways of being and/or presence create the conditions for safe virtual services? *Please list as many practices as you like and explain them in your own words.*
3. Can you name the stakeholders in Virtual Services and describe their role in creating a safe environment?
4. What becomes possible when the virtual space is experienced as safe? *Feel free to list as many possibilities as you like and illustrate with examples, if that helps.*
5. What signs indicate that the space is unsafe? *Please use examples if this helps explain your answer.*
6. What role does technology play in supporting/inhibiting safety?

Section 2: Coordination of practices
7. Describe what ideally needs to happen to support co-ordination of virtual services so that they are experienced as a safe space? eg. scheduling, group composition, size, etc.
8. What kinds of actions do staff need to be able to take to deal with unexpected occurrences during and after sessions?

Section 3: Managing resources, monitoring and evaluation
9. What resources are needed to ensure safety is sustained? This can include staffing levels, time, funding, training, etc.
10. What mechanisms need to be in place to ensure the space is safe? This can include policies, monitoring and evaluation etc.

Section 4: Development and interaction with the environment
11. What future trends and external environmental impacts, do you think, are likely to affect the provision of virtual services in the next 5 years?
12. How does your organisation plan to deal with these trends?
13. What kinds of supports would help staff develop their practice in creating safe virtual spaces? Eg. training, mentoring, reflective practices etc.

Section 5: Strategy, Identity and Sustainability
14. What governance structures and policies are needed to support safe virtual services?
15. How do virtual services interact with the rest of the organisation?
16. Please describe any gaps between what is happening currently and how you think virtual services should be governed as part of the overall organisation.

than an attempt to sabotage the research. The moderator will observe the following moderation guidelines:

· The moderator will strive to create a balance between being present, observant and staying in the background in order not to interfere with the contributions and keep the focus and flow of panellists' contributions.

· The moderator will strive to give people time to respond. As this is an online asynchronous survey/forum, with delays between postings, it is important to exercise restraint in jumping in and asking questions that either seek clarity or ask further questions.

· The moderator will endeavour to model appropriate responses by recognising the value of comments even where there is disagreement and supporting the conversation to move on with a more positive framing.

· The moderator will also respond to any requests for clarity on questions.

· The moderator reserves the right to remove offensive posts.

The moderator may intervene in the following circumstances:

· where a contribution that goes off topic leads others to go off topic

· where a contribution is making a statement or value judgement that surfaces sexist, racist, discriminatory or derogatory opinions

· where a contribution is argumentative or antagonistic towards another contribution (disagreement alone is not grounds for intervention)

· where contributions remain at a very surface level and lack a depth of thinking or consideration of the issue

· where information shared is unclear or seemingly incomplete or remains unchanged during the survey

· where panellists have disengaged from participation.

Off-topic & Surface level interventions:

The moderator can use prompts to support a deeper consideration of the topic. For example: *"When you consider the definition given of* (*name term*) *in the glossary, how might this affect your response?"*

Antagonism towards others in the survey:

Where an intervention is deemed necessary, the moderator will endeavour to set a positive tone with the intention of reinforcing the idea that all panellist's contributions are of value to the research and encourage participation. The moderator may also remind panellists of the consent agreement and point them to the information on etiquette.

Lack of clarity/incomplete contributions:

The moderator may invite panellists to elaborate on a point for example: *"Can you say more about this point? Or Can you clarify what you mean when you say . . . (quote unclear text)?"*

Unchanged views:

There are no requirements to answer all the questions (apart from the demographic questions). However, where there are gaps in the survey, the reminders may include an invitation to focus on those questions. If a contributor does not change any of their views throughout the process, for example: *"Is there anything that strikes you as potentially interesting in other contributors' responses that influences your thinking? If so, please feel free to amend your responses."*

Disengagement from the survey:

Panellists may disengage from the survey at any point. They will be notified that they will receive a weekly reminder to participate (3 reminders maximum) when they sign up. If they make contact with the researcher to make the researcher aware of the withdrawal, then these reminders will be cancelled. Withdrawal will not affect the relationship between the panellist and the ALL Institute.

Discriminatory or derogatory opinions:

The risk of this happening is negligible. However, offensive material will be deleted immediately and the panellist will be removed from the study. Appropriate follow-up action will be decided on with Supervisors and an apology from the researcher will be issued to the other panellists immediately.

B.2 Appendix 3: Ethical Approval 1 July 2020

12. Title. Brief title of the research project:

Understanding the experience of running disability services online during COVID-19

13. Research Objectives. This research is about how learning is enacted amongst Irish disability service providers who have traditionally delivered services to people with disabilities in day centres, or via one to one in person sessions.

The purpose of this research is to develop an understanding of the experience of moving disability service provision online during Covid-19 and turning services into virtual services. The research focuses on exploring three primary areas of interest:

- What are the logistical issues that arose when setting up a virtual service?

- What approaches worked and what has not worked?

- What learning has taken place about the potential for virtual services into the future?

14. Methodology.

4a. Where will the research be carried out?

This research will be carried out via Microsoft Teams video conferencing.

4b. Briefly describe the overall methodology of the project.

Irish disability service provision has largely relied on face to face contact, within centre based community services. Covid-19 has disrupted service provision and necessitated a rapid response from services, some of whom have piloted virtual services. Virtual services have included online recreational activities, as well as one to one sessions with key workers, as well as some therapy assessments, eg Occupational Therapy. This research forms part of an action research approach to understanding the experience of virtual service provision, look at what has been successful and what lessons have been learnt, that can inform future service design and delivery.

An in-depth semi-structured interview method will be used to explore the research questions. The interviews will take up to one hour. The interviews will take place on Microsoft Teams and be recorded on Microsoft teams. Interviews will be kept confidential and the laptop stored in a locked cupboard to which only the researcher has access, with transcription as soon as practicable. Interviews will be conducted using both camera and audio functions.

Interviews will seek an understanding of the experience of managing and running a virtual service during Covid-19. Questions include inquiry into logistical issues around moving services on-line and resourcing the service. The interview will ask about the risks and opportunities that emerged as services went live. Information is also sought about the experience of coherence and belonging that can be developed and sustained online, as well as a service provider perspectives on the potential for virtual services into the future.

Interview responses will be transcribed, data checked, analysed by data reduction, organised into themes, visually displayed and conclusions drawn. Verification for the analysed will be conducted by providing a draft report to participants for further comment, should they wish to.

15. Participants.

5a. Who will the participants be?

Participants will include professionals involved in delivering services online during Covid 19. Exclusion criteria will be members whose primary role is unrelated to direct service delivery.

In addition to the information sheet, the researcher will also be available to further discuss the study with potential participants, if required.

5b. Outline the recruitment process, considering any criteria for inclusion/exclusion.

Where gatekeepers are involved in the process of participant recruitment, please clearly outline procedures relating to their involvement.

Participants will be recruited via the mailing list of people who participate in a learning forum around accessible and assistive technology run by FreedomTech (www.freedomtech.ie). The forum is open to all who are interested in developing accessible services and Assistive Technology in Ireland. It consists of service providers, academics, developers and AT users across health, education, employment and independent living.

Participants will include professionals involved in delivering services online during Covid 19. Members whose primary role is unrelated to direct service delivery will be excluded.

In addition to the information sheet, the researcher will also be available to further discuss the study with potential participants, if required.

It is expected that three participants from each of the following categories of service provision will be selected from a list of all who express an interest in participating on a first come basis. If any participant withdraws from the study before it commences, another participant who volunteers to participate will be selected from the initial list in chronological order of the receipt of their voluntary participation consent form:

- Physical and sensory disability service provision

- Intellectual disability service provision

- Bespoke Condition Specific services (eg, acquired brain injury, autism)

- Purpose driven services (eg. Education, independent living).

A mix will also be sought between national and local services, where possible.

Circa 12 participants are anticipated, which is considered a robust sample size in relation to the number of services involved in FreedomTech and who have been piloting virtual services.

5c. What will research participants be asked to do for the purposes of this research study?

participate in interview

5d. Conflict of Interest: NO

I manage FreedomTech which is the project that holds the mailing list that will be used to recruit participants. I have no stake in service provision.

Consent forms are explicit in separating out the work of FreedomTech from the research.

Ongoing consent will be sought, at each stage of the research and participants can withdraw at any time.

5e. Will the research involve power relationships e.g. student/employee/employer/c etc.? ☑ Yes ☐ No

If yes to above, please outline the basis of the potential power relationship and describe the steps you will take to address this should it arise?

There is no power relationship between FreedomTech and those who participate in the learning forum. Participation and contribution is open to everyone with an interest in sharing learning about accessible and assistive technology, who come from different backgrounds to present to each other and to learn.

Participation in FreedomTech is voluntary, participants can register to attend learning forum events by giving their name, email address and organisation name and consenting to be on a mailing list for future events. FreedomTech operates an open-door policy and there is no conflict of interest between the management of the project and participants. Participation is on a first come, first serve basis. There is no formal membership criteria, other than an interest in developing assistive technology services and capacity. Contributors who speak at the forum are chosen dependent of the theme of the meeting by the project Co-ordinator, not the Project Manager.

FreedomTech is a collaboration between two organisations (Disability Federation of Ireland and Enable Ireland). Participants in the research may include the Manager of the National Assistive Technology and Seat-Tech Services in Enable Ireland who is a partner in the project. Should a power conflict arise, there is recourse to PhD supervisors, as well as the Steering group for the project, and the other partner Disability Federation of Ireland.

5f. Will the participants be remunerated, and if so, in what form? No

16. Risk/Benefit Analysis

6a. **Potential Risks:** There is no potential risk arising from the research techniques, procedures or outputs. This research has the potential to contribute to learning about how to run virtual disability services in a way that contributes to knowledge and may have the potential to impact on future design of services and contribute to the quality of life of those accessing services.

6b. Potential Benefits: This research has the potential to contribute to learning about how to run virtual disability services in a way that contributes

to knowledge and may have the potential to impact on future design of services and contribute to the quality of life of those accessing services.

6c. Risk/Benefit Analysis: People with disabilities and their families need urgent and continued support whilst day service access is not possible and is likely to be restricted into the medium term due to social distancing guidelines.

17. Informed Consent:

7a. Confirm you are seeking and recording informed consent from participants ☐

· Who will be responsible for seeking and recording consent? [Joan O'Donnell]

When and where is consent obtained e.g. do participants get an information sheet and sign a consent form, keeping a copy for their records or is consent secured by another means?

· *Consent **must** be recorded in an appropriate format.*

· *If your research involves children or other vulnerable people, explain how you will obtain their assent.*

· *For projects in which participants will be involved over the long term, you must include details of how you will ensure ongoing consent.*

Limits to confidentiality Statement:

*Ensure that participants are informed of the **limits to confidentiality** as outlined in section 3.3 of the ethics policy*

7b. If applicable, please also justify deceiving or withholding information from participants ***(see section 4.9 MU Ethics Policy).***

Not applicable

18.Follow-up: .

- No misleading or deception will be used in this study·
- Initial analysis and draft report will be shared with participants.
- The researcher will provide contact details for any participants who seeks follow up information
- All participants will be notified of averaged findings across the study in writing.

19. Data Management, Storage

9a. Anonymity

Will personally identifiable data be protected through the use of pseudonyms and/or codes? ☑ Yes ☐ No

· If yes, please confirm that the key to pseudonyms and/or codes will be held in a separate location to the raw data? ☐

· Will personally identifiable data collected be irreversibly anonymised (All identifiers including keys to link pseudonyms or codes back to individual participants are destroyed)? ☑ Yes ☐ No

· Who will be responsible for rendering the data anonymous? [Joan O'Donnell]

9b. Data Access and Security

Please tick the box to confirm; · Only the researchers listed on this application will have access to the personal information and data collected from participants ☑

· Electronic Information sheets/consent forms and data collected will be encrypted and stored on a PC or secure server at Maynooth University ☑

· Hard copy Information sheets/consent forms and data collected will be held securely in locked cabinets, locked rooms or rooms with limited access on campus ☑

· Please justify any exceptions to the information stated above

Due to lack of access to campus, all forms will be gathered digitally and stored on MU server.

· Do you plan to transfer Data outside of the European Economic Area? ☐ Yes ☑ No

· If yes, please confirm you are doing so in accordance with Section 6 of the Maynooth University Data Protection Policy Yes ☐

See Data Commissioners website for a list of approved countries and exceptions

9c. Data Storage:

· Are you planning to collect data on a mobile device (SB keys, smart phones; video recorders; audio recorders and/or laptops)?

☑ Yes ☐ No

If yes, to be compliant with Data protection Law, please confirm:

· Data collected on a mobile device will be protected with a strong password at a minimum, and/or encrypted if the device supports encryption ☑

· Data will be removed from the mobile device as soon as is practicable ☑

· Data will be removed to a desktop PC or server in a secure location at Maynooth University ☑

9d. Secondary Use and Processing:

Are you planning for any secondary use of the data?

☑ Yes ☐ No

If yes, please confirm you will obtain **explicit consent** for;

· Re-use and/or sharing of anonymous data at the beginning of the project ☑

Re-use and/or sharing of the identifiable data for any purpose other than the current research project ☐

· Depositing in an Archive such as the *Irish Qualitative Data Archive* or the *Irish Social Science Data Archive* ? ☐

o If yes, please give name and contact details for the proposed archive

9e. Data Disposal: Data should be destroyed in a manner appropriate to the sensitivity of that data.

Please confirm:

· Paper based data will be destroyed by confidentially shredding or incineration ☑

· Electronic files will be deleted by overwriting ☑

· Who will be responsible for destroying personally identifiable data? [Joan O'Donnell

20. Professional Codes of Ethics. https://www.apa.org/ethics/code/principles.pdf. https://www.psychology-ireland.ie/articles/PSI Code of Professional Ethics_file_133.pdf

B.2.1 Supervisors Letter

19th June 2020

Dear SRESC members,

We write in support of Joan O'Donnell's application for ethical approval for her research titled *Understanding the experience of running disability services online during COVID-19.* Joan has more than 15 years' experience working with complex social issues associated with disability from a social policy perspective. She also holds a BA in Psychology and an MSc in Systems Thinking in Practice. Since joining the Department last September she has completed a 5-credit module on `Ethics in Psychology Research and Practice' (PS631).

Joan's experience in disability policy means she is well suited to explore issues in the transition to online disability services. She has reflected on her dual role as a researcher and as the Project Manager of FreedomTech, the potential for conflicts of interest in recruiting participants through FreedomTech, and has adopted precautions to mitigate the associated risks. She has a sound understanding of data handling, storage and management requirements.

She will have our support, as well as Departmental supports and facilities, to ensure that the research is conducted rigorously and with due consideration of the ethical challenges involved. Should you need to clarify any issues please do feel free to get in touch.

Kind regards,
Professor Mac MacLachlan
Dr Deirdre Desmond.

B.2.1.1 INFORMATION AND CONSENT FORM FOR RESEARCH PARTICIPANTS

INTERVIEW

Information Sheet

Purpose of the Study. I am ***Joan O'Donnell***, a ***doctoral student***, in the ALL Institute: Assisting Living & Learning and Department of Psychology, Maynooth University.

As part of the requirements for PhD, I am undertaking a research study under the supervision of ***Prof. Malcolm MacLachlan and Prof. Deirdre Desmond.***

The study is concerned with understanding how disability services have responded to the closure of face to face services during the Covid-19 pandemic, by developing virtual services. The purpose is to understand what the experience of moving services online has been, how services have been resourced, and identify the risks and opportunities that have arisen. This study seeks to contribute to an understanding of the potential of virtual services into the future.

What will the study involve? Participants are invited to participate in an interview that will take up to an hour and will take place online, using Microsoft Teams. Interviews will be videoed and audio recorded using MS Teams.

Who has approved this study? This study has been reviewed and received ethical approval from Maynooth University Social Research Ethics Subcommittee and you may have a copy of this approval if you request it.

Why have you been asked to take part? You have been asked because you are a contributor to the Community Hub for Assistive Technology (CHAT) run by FreedomTech.

Do you have to take part?

No, you are under no obligation whatsoever to take part in this research. However, we hope that you will agree to take part and give us some of your time to participate in an interview.

Please read this information and consent form before the interview and you will have an opportunity to look over it and ask any questions that you

may have, either before the interview is arranged or at the start of the interview.

If you agree to continue with the interview, please tick YES (I Consent) or No (I Do not consent). No personally identifying information to indicate consent will be required and if you agree to participate you will be asked to return the consent form with your name and the date filled out, stating in the return email if you consent to the interview or not. Please keep a copy of the email and form for your own records.

If you decide to take part, you are still free to withdraw during the interview or after the interview. A decision to withdraw at any time, or a decision not to take part, will not affect your relationships with the ALL Institute or FreedomTech.

What information will be collected?

You will be asked to reflect on your experience of running virtual disability services. The following questions are indicative of the information sought:

1. How would you describe the service you run/deliver/attend?
2. How have you found the process of moving online?
3. Where and how have you found the resources that you need to go online?
3. What has been the most challenging thing about being online?
4. Has going online offered any opportunities that were not possible before?
6. What about being online do not work well?
8. How can feelings of coherence, common identity or common purpose be supported most effectively through virtual means?
9. What potential do you see for virtual services into the future?

Will your participation in the study be kept confidential? Yes, all information that is collected about you during the course of the research will be kept confidential. No names will be identified at any time. Electronic information will be encrypted and held securely on MU servers and will be accessed only by **Joan O'Donnell** (the researcher), **Deirdre Desmond** and **Mac MacLachlan** (Supervisors).

'It must be recognised that, in some circumstances, confidentiality of research data and records may be overridden by courts in the event of litigation or in the course of investigation by lawful authority. In such circumstances the University will take all reasonable steps within law to ensure that confidentiality is maintained to the greatest possible extent.'

What will happen to the information which you give? All the information that you provide will be kept at Maynooth University in such a way that it will

not be possible to identify you. On completion of the research, the data will be retained on the MU server. After ten years, all data will be destroyed (by the PI). Manual data will be shredded confidentially, and electronic data will be reformatted or overwritten by the PI in Maynooth University.

What will happen to the results? All interviewees will receive a preliminary analysis and draft copy of the findings from the research for comment. They will also receive a final copy of the research findings. Findings may be presented at national conferences or submitted for publication.

What are the possible disadvantages of taking part? I do not envisage any negative consequences for you in taking part.

What if there is a problem? You may contact my ***supervisor, Prof. Malcolm MacLachlan at Mac.MacLachlan@mu.ie*** or Prof. Deirdre Desmond at ***Deirdre.Desmond@mu.ie*** if you feel the research has not been carried out as described above.

Any further queries? If you need any further information, you can contact me: ***Joan O'Donnell, by phone 085 8886780 or by email: joanodonnell.2020@mumail.ie***

If you agree to take part in the study, please complete and add your name and the date to the consent form overleaf. Please return by email, which contains a statement that you consent to interview.

Thank you for taking the time to read this.

Consent Form

I Consent **YES** ☐ or I Do not consent **NO** ☐ to participate in ***Joan O'Donnell's*** research study titled;

"**Understanding the experience of running disability services online during COVID-19**"

Please tick each statement below

The purpose and nature of the study has been explained to me verbally and in writing. I've been able to ask questions, which were answered satisfactorily. ☐

I am participating voluntarily. ☐

I understand that I can withdraw from the study, without repercussions, at any time, whether that is before it starts or while I am participating. ☐

It has been explained to me how my data will be managed and that I may access it on request. ☐

I understand the limits of confidentiality as described in the information sheet. ☐

I understand that my data, in an anonymous format, may be used in further research projects and any subsequent publications if I give permission below. ☐

I agree that the researcher can contact me to invite me to participate in future related research projects. □

I the undersigned have taken the time to fully explain to the above participant the nature and purpose of this study in a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have invited them to ask questions on any aspect of the study that concerned them.

Signed..... Date.....

Researcher Name in block capital **JOAN O'DONNELL**

If during your participation in this study you feel the information and guidelines that you were given have been neglected or disregarded in any way, or if you are unhappy about the process, please contact the Secretary of the Maynooth University Ethics Committee at research.ethics@mu.ie. or +353 (0)1 7086019. Please be assured that your concerns will be dealt with in a sensitive manner.

For your information the Data Controller for this research project is Maynooth University, Maynooth, Co. Kildare. Maynooth University Data Protection officer is Ann McKeon in Humanity house, room 17, who can be contacted at ann.mckeon@mu.ie.

Maynooth University Data Privacy policies can be found at

https://www.maynoothuniversity.ie/data-protection.

Two copies to be made: 1 for participant, 1 for PI

Interviews will be based on the following questions:

1. How would you describe the service you run/deliver/attend?

2. How have you found the process of moving online?

3. Where and how have you found the resources that you need to go online?

3. What has been the most challenging thing about being online?

4. Has going online offered any opportunities that were not possible before?

6. What about being online do not work well?

8. How can feelings of coherence, common identity or common purpose be supported most effectively through virtual means?

What potential do you see for virtual services into the future?

B.3 Appendix 4: Ethics approval 11 May 2021, ID: 243923

Social Research Ethics Sub-Committee

Protocol for Tier 2-3 Ethical Review of a Research Project Involving Participation of Humans

21. Applicant.

Joan O'Donnell

22. Title. *Brief title of the research project:*

Understanding the quality of meaningful connection and psychological safety in online disability supports

23. Research Objectives. *Please summarize briefly the objective(s) of the research, including relevant details such as purpose, research question, hypothesis, etc.* ***(maximum 100 words)****.*

Use plain English

Disability service providers were prompted by Covid-19 to transition from face-to-face services to engaging with disabled people via online platforms. Research already completed (ethics approval granted on 2 July 2020, ID: 2409706) explored the experience of moving disability service provision online in the initial phase of the pandemic.

This research is a follow up study with management and staff involved in the delivery of services to generate learning around the following objectives:

· How is meaningful connection understood and enacted in online sessions?

· How are services designed to maximise the likelihood that participants with disabilities feel safe and comfortable to participate?

24. Methodology.

4a. Where will the research be carried out?

Location(s)

Please describe the locations where the research will be carried out. If research will be carried out abroad illustrate how you have given due consideration to the ethical norms and data protection requirements for the country/culture etc. Note that when working with institutions abroad you might also require ethical approval from that institution/organisation.

This research will be carried out via Zoom video conferencing using a secure log in.

4b. Briefly describe the overall methodology of the project.

Since the introduction of GDPR guidelines, MU cannot use the Survey Monkey or many of the traditional platforms any longer. The university has a licence to onlinesurveys.ac.uk

To get access to this platform, please contact laura.mcelwain@mu.ie

Please note the use of this platform is subject to Maynooth University OnlineSurveys User Policy

This study forms part of an action research approach to understanding the experience of virtual service provision of disability services. It is designed as a follow up to explore issues that arose in the previous research cycle, which indicated that the quality and style of facilitation was a significant enabling factor in creating and sustaining meaningful connection and emotional safety using online platforms.

This research cycle is designed to understand the conditions that give rise to meaningful connection and a sense of safety in online services to inform future service design. It aims to cover the following areas (see Appendix for questions).

1. What are the specific conditions that give rise to a sense of meaningful connection?

2. What are the specific condition that give rise to a sense of psychological safety online?

3. What are the practices that staff engage in to foster an environment that allows these conditions to emerge?

A World Café style workshop with up to 40 stakeholders will be held online to harvest a wide range of views. This workshop will be two hours long and use breakout rooms to capture learning points from group conversations. Three supporting facilitators from the ALL Institute in Maynooth will be engaged to support facilitation in the breakout rooms.

Guidance for participation will be provided in advance of the session and explained and agreed at the start of the session.

The main room of the workshop will be recorded by the researcher and facilitators will record breakout sessions on devices that are encrypted with Maynooth university security. Breakout room recordings will be shared with the researcher and immediately deleted by facilitators. All data will be stored on the Maynooth server, kept confidential and stored in a locked cupboard to which only the researcher has access, with transcription as soon as practicable.

Conversation in breakout rooms will also be captured digitally using Miro software, which is GDPR compliant and for which the researcher has an account.

Workshop contributions will be transcribed, data checked, analysed by data reduction, organised into themes, visually displayed and conclusions drawn. Verification for the analysis will be conducted by providing a draft report to participants for further comment, should they wish to.

25. Participants.

5a. Who will the participants be?

Participation is open to all who have participated in CHAT events in the past, and other organisations who express and interest and fit the eligibility criteria.

Criteria for participation:

Participants must be staff or management of disability services who have been actively involved in the design and delivery of online services since March 2020, when face-to-face services ceased and who now may be involved in delivering a mix of face to face services as well as virtual services.

5b. Outline the recruitment process, considering any criteria for inclusion/exclusion.

Where gatekeepers are involved in the process of participant recruitment, please clearly outline procedures relating to their involvement.

Recruitment: *Participants will be recruited via the mailing list of people who participate in a learning forum around accessible and assistive technology run by FreedomTech (www.freedomtech.ie). The forum is open to all who are interested in developing accessible services and Assistive Technology in Ireland. It consists of service providers, academics, developers and AT users across health, education, employment and independent living.*

Email invitation distributed viaFreedomTech mailing list and FreedomTech twitter account. Recipients will be invited to pass the invitation on to whomever in their organisation may be interested or to another organisation they feel may have a stake in this issue.

Inclusion/Exclusion Criteria: *Participants from each of the following categories of service provision will be selected from a list of all who express an interest in participating on a first come basis. If any participant withdraws from the study before it commences, another participant who volunteers to participate will be selected from the initial list inchronological order of the receipt of their voluntary participation consent form:*

- *Physical and sensory disability service provision*
- *Intellectual disability service provision*
- *Bespoke Condition Specific services (eg, acquired brain injury, autism)*
- *Purpose driven services (eg. Education, independent living).*

Should there be excess capacity within the workshop, up to three people from one organisation may be able to attend.

The numbers will be capped at 40, as this number of participants allows for a representative sample from different parts of the sector. Given the online nature of the workshop, this is also the maximum number of people that the workshop design can accommodate and at the same time ensure that everyone has time and space to contribute equally.

Everyone who is eligible will be invited to join a mailing list to invite them to follow up studies that may arise from this research cycle.

***Gatekeepers:** The CHAT coordinator within FreedomTech will act as gatekeeper for issuing invitations to participate.*

5c. What will research participants be asked to do for the purposes of this research study?

NB: This information should be reflected in the content of the Information Sheet and Consent Form.

Participants will be invited to attend and contribute to a two-hour workshop. They have the option of reading and commenting on the draft report that arises from the workshop, should they choose to do so.

The workshop will be run as a World Café style workshop. The format will be as follows:

1. Introductions, orientation to research, run through of consent, Ice-breaker (invitation to recall instance of meaningful connection during an online session)

2. The group will be invited to join one of three breakout rooms for a discussion on meaningful connection. Mid way through the discussion they will be invited to switch breakout rooms and join a different group on the same subject. This will give an opportunity to layer upon the learning from their initial conversation and avoid any one group getting stuck or having a repetitive conversation.

3. There will be a brief feedback session and comfort break.

4. The breakout process will then be repeated on the topic of psychological safety in online sessions.

5. Feedback from the second breakout session along with space for closing questions and a briefing on next steps. Participants will be thanked for their time.

5d. Conflict of Interest. ☑ *Yes* ☐ *No*

Please consider the basis of any potential conflict of interest and describe the steps you will take to address this should it arise?

I manage FreedomTech which is the project that holds the mailing list that will be used to recruit participants. I have no stake in the provision of services (online or face-to face) , or the running of online services. I do not work for or with any service provider FreedomTech is a collaboration between Enable Ireland and the Disability Federation of Ireland and is focused on advocacy around policies for assistive technology and collective learning within the wider Irish disability.

Consent forms are explicit in separating out the work of FreedomTech from the research.

Ongoing consent will be sought, at each stage of the research and participants can withdraw at any time.

5e. Will the research involve power relationships e.g. student/employee/employer/colleague etc.? ☑ *Yes* ☐ *No*

While I manage FreedomTech I do so as a facilitator on behalf of the collective, rather than form a position of authority. There is no power relationship between FreedomTech and those who participate in the learning forum. Participation and contribution is open to everyone with an interest in sharing learning about accessible and assistive technology, who come from different backgrounds to present to each other and to learn. The research design is informed by literature on doing insider action research (Coughlan, D. (2019) Doing action Research in your own organisation, 5th Edition, Sage London).

Participation in FreedomTech is voluntary, participants can register to attend learning forum events by giving their name, email address and organisation name and consenting to be on a mailing list for future events. FreedomTech operates an open-door policy and there is no conflict of interest between the management of the project and participants.

Participation is on a first come, first serve basis. There is no formal membership criteria, other than an interest in developing assistive technology services, online services and capacity. Contributors who speak at the forum are chosen dependent of the theme of the meeting by the project Co-ordinator, not the Project Manager.

FreedomTech is a collaboration between two organisations (Disability Federation of Ireland and Enable Ireland). Participants in the research may include the Manager of the National Assistive Technology and Seat-Tech Services in Enable Ireland who is a partner in the project. Should a power conflict arise, there is recourse to PhD supervisors, as well as the Steering group for the project, and the other partner Disability Federation of Ireland.

5f. Will the participants be remunerated, and if so, in what form? *No*

26. Risk/Benefit Analysis ***6a. Potential Risks:****There is no risk with this research, it is conducted with management and staff of services, and is framed to support positive and constructive reflection and learning.*

6b. Potential Benefits: *This research has the potential to contribute to learning about how to run virtual disability services in a way that contributes to knowledge and mayhave the potential to impact on future design of services and contribute to the quality of life of those accessing services.*

6c. Risk/Benefit Analysis: *The benefit of conducting this research outweighs any perceived risk. People with disabilities and their families need urgent and continued support while access to day service access is restricted. Many may be unable to return to in-person services due to social distancing restrictions within buildings to the same level as before. Some people may also choose to engage online due to transport difficulties or underlying health conditions. The first phase of this research also indicated that online services gave people more choice and control over their services, making the potential benefits extremely valuable for understanding what is needed for effective service provision.*

27. Informed Consent:

7a. Confirm you are seeking and recording informed consent from participants ☑

· Who will be responsible for seeking and recording consent? The CHAT project coordinator will seek consent, which will be recorded by Joan O'Donnell, the researcher.[*Joan O'Donnell*

When and where is consent obtained e.g. do participants get an information sheet and sign a consent form, keeping a copy for their records or is consent secured by another means?

Please note:

· Consent ***must*** *be recorded in an appropriate format.*

· If your research involves children or other vulnerable people, explain how you will obtain their assent.

· For projects in which participants will be involved over the long term, you must include details of how you will ensure ongoing consent.

Limits to confidentiality Statement:

Ensure that participants are informed of limits to confidentiality as outlined in section 3.3 of the ethics policy

The following or similar text should be used in consent/information sheet.

'It must be recognized that, in some circumstances, confidentiality of research data and records may be overridden by courts in the event of litigation or in the course of investigation by lawful authority. In such circumstances

the University will take all reasonable steps within law to ensure that confidentiality is maintained to the greatest possible extent.'

Participants will opt-in to the research.

They will be asked to sign a consent form in advance of attending the workshop that also gives permission for video recording. They will be invited to ask any questions in advance of participation and the consent process will be explained at the start of the workshop.

They will be asked to keep a copy of the form for their own records.

This research will use a consent as a process approach, with ongoing negotiation of consent throughout the research cycle. Participants can withdraw at any point.

Not applicable

28. Follow-up. *As appropriate, please explain what strategies you have in place to debrief or follow up with participants – especially in cases where information is withheld or deception is involved or where research has been carried out on sensitive topics, and/or with vulnerable persons.*

This study will not involve any withholding of information or deception.

The initial analysis and draft report will be shared with participants.

The researcher will provide contact details for any participants who seek follow up information.

29. Data Management, Storage

Please complete 9a if personally identifiable data is being collected. If no personally identifiable data is being collected please move to 9b.

9a. Anonymity

Page 2 of the ***Maynooth University's Research Integrity Policy*** *states 'where ever possible personally identifiable data should be rendered anonymous in order to provide the best protection for participants'.*

Will personally identifiable data be protected through the use of pseudonyms and/or codes? ☑ Yes ☐ No

· *If yes, please confirm that the key to pseudonyms and/or codes will be held in a separate location to the raw data? ☑*

· *Will personally identifiable data collected be irreversibly anonymised (All identifiers including keys to link pseudonyms or codes back to individual participants are destroyed)? ☑ Yes ☐ No*

· *Who will be responsible for rendering the data anonymous?* [*Joan O'Donnell*]

If you answered No to above and are keeping personally identifiable data please explain your decision & rationale for not adhering to the policy.

9b. Data Access and Security:

Data must be stored in a safe, secure and accessible form, must be held for an appropriate length of time, to allow (if necessary) for future re-assessment or verification of the data from primary sources, as outlined in the ***Maynooth University's Research Integrity Policy.***

Please tick the box to confirm;

· Only the researchers listed on this application will have access to the personal information and data collected from participants ☐

· Electronic Information sheets/consent forms and data collected will be encrypted and stored on a PC or secure server at Maynooth University ☑

· Hard copy Information sheets/consent forms and data collected will be held securely in locked cabinets, locked rooms or rooms with limited access on campus ☑

· Please justify any exceptions to the information stated above

As the workshop will be recorded, 3 facilitators will record the breakout sessions on their Maynooth university laptops and save them to the Maynooth server immediately following the workshop and permanently delete the local copy.

Due to lack of access to campus, all forms will be gathered digitally and stored on MU server.

· Do you plan to transfer Data outside of the European Economic Area? Yes

· If yes, please confirm you are doing so in accordance with Section 6 of the Maynooth University Data Protection Policy Yes ☐

See Data Commissioners website for a list of approved countries and exceptions

9c. Data Storage:

· Are you planning to collect data on a mobile device (SB keys, smart phones; video recorders; audio recorders and/or laptops)?

☑ *Yes* ☐ *No*

If yes, to be compliant with Data protection Law, please confirm:

· Data collected on a mobile device will be protected with a strong password at a minimum, and/or encrypted if the device supports encryption ☑

· Data will be removed from the mobile device as soon as is practicable ☑

· Data will be removed to a desktop PC or server in a secure location at Maynooth University ☑

9d. Secondary Use and Processing:

Are you planning for any secondary use of the data? ☑ Yes ☐ No If yes, please confirm you will obtain ***explicit consent*** *for;*

· Re-use and/or sharing of anonymous data at the beginning of the project ☑

Re-use and/or sharing of the identifiable data for any purpose other than the current research project ☐ · Depositing in an Archive such as the Irish Qualitative Data Archive or the Irish Social Science Data Archive ? ☐

9e. Data Disposal: Data should be destroyed in a manner appropriate to the sensitivity of that data.

Please confirm:

· Paper based data will be destroyed by confidentially shredding or incineration ☑

· Electronic files will be deleted by overwriting ☑

· Who will be responsible for destroying personally identifiable data? [Joan O'Donnell

30. Professional Codes of Ethics. *Please append an appropriate code of ethics governing research in your area to this protocol, and/or provide a link to the website where the code may be found.*

https://www.apa.org/ethics/code/principles.pdf.

https://www.psychology-ireland.ie/articles/PSI Code of Professional Ethics_file_133.pdf

Submission Check List

B.3.1 Supervisors letter

5th May 2021

Dear SRESC members,

We write in support of Joan O'Donnell's application for ethical approval for her research titled Understanding the quality of meaningful connection and psychological safety in online disability supports. Joan has more than 15 years' experience working with complex social issues associated with disability from a social policy perspective. She also holds a BA in Psychology and an MSc in Systems Thinking in Practice. Since joining the Department in September 2020 she has completed a 5-credit module on 'Ethics in Psychology Research and Practice' (PS631).

Joan's experience in disability policy means she is well suited to explore issues in the transition to online disability services. She has reflected on her dual role as a researcher and as the Project Manager of FreedomTech, the potential for conflicts of interest in recruiting participants through FreedomTech,

and has adopted precautions to mitigate the associated risks. She has a sound understanding of data handling, storage and management requirements. She will have our support, as well as Departmental supports and facilities, to ensure that the research is conducted rigorously and with due consideration of the ethical challenges involved. Should you need to clarify any issues please do feel free to get in touch.

Kind regards,

Professor Mac MacLachlan

Professor Deirdre Desmond.

B.4 INFORMATION AND CONSENT FORM FOR RESEARCH PARTICIPANTS

INTERVIEW

Information Sheet

Purpose of the Study. *I am* ***Joan O'Donnell,*** *a* ***doctoral student****, in the ALL Institute: Assisting Living & Learning and Department of Psychology, Maynooth University.*

As part of the requirements for PhD, I am undertaking a research study under the supervision of ***Prof. Malcolm MacLachlan and Prof. Deirdre Desmond.***

This research is concerned with understanding how meaningful connection can be sustained in group-based online services and supports for people with disabilities.

Management and staff involved in the design and delivery of disability services and supports are invited to participate in a World Café workshop designed to generate learning around the following objectives:

· How is meaningful connection understood and enacted in online sessions with people with disabilities?

· How can services be designed to maximise the likelihood that service users and service providers feel safe to participate?

These questions have been generated from an initial study conducted into the experience of taking services online.

What will the study involve? *Participants are invited to participate in a two hour workshop that will take place online on Zoom. The workshop, (including breakout sessions) will be videoed and audio recorded.*

Who has approved this study? *This study has been reviewed and received ethical approval from Maynooth University Social Research Ethics Subcommittee and you may have a copy of this approval if you request it.*

Why have you been asked to take part? *You have been asked because you are a contributor to the Community Hub for Assistive Technology (CHAT) run by FreedomTech and you manage or run online services.*

Do you have to take part?

No, you are under no obligation whatsoever to take part in this research. However, we hope that you will agree to take part and give us some of your time to participate in an interview.

Please read this information and consent form before the interview and you will have an opportunity to look over it and ask any questions that you may have, either before the interview is arranged or at the start of the interview.

If you agree to continue with the interview, please tick YES (I Consent) or No (I Do not consent). No personally identifying information to indicate consent will be required and if you agree to participate you will be asked to return the consent form with your name and the date filled out, stating in the return email if you consent to the interview or not. Please keep a copy of the email and form for your own records.

If you decide to take part, you are still free to withdraw during the workshop or afterwards. A decision to withdraw at any time, or a decision not to take part, will not affect your relationships with the ALL Institute or FreedomTech.

What information will be collected?

You will be asked to reflect on the following questions:

1. When you recall an instance of meaningful connection within an online individual or group, what strikes you most about the experience?

2. What does meaningful connection mean to you? Why does it matter?

3. How do you engage in sessions so that participants feel met, or seen and/or heard?

4. How does the virtual nature of the engagement support/inhibit a felt sense of connection?

5. How have you been changed by these online connections?

6. What does the term psychological safety mean to you in the context of virtual group engagement? Why does it matter?

7. How do you go about creating a sense of psychological safety in online sessions?

8. What facilitator qualities/characteristics support the creation of a safe space?

9. How does the virtual environment support/inhibit a felt sense of safety?

Will your participation in the study be kept confidential? *Yes, all information that is collected about you during the course of the research will be kept confidential. No names will be identified at any time. Electronic information will be encrypted and held securely on MU servers and will be accessed only by* ***Joan O'Donnell*** *(the researcher),* ***Deirdre Desmond*** *and* ***Mac MacLachlan*** *(Supervisors).*

'It must be recognised that, in some circumstances, confidentiality of research data and records may be overridden by courts in the event of litigation or in the course of investigation by lawful authority. In such circumstances the University will take all reasonable steps within law to ensure that confidentiality is maintained to the greatest possible extent.'

What will happen to the information which you give? *All the information that you provide will be kept at Maynooth University in such a way that it will not be possible to identify you. On completion of the research, the data will be retained on the MU server. After ten years, all data will be destroyed (by the PI). Manual data will be shredded confidentially, and electronic data will be reformatted or overwritten by the PI in Maynooth University.*

What will happen to the results? *All participants will receive a preliminary analysis and draft copy of the findings from the research for comment. They will also receive a final copy of the research findings. Findings may be presented at national conferences or submitted for publication.*

What are the possible disadvantages of taking part? *I do not envisage any negative consequences for you in taking part.*

What if there is a problem? *You may contact my* ***supervisor, Prof. Malcolm MacLachlan at Mac.MacLachlan@mu.ie*** *or Prof. Deirdre Desmond at* ***Deirdre.Desmond@mu.ie*** *if you feel the research has not been carried out as described above.*

Any further queries? *If you need any further information, you can contact me:* ***Joan O'Donnell, by phone 085 8886780 or by email: joanodonnell.2020@mumail.ie***

If you agree to take part in the study, please complete and add your name and the date to the consent form overleaf. Please return by email, which contains a statement that you consent to interview.

Thank you for taking the time to read this.

Consent Form

I Consent ***YES*** ☐ *or I Do not consent* ***NO*** ☐ *to participate in* ***Joan O'Donnell's*** *research study titled "****Understanding the quality of meaningful***

connection and psychological safety in online disability supports"

Please tick each statement below

The purpose and nature of the study has been explained to me in writing. I've been invited to ask further questions, which were answered satisfactorily. ☐

I am participating voluntarily. ☐

I understand that I can withdraw from the study, without repercussions, at any time, whether that is before the workshop starts or while I am participating. ☐

I understand that this workshop will be recorded for transcription purposes, and I understand how

my data will be managed and that I may access it on request. ☐

I understand the limits of confidentiality as described in the information sheet. ☐

I understand that my data, in an anonymous format, may be used in further research projects and any subsequent publications if I give permission below. ☐

I agree that the researcher can contact me to invite me to participate in future related research projects. ☐

I the undersigned have taken the time to fully explain to the above participant the nature and purpose of this study in a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have invited them to ask questions on any aspect of the study that concerned them.

Signed..... Date.....

Researcher Name in block capital ***JOAN O'DONNELL***

If during your participation in this study you feel the information and guidelines that you were given have been neglected or disregarded in any way, or if you are unhappy about the process, please contact the Secretary of the Maynooth University Ethics Committee at research.ethics@mu.ie or +353 (0)1 7086019. Please be assured that your concerns will be dealt with in a sensitive manner.

For your information the Data Controller for this research project is Maynooth University, Maynooth, Co. Kildare. Maynooth University Data Protection officer is Ann McKeon in Humanity house, room 17, who can be contacted at ann.mckeon@mu.ie.

APPENDIX C

Research participant profiles

Research Cycle 1: Interviewees
Research Cycle 2: World Cafe participants
Research Cycle 3: Delphi panellists

Table C.1: Participants: Research cycle 1 (1 of 2)

Category	**Organisation descriptor**	**Service type**	**Role**	**M/F**
Physical Sensory	Large national provider of supports for children and adults	Health and Social Care	Adult Day Service manager	M
	Large national provider of therapeutic and day services and training for children and adults	Education and training	Program Coordinator: Life Skills	M
	National sensory organisation providing care, technology, and advice & Information Services and advocacy	Health and social care	Head of Advocacy	M
ID	Large national provider of residential and day services	Health and Social Care	Clinical Nurse Specialist: AT	F
	Local Rural Adult services: day, residential and respite services and respite services	Health and social care	Services manager	F
	National provider of community supports and training services	Education and Training	Programme Facilitator	M

Table C.2: Participants: Research cycle 1 (2 of 2)

Category	**Organisation descriptor**	**Service type**	**Role**	**M/F**
Condition Specific	National patient organisation for people living with a Musculo-skeletal disorder	Education and Training	Services manager: Education and training & Support Services	F
	Small national organisation providing family support services, respite and information and advice on neurological condition	Health and Social Care	Respite Manager	F
	National Organisation providing rehabilitation for people with neurological condition	Health and Social care	National Quality and Standards Manager	F
Purpose Driven	Disability Service within university	Education	Service manager	F
	Assistive Technology service within third level college	Education	Regional Assistive Technology Co-ordinator	M
	National Disabled Person's Organisation	Training and education	Project Manager	M

Table C.3: Participants Cycle 2: Physical and sensory organisations (1 of 3)

Organisation descriptor	Service type	Role
Large national provider of therapeutic supports, day services and training	Health and social care Education and Training	Programme Coordinator Employment coordinator
Large national provider of therapeutic supports, day services	Health and social care	Adult Day Service co-ordinator Support worker
Large national provider of education and training	Education and Training	Psychologist
Statutory Adult Day Services and therapeutic supports	Health and social care	Technical support

Table C.4: Participants Cycle 2: Intellectual disability organisations (2 of 3)

National provider of community supports and training	Health and social care	Facilitator (x2), Coordinator,
National provider of community supports and training	Health and social care	Technical support Manager Adult Day Service Manager
Local service provider, adult day services, employment supports	Health and social care	Service manager Facilitator
Local service provider, adult day services, employment supports	Education and Training	Educator
Local Rural Adult day, residential and respite services	Health and social care	Services coordinator

Table C.5: Participants Cycle 2: Condition specific organisations (3 of 3)

National Organisation providing information, advise, support and rehabilitation for people with neurological condition	Health and Social care	Community facilitator (x2)
National Organisation providing information, advise, support for people with neurological condition	Health and social care	Community Support worker
National Organisation providing information, advise, support, day services and therapeutic support for people with neurological condition	Health and social care	Community Support worker
National organisation providing family support services, respite and information and advice on neurological condition	Health and Social Care	Respite Manager Respite co-ordinator

	Policy experts	**Practioners (managers and coordinators)**
Ireland	1 representative organisation	5 practitioners
Europe	3 representative organisations	3 practitioners
Australia	1 academic	3 practitioners
International	1 consultant	-

APPENDIX D

Audit trail for analysis: Research Cycle 1

D.1 Research Cycle 1: Interview Transcript and analysis

Interviewer: Yeah, OK, so I've just pressed record now. So, would you like to say anything about about the information and consent forms, that we've discussed, and tell me your name and the organisation that you're with and then we can take it from there.

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Sure, OK, my name is X. I work as a programs facilitator Y and our service users, our school leavers come to us just after they turn 18. And we operate as a day centre, so, the virtual online aspect was something that was totally new to us, but I've read through the information and the consent form and they're all fine in terms of the information that will be relevant to the interview and the - the research that you're doing are all relevant and hopefully this will be useful and beneficial as an insight into the research that you're doing. We, I suppose, like a lot of service providers got into the virtual online delivery of programs, purely because of what happened with COVID, but it turned out to be an excellent form of delivery of service for us in terms of being able to maintain contact with the service users and also enable them to keep in contact with each other through the online program delivery.	Interviewee keen to be of service to research. Have never met before but sense that this person is looking for more innovation in services in a broad sense , based on genuine regard for service users as interview progresses. Motivated to keep connection: staff to user but also peer connections Positive about technology: Some surprise at how "excellent" technology modality proved to be Also evidence of social desirability bias – putting up a good front	Orientation towards technology Sustaining connection	Emergent novelty: emergence of creative innovation to sustain connection

Interviewer: Can you tell me something about what it was that you were doing in the day service before Covid and then something about what happened when we had to close the centre?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Yeah, well, as I said the centre is a day centre so the guys come to us each day. Some come every day some come less than that. And we function as a location for the guys to come to which enables them to have a point of meeting, so we focus very much on the social aspect of service delivery. We obviously look after all of their individual needs that you would expect in a service operating just to deliver services for people with a disability. As I said our service uses are 18 years plus: they would have quite challenging disabilities, and they would have a relatively high level of dependency, so we would look after all of those uh, day-to-day human needs, if you like. The focus of our service delivery has been very much as a semi-structured approach to facilitating socialisation. And our interaction with the guys is very much on that basis. So we would had a delivery of programmes - for want of a better word - both on an individual one-to-one basis and also in the group scenario.	Pre:Covid Oriented towards taking care of social needs, for isolated people with high-dependency needs, already with level of flexibility in content – non formal interactions oriented towards catering for human need for social interaction. Clarity of purpose An understanding of the generative nature of doing things in groups over 1:1 contact Some discomfort with using the word "delivery" when the purpose is seen as facilitating social engagement and person-centred in orientation – friendship Familiarity with group supports better engagement (challenging in other contexts)		

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): The group scenario would have been preferred because it generates its own life if you like, where social interaction is triggered through the activity that we're engaged in. And for the guys it's beneficial to have that level of social interaction, which outside of the centre is always a challenge... ... in the sense that mainstream activities and involvement in them is more difficult to achieve. You know when you think of a circle of friends or activities that they can participate in. So we've taken the view that if we can cater to that human need, if you like, that that's where we should focus our energies.	Sense of interdependency hinted at in face-to-face services Practical needs also need to be taken care of		

Interviewer: When you are talking about human need you are talking about that social element?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: contact with people, yeah particularly with people of their own age.	Peer contact is primary focus		

Interviewer: Can you tell me more about that? What is it that you're facilitating or creating space for?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Well, we would run conventional type programmes such as Arts and crafts, cooking and we would have a number of tutors who would come in to deliver programmes that they might have a particular expertise in, whether it's arts and crafts or individual massage, for, you know, relief of ailments. And, we just try to use as much creativity as we can in terms of the programmes. They're not, they're not particularly structured on an academic criterion or anything like that: they're very loose in in nature, particularly because we try to have a lot of spontaneity. So, we see the programme content as a means to an end, and at the end is the interaction between the service users and the staff.	Spontaneous emergent activities that serve interaction rather than goal focused. Creative programming, open to self -organising - fluidity	Sustaining connection	
So the the program itself is, uh, is secondary. We're not trying to achieve any educational goals if you like, but we do work with a number of the guys to help them use software and hardware for communication needs, so we would use software like Grid 3 which is a standalone third-party software that some have available to them on their tablets...	Connection is primary purpose not activity. Being together more important than what is being done. Innovative use of tech to sustain contact before COVID – in service of contact- rather than for its own sake.	Orientation towards technology Techno-logical readiness	

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): . . . so we would spend a certain amount of time trying to develop communication abilities because some of our guys are nonverbal. Others would have a disability that would impact their use of a tablet so they would use eye gaze equipment so we have again - we work in a one to one with those guys to develop that skill to use the eye gaze technology and that's very beneficial as well because it gives us a basis to have contact, meaningful contact with an end goal in mind.	Computer games a way of developing tech skills for Eye Gaze – gives them the why- but staff motivation goes further is to develop a way to stay in meaningful contact.		
And, the COVID scenario just completely decimated that environment so we had to, we had to look at going online and we said about trying to develop programmes that could be delivered on that kind of a platform.	Sense of care in creating an opportunity for quality of life rather than instrumental goals - speaks to need for human connection. Key motivation: Service users want to come – enjoyment implied. No hesitancy in going online	Orientation towards technology Techno-logical readiness Level of dynamic adaptive-ness	Dynamic adaptive-ness Determined contexu-tally

Interviewer: OK - So can you just go back to March for a moment, and everything was going along, and you were running the day service and doing your thing, if you like, and then there's this sudden or gradual change? How did the change come to your service?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: It was very sudden. I think it was March 16th when we closed the doors and we, we didn't have anybody come back until about a month ago. It was total closure.	Suddenness of closure – link with word "decimate" in previous question and "Turned the lights out in next question". Sense of shock?		

Interviewer: And what was the most immediate concern in your mind when you closed the doors?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Um, the loss of contact, I suppose with the guys. It was just, like somebody turned the lights out and we have no, no contact of any any type.	Strong metaphor of 'turning the lights out" implying darkness and being cut off from each-other, suddenness	Growing appreciation of interdependency	Consitituted relationally

Interviewer: So somebody 'turned the lights out' for you as staff or in terms of your contact with service users, or for the service users, or for all?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: For everybody really, but our...we were going to start working from home so we have to come up with a means of re-establishing the contact with the guys. We did that through Skype. So we, we set up each service user with an account and we created the main contact point on the Skype platform. Uh, and that's how we maintained the contact if you like. OK on a daily basis. From then on, once we have the platform created.	Driven by need to sustain contact	Constructing the technical response: Technological readiness	Adaptive capability

Interviewer: And with Skype, was all the organisation using it? Or just your service?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: I think some were using teams. The reason I think we ended up with Skype was because it was, I think, part of the Microsoft package and considered to be a user-friendly, complied with GDPR and was relatively straightforward for us to set up an account for each of the service users.	Recognition that chosen platform not the best choice, but may be due to the pragmatic forward movement they engaged in immediately.	Constructing the technical response: Orientation towards technology	Adaptive capability

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): I think, I think the teams platform would have been possibly better, more secure, more stable, but the setting up of the accounts I think goes a little bit more tricky. So we, we, we stayed with the Skype but… (shrugs shoulders) OK, well I think if we were doing it again we would probably try and establish teams as the platform to use. I think Skype is probably a little bit aged at this stage and one of the difficulties we did encounter on a regular basis was the lack of stability in the in the Skype platform in terms of quality, so I think for that reason we will probably try to teams.	Not familiar with Teams – not tech ready – but learning in real time – sensemaking and reflecting Disconnect with other teams in same organisation. Hint of regret – lack of resources or knowledge implied and elaborated on later in interview	Techno-logical readiness Availability of resources Staff digital skills	Adaptive capability

Interviewer: Can you tell me about getting set up then and what kinds of things that you did at the start. Ye got an account set up for everybody, which is tricky enough as you're describing and then what? What did you use them for exclusively group sessions or individual sessions? How did you work that? **(*transcript continued on next page*)**

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Well, we used it for contact between the staff and other staff members and then we created one single link for the service users and staff to connect through each day. So we would had a number of programs running everyday some in the morning. Some – afternoon. The structure of the week remained fairly constant for the whole period. Um, I suppose we introduced new programs or tweaked some as we went along, but we created a timetable and content in the timetable that we pretty much kept to all of the time. So the programmes that we ran online were spread amongst the staff and so we obviously supported each other in terms of making contributions to the content of the programs, but it enabled the same stuff you like to deliver the same programme at the same time every week. So there was a lot of consistency there. And we found that most of the the guys that tuned in, if you like to a particular programme, continued to tune into the same program - so that they selected which which program they they wanted to tune into OK.	Got set up fast and sustained consistent services throughout. The programme was sustainable over time it evolved and was sustainable. "Tune in" "programmes"– tv metaphor – passive audience? Ties in with description of client group	Dynamic adaptive-ness Enacted sense-making and self-organising	Adaptive capability Driven dynamically

Interviewer: And in that sense, was it a clear transfer of what you would have been doing in situ on to online or where the things some things that work differently?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Yeah, the worlds were different ones. Some things transferred - like we continue the cooking. And we had a kind of a "live" transmission from the kitchen that we have here. And stuff that went down well because it was live - it was on an unknown element, if you like. And it was challenging enough to deliver the program live while you're still doing the kitchen stuff.	In person and online are distinctly different - not everything works. Navigating technology and facilitation at the same time Not afraid to take risks with live sessions in kitchen - but challenging to do activity and run as session live	Enacted sensemaking amongst staff	Emergent novelty
We also introduced Harry Potter at the first book that she wrote. We decided we decided to…they were delivered that initially it started off with one staff member reading from a chapter and then shortly after -so I got it up and running. We added, I think three or four more staff, so we separated the characters out in the chapter so it. made it more entertaining I suppose, and more interesting because we used actions as well where we felt that you know, it added a lot of what you call it...*substance* to the characters.	Creative evolution of content	Working through complexity: self organising	Adaptive capability Emergent novelty

Interviewer: Can I ask where did/does initiative with something come from?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Yeah, yeah, I mean, I think, all of the initiatives came from the staff - and that was one of the interesting things that we found that we had a little bit more creativity than we gave ourselves credit for. OK, and we worked well together to support that idea generating. Um and we would have passed ideas to each other that would have supported the content of the program, so that was, I think, by accident rather than designed. I don't know, but it certainly I think, it helps the sustaining of the online delivery. I don't know whether it would have continued because I think the service user interest level right away was there and if the content wasn't over a reasonable quality. I think that was something that we had to keep in mind - that we were - if you like, almost like a a TV operating a TV company operating with live programs 'cause they were all live but the content had to be interesting, and I suppose we had that in the back of our minds when we were putting the programme and the content together that that was the kind of pitch that we were looking to achieve.	Level of creativity is a surprise – is this in contrast to how they worked before? Something new. No direction from organisational management, funders or wider sector – self-organising through internal collaboration within team Concern with quality and interesting content – feedback though attendence levels. TV metaphor Some reflection and planning implied within team	Working though complexity, sensemaking and self-organising	Determined contextually

Interviewer: So what surprised you most about how well your efforts and the new creativity was received by people using the service?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Um? I don't know why. I think they probably appreciated what we were trying to do, and I know the parents who sat in on a lot of the programs with the service users appreciated that you know we were all amateurs at this and this is a new form of delivery for us, and that we were basically trying to do our best to keep the guys entertained and maintain a form of contact with them um and enable them to keep in contact with each other as well, because they could see and they could hear all the other guys that they weren't meeting each week, and I think that was one of the the main advantages of the online platform, if you like, that it enabled everybody to stay in touch. And there were a number of the guys who would have had mental-wellness issues because of COVID that they weren't having the regular contact. They weren't coming to the centre, they weren't meeting guys, so I think it was invaluable from that point of view that the service was maintained and we were able to deliver contact I suppose.	Family involvement in session – growing sense of interdependence. Recogition that staff were learning in real time and were amateurs Change in power dynamic and levels of expertise between attendees, family and staff Importance of peer contact The idea that contact can be delivered is curious – speaks to familiarity with others they know in the space	Power relations in flux	Constituted relationally

Interviewer: Can you say more about service users engagement? Did they initiate an any of the content or more contact with each other? How did that work out?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: There might have been a degree of input not to any great extent. I mean their input was their participation both during the programme delivery and after, because one of the programmes we ran was a gardening one which involved planting seeds, sunflower seeds, and we would have had updates on how they were getting on and they would have posted the photos from their gardens on how the plants were doing? So you know they did participate at that level.	Contact between attendees not extensive. Group can participate in activity (gaming also) and do things autonomously more easily than chat online.	Sustaining connection	Constituted relationally

Interviewer: Can I ask you something around the experience of having access to people's homes, even online, and having maybe parents in situ or other family members as well an observing you work? How did that have an impact on the dynamic?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee Very much so yeah, it was a great addition to the dynamic, that the parents were involved because it gave us the chance to actually get to know the parents a lot better. It certainly how to improve the relationship between the staff and the parents. We got to know each other.	Positive impact on relationship with families, who got more involved - welcomed on both sides	Growing appreciation of inter dependence Power relations in flux	Constituted relationally

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): We created our own form of banter and that worked very well, and it helped make the program a lot more spontaneous and lively. And as well it would have, it would have taken away from the content of the programme quite a lot if they, if they hadn't become involved and weren't sitting in on it. So I don't think there was any level of awkwardness or anything other than, well, eager participation.			

Interviewer: And in terms of opportunities and things that weren't, wouldn't have been possible before, was there anything that arose for ye?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: In terms of things that might not have been possible...well, I think perhaps the activity as a group um came to the fore, more, I suppose, because if we were doing, so, for example, one of the programmes was games and we had a number of crossword individual programs where a crossword was was put together with clues. We wouldn't, I suppose, have thought about having that kind of a programme in the centre where we would have had five or six service users participating in the same program at the same time with as many staff.	New found creativity and ideas coming from staff Sense of togetherness and working on shared activity as a group was new to the service Sense of pride in how interviewee presenting achievement	Level of dynamic adaptive-ness Self organising Sustaining Connec-tion	Adaptive capability Determined contextu-ally Emergent novelty

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): So, the actual activity of the crossword itself, lent itself to that kind of, uh, participation, where, you know, the clues were read out and everybody had to come up with the solution, and yeah, that particular type of programme might not have, well, probably wouldn't have, been a feature of what we've done during the day. So, necessity I suppose, introduced the idea - and it worked.			

Interviewer: And can I ask something about service users: did anything surprise you about them and their capacity to engage online?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Yeah, we we did have a small number who didn't want to participate online. It could have been just the platform itself was too new and the thoughts of being, you know online visible to others a bit intimidating. Um but by and large, I think everybody wanted to be connected through the Skype, involved in the programme, and were happy to participate to the extent that they participated, more than they would have if they were here.	Not everyone wanted to be connected online – but they still engaged a bit. Up to people themselves to decide when and how to engage. Overall- participation was better than in in-person services	Level of take up Growing sense of interdependency Sustaining connection Individual autonomy	Constituted relationally

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): Perhaps because they would have been focused in on if there was a particular question, or comment, or feedback looked for form them, they would have been maybe, a little bit on the spot. But I know there was no negative feedback that I can recall, other than perhaps, one or two, preferring not to engage. They did engage to a certain extent, but not to the same frequency as most did.			

Interviewer: And were there things that you found didn't work online?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Well, one of the difficulties I suppose, was just coming up with material all the time. One of the problems we had, or we ran was one called "Social Interaction". And that was just basically an hour-long shooting the breeze with the guys so all of the staff would have come up with something to chat about. Uh, so it could have been something topical in the news or it could have been connected to some of their favourite singers and anything that might have been up on Facebook are on Pinterest or on any of the other social media platforms that we could have...	Peer connection and interaction most valued way of coming together and what was missed most whilst self-isolating	Growing sense of interde-pendency Sustaining connection	Constituted relationally

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): ...obtained some news item and just basically had it had an hour-long chat and that was one of the ones I think, that was attended probably by more on a more regular basis. So, I think it was kind of suggested that that's what they missed - was the social interaction that was part and parcel of what the experience when they came here each day.			

Interviewer: And was your experience that's that sense of belonging and coherence could be generated online, then in those sessions?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Absolutely yeah, yeah. I think we sent out a call every day 1/2 an hour, 15 minutes, before the programme. So, everybody knew - everybody got a call letting them know that in half an hour the program will be starting. Uh, some of the parents said that you know, they just waited - that this is all that they wanted to do that day. They were waiting half an hour ahead of time for the thing to kick off and it made their day. Obviously, the COVID meant getting out and about was much more restricted than other times would have been so, this coming into the home was a very useful form of social contact.	Striking image of how important the connection was via online service. Feedback coming from family suggests a appreciation of the service amongst family members also. Interviewee takes pride in this feedback and then qualifies it with acknowledgement that there was little else going on for people to engage in	Growing appreciation of interdependency	Constituted relationally

Interviewer: What is it about how you would have done things, in that social interaction session, that would have helped to keep that sort of sense of connection alive? That connection with the centre and being part of something?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: I think it was just the structure, and the content and the frequency, was part of the reason why it was successful. Because the content was always fresh and was always new. Was always interesting. It was always relevant, and it was something that basically held their interest. And I think the that the live aspect to it being able to hear and be able to see everybody, made it all the all the more worthwhile. Notwithstanding that, I mean the Skype platform left a lot to be desired. Yeah, we'd issues practically on every delivery session of the line dropping or freezing or getting through to people. So from that point of view, had we not had those, it would have been, you know, 10 times better.	Importance of regularity, and familiarity with the programme along with fresh content. Being able to hear and see each other in a live setting held significance Technology limitations due to platform – not the nature of online interaction – did not let it impede	Level of dynamic adaptive-ness Orientation towards technology	Adaptive capability

Interviewer: And tell me something about staff in all of this? And did everybody have the IT skills once they had the Skype account or was that a mixed thing for staff?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: No, we had a learning curve. We're just fortunate I, I suppose that we have one of the staff is particularly good on the IT side.	Value of one person with tech skills is significant- though resource not shared with other services	Techno-logical readiness	Adaptive capability

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): So, he was the guy to go to. If the thing broke down. He was the one that was able to set it up. So that really is, is a big issue I suppose for some centres that they wouldn't have had that expertise. Oh, but yeah, I mean all of the staff as far as I know, haven't used Skype before as a means of communicating or certainly for delivering any kind of a programme. But I mean that it was picked up fairly quickly, and relatively uncomplicated. But I can imagine for a centre that doesn't have a guy like that, it would have been a serious stumbling block.	– nor does there appear to be awareness of what other centres might be doing or contact with them – organisational silos. Where is management	Orientation towards technology Self-organising	

Interviewer: And you mentioned something as well about staff creativity?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Yeah. We all agreed, I suppose that we were surprised at our own ability to come up with ideas. Now, we would have relied a lot on an idea being generated in terms of maybe, what might have worked as a programme, and then you go off and you think about the topics that might be covered or included in the programme that you're delivering. But I mean I was amazed at some of the programmes.	Evolution of programmes as a team effort – collaboration leading to novel outcomes that were greater than the sum of their parts.	Working through complexity: sensemaking and self-organising	Determined contextually Emergent novelty

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): One of them was home economics and the girl that delivered that, (laughs) she just surprised us all with the level of ideas that came out of nowhere and she put it together, and it was entertaining and interesting and informative. And I think everybody found that they, when they started researching a topic, myself included, - I wouldn't consider myself creative at all - But um, when I put together the the clues for the crossword, like it was, it was good fun and a fairly good quality in terms of programme content. So, I think it was useful as well that people discovered that about themselves. And I think it probably wouldn't have been any different in any other centre, had the staff been given time, and the need to put together a programme because in a way, I suppose if you're taking ownership of a programme you know the day at the time that you have to deliver it, so you know you gotta have a content that's gonna be seen and heard by staff and service users. So you, you do give it your best shot.	Sense of being alive with ideas coming out of nowhere -creative-spontaneous – enacted – learning by doing – new capabilities emerging – flow. Personally satisfying and `growing' for staff – greater ownership of programmes-empowering Effort being made to do the best to serve attendees		

Interviewer: OK, I mean can I ask it just to play devil's advocate for a moment? If you were going to recruit now for more staff, um are there any ways in which you would change the current source of job description or the way that some jobs are configured after this experience?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Oh no, I don't think so. I think the main quality that you would probably need and want anyway is the inclination to work to help the guys that come here. There'd only be one expertise that I think is critical and that's IT or AT awareness. And I think that's greatly lacking generally. I don't think there's any focus on assistive technology and the part that it can play in the lives of the guys that come here and any other centres that have guys that are dealing with the same challenges as our guys have. So, there, there isn't there isn't I think a focus on, recruiting somebody with that skill set that can go off and train up other people, in other centers. That can investigate what the needs of the service users are in different centres. And I think it's a gaping hole that's not being filled. So, one of those guys will definitely be very useful.	Purpose of working in this environment: serving attendees. Not enough focus on IT skills amongst staff at present – or focus on AT in particular – should both IT and AT apply to everyone? Draws parallels with other centres in terms of client profile – and identifies need for IT skills across services – but not in a position to action this. A tentative realisation pointing towards more strategic need – beginning to question needs from organisational perspective	Staff digital skills Power dynamics	

Interviewer: And can I ask do most of the people in your service use some form of assistive technology?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: No, that's because we have a small number who have been given equipment, but it's like giving somebody, you know, a very expensive piece of IT equipment and they don't know how to turn it on, or they don't have the means to turn it on. And then it's like the job is done once the equipment is bought and supplied. But, more of our guys could benefit from activities, that they could do during the day that would be - they would also need somebody to learn how to use the equipment, and have uses for the equipment. So, I mean we've got to find games that are playable with AT equipment. Which is not easy - there's not very many made out there, as you can imagine - Eye Gaze is even more difficult. But I'm talking about even extending that, not just on the entertainment side of things that we do but also communication wise.	Technology is only as good as the support services around it and availability of others who know how to use it.	Techno-logical readiness	
There's a huge time element involved in working with people over a long period of time where you develop any level of ability, but you know, they, just the decision has to be made you know: how important is it, to address those needs? I mean, it's all very well and good,	Beginning to question organisational culture and accountability systems Values quality experience for attendees	Power relations in flux	Radically open

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): . . . putting a building in place and having a building that people can go to - but what do they do during the day when they are there? There doesn't seem to be anyone looking at... I mean there's inventories of PC's and printers and coffee machines, but there's no inventory of equipment that people could use, to enhance the quality of their day, what they do during the day.			

Interviewer: Can I ask what all of your service users have mobile phones, access to the Internet, some form of technology?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: yeah		Techno-logical readiness	

Interviewer: OK so they're all online so that wasn't an issue for ye during closure?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: No, no.		Techno -logical readiness	

Interviewer: And when you reflect back on the experience now and you're open a month, what bits and what new possibilities are there that you want to keep with you and develop?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Um, well, we are continuing - because, not all of the service users have returned, we do still go out to their homes and we might deliver a programme from their home. So, they would kind of host the venue, and that enables us to um compensate for the fact that the centre is not open for everybody to come back to, so we...	Phased return		Radically open

Interviewer: This is something you started doing the last month is it?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Yeah yeah, so each week guys aren't allocated to come to the centre on a particular day, so somebody would possibly go to their house, and deliver the programme from there. Particularly the likes of the the Harry Potter reading, so that's very doable. We also when the weather permits, go down to a local park and we would run an activity from there. Last week we had a scavenger hunt and game with football and another game. So, we were there for about 2 hours. Just lucky the weather was amazing. So, we're keeping that going as well as the online programmes...	Shift towards hybrid services and future possibility of keeping virtual service going Creative adaptive programming	Future of virtual services Level of dynamic adaptive-ness	Emergence of novelty

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee (cont): And then we have the guys who come into the centre as well. So, we would turn, we would work one-to-one because of the restrictions on numbers in a given room. Only limited number of people can be in a particular room at a particular time, so we're restricted there. So, we do miss out on the the group activity , if you like, but we've run the meditation session from the same park as well over Skype too. So, and I think the arts and crafts continue and we're still continuing with Harry Potter and the games. So, it's probably extended our type of programme, you know. So, and I think the arts and crafts continue and we're still continuing with Harry Potter and the games. So, it's probably extended our type of programme, you know.			

Interviewer: And have you plan to review or done a formal evaluation or are you planning anything around that?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: There probably will be - and I think some of the questions in your research today will be very worthwhile for us to consider individually and then collectively in terms of evaluating what we have achieved on what we can carry forward and basically enhance our product offering in the centre.	Oriented towards improving service long term and bringing learning back to in-person services Industrial metaphor combined with offer "product- offering". Content still driven by staff	Resourcing the response	Radically open

Interviewer: I have one or two other questions for you on technicalities, if that's OK. The first one is around - where did you go to get resourced? Did you speak to other centres within the organisation, did you speak to other people that you knew outside of the organisation or did you pull it all from your own internal resources?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: We went pretty solo to be honest with you. We didn't…I don't think it occured to anybody to go and ask anyone else if they were doing this. So, as far as far as we knew, we were the only ones doing it, but we found out subsequently that there were other organisations doing it. I don't know how well it went for them I haven't spoken to any of them - whether they continued with it for the duration of the closure. But no we pulled it together pretty much uh spontaneously, from within.	Closed loop siloed system – self-organising from a very small group – little organizational oversight?	Resourcing the response	Radically open (example of being closed)

Interviewer: OK and then the other question that I have is around your client/service users. Were there any service users for whom being at home was going to be difficult or unsustainable that ye had concerns about, and that you know other parts of your organization might have had to intervene or come in or were ye very much stand alone?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: Um yeah, there were a small number who did develop difficulties with the new environment caused by I think the isolation.	Level of take-up		

Interviewer: Are you referring to mental health issues or other concerns?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: yeah, yeah – mental health. They haven't they haven't completely been, been sorted if you like, that they still are a difficulty, but they are improving, so I think I think the isolation was a real factor for some of the households - thankfully a very small number.	Mental health issues a consequence of isolation Refers to households rather than individuals	Growing appreciation of interdependency	

Interviewer: And can I ask was - you describe how staff worked a bit closer together - was there any requests from service users to have more contact with each other apart from interacting with the formal service?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Not that I'm aware of, to any great extent. There could very well have been contact I wasn't aware of, and some of the parents might have been able to set that up, depending on their knowledge of skype and how and how it works.	Service acts as central spoke of contact within group. Boundary around in service contact only		Radically open (example of being closed)

Interviewer: And can I just ask I have one final question for you which is what what kind of numbers are we talking about here and in terms of numbers of users and numbers of staff?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Staff probably some around the 7 mark and services or something similar. I think 9 probably 9 service users.			

Interviewer: In total?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: yeah			

Interviewer: OK and is there anything else from your perspective that you'd like to say or this you had thought of when you were looking at these questions?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Not really no. I hope your research will inform decision-makers about looking at the initial gritty of what goes on in the centre each day and what what's being what's being delivered, you know, what the services are actually getting out of it. Because I think there is a vacuum there. I think New Directions is a very good document. I'm not sure of the incentive has been devised enough, to make, the day-to-day input in day centres, what it needs to be - if you're looking at quality of - quality of life.	Awareness of policy and gap between aspiration and quality of service and how it supports a better quality of life.	Power relations in flux	

Interviewer: Can you make that more concrete for me so I can follow it in practical terms?

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee: Well in practical terms, the guys come here for a place to go everyday um and that's you know in place of going to work. So, this is their life. And what they do during the day here - is it gonna be a beneficial, nourishing, rewarding and worthwhile? That they actually want to come here?	Critical of quality of services as offering real value to people Reflecting on the importance of building over what happens within it.	Power relations in flux	Radically open

Transcript: Interview with participant Number 10	Notes	Final theme	CAS
Interviewee (cont): And I think, - service providers would be doing a better job if they if they took seriously what the content of the day consisted of in services. Because you know, it does affect the mental well-being to a large extent, as to what you do during the day. And you're just sitting around and there's not much input coming your way and you can't create input yourself, so I think there - the dependency is there. But I think, the system needs to be given a jolt, and I mean, in the same way COVID has given us all a jolt. We discovered that we had creativity within us. It was, it was a pleasure to put it into a shape that ended up being delivered as a programme that had had a beneficial outcome. So, in the same way I think the content of the service delivery, needs to be, much more focused on, rather than just providing a physical building.	Challenges the wider system to address gap Parallel between jolt given to staff that unearthed creativity, and the jot system needs to look beyond buildings		

Interviewer: Just so that I'm clear that I'm following you - have you felt constrained organisationally or have you had enough scope in your setting to do what is this you think is required to make it a meaningful experience with people?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: No, I I think we're just fortunate that we have an environment that encourages initiative, and the staff are of a type that want to take up that scope if you like.... I think I think it's very dependent on the centre but I think that that's leaving things to chance. So, but I don't know if the, um, the need is recognised at organisational, senior organizational level, both within providers and both within the HSE itself. If it was, if service providers and centres were run as businesses and you relied on the service users to pay at the door on the way in, uh and they didn't turn up, so your turnover was down, I think a lot more focus would be given to the content of the day, so that your customers kept coming back. If you could achieve that kind of an outcome, I think the the quality of the content would be different and better. I think that's what's missing. You know, the customers keep come on back even though they don't have to.	Staff encouraged to use initiative and exercise autonomy to respond in this centre. No policy at national level and leaving response to chance is unreliable. Business model – challenge to management in terms of quality of service – complacency in system with "captive" client group? Constituted relationally This is questioning power dynamic between giver and receiver of services	Self-organising Power relations in flux Individual autonomy Future of virtual services	Radically open

Interviewer: I understand now, thanks. Anything else?

Transcript: Interview with participant Number 10	**Notes**	**Final theme**	**CAS**
Interviewee: yeah I think it's unfortunate that staff don't transfer between different centers to see what's good and what's not good and inform their learning that way and even transfer between different service providers because I think there is an information gap, or a knowledge gap, as to what is possible - and I know some service providers are better than others - but the knowledge isn't being shared and something like the research you're doing is probably possibly one way of sharing that knowledge, that will that will improve service delivery perhaps.	Lack of staff movement indicating a closed system where it is hard to learn. Sense of frustration with status quo Desire to be helpful in a broader sense – beyond own organisation	Enacted Sensemaking: Working though complexity Power relations in flux	Radically open

Interviewer: thank you, I really appreciate your time.

APPENDIX E

Audit trail for analysis: Research Cycle 2

E.1 RTA Theme Descriptions: Setting the scene

E.1.1 Theme 1. Resourcing the space

This theme is centred on the behind-the-scenes work and the resources it takes to run online services. There is a shift from reactive to proactive governance of the space as services mature. Resourcing includes personnel and policies as well as time: it takes time to support participation, develop the relationships and skill to support people to feel safe enough to participate freely. This includes careful consideration of the composition of groups to account for group dynamics and reflective practice on the part of facilitators. There is also a lot of backroom co-ordination and referral work to ensure the smooth running of the service.

1. ***Link with meaningful connection:*** *Constructing an online service is a creative process, that involves balancing time and resources, and consideration for creating the right dynamics that support meaningful connections.*

2. ***Link with psychological safety theory****: Resourcing not discussed apart from reflective practice.*

3. ***Link with psychological availability:*** *Staff time and emotional energy form part of the resource that sets the scene for virtual services. This requires presence and investment in relationship building and supporting participation.*

4. ***Link with practice theory:*** *This refers to the material-economic arrangements that are needed to scaffold practices, which change over time. In order for practices to change, the architectures supporting them must also change.*

5. ***Link with systems theory:*** *There are many different kinds of interrelationships at play here: between resources and action, between delivery and co-ordination, relationships between people. The process of resourcing virtual services involves staff presence which supports meaningful connection.*

E.2 The art of facilitating online

E.2.1 Theme 2. Boundary setting

This theme is about creating safe and clear boundaries within the practice setting, contracting for safe boundaries within sessions and with consideration for those others in the home environment. It also involves harnessing the technology to create safe spaces for one-to-one conversations in breakout rooms, for example. It is also about having candid conversations when necessary but also about the extent to which as facilitators it was possible to "work the edge" in an environment so that people can challenge themselves. Safety is also a function of the size of the group and the depth of connection is linked to both group size and the purpose around which people come together.

1. ***Link with meaningful connection:*** *Being meaningfully connected is a function of the size of the group and its purpose.*

2. ***Link with psychological safety****: linked to candor*

3. ***Link with psychological availability:*** *"Working the edge" requires active presence and sensemaking in real time.*

4. ***Link with Practice Theory:*** *Linked to cultural discursive relationships*

5. ***Link with systems theory:*** *foundational consideration of boundaries, interrelationship between home and virtual space.*

Theme 3: Growing wings on the way: *Everyone is new to the situation, there are no precedents, and staff learn as they go. Those who are able to adapt, learn by doing, but this does not suit all staff. The sense of knowing that they*

are not on their own and others are going through the same thing, collaborating across organisations supported learning. Being able to learn and adapt is associated with being able to turn up with enough confidence to go online.

1. ***Link with meaningful connection:*** *There is a need to be connected to others running virtual services, as much as those attending.*
2. ***Link with Psychological safety theory****: linked to candour*
3. ***Link with psychological availability:*** *A high level of presence is required in order to learn by doing in real-time.*
4. ***Link with Practice Theory:*** *Linked to cultural discursive relationships*
5. ***Link with Systems Theory:*** *Enacted sense-making in a complex adaptive system, engaging with multiple perspectives to learn forward.*

E.2.2 Theme 4. Live on air

There are two prevalent styles of running sessions: being an entertainer or a holder of space. Both are performative and call for putting up a good front, authentic use of self as well as personal risk-taking. Facilitators are predisposed to creating a positive space, whilst acknowledging that this does not necessarily preclude covering difficult or sensitive topics. Regardless of approach, all facilitators are sense-making in real time: they are becoming adept at reading the room and knowing what is needed and when.

Facilitators report that immense concentration and presence is needed to facilitate online: it is difficult to read body language, more tiring than in-person work and they use their embodied self as a facilitation tool.

1. ***Link with meaningful connection:*** *The relationship between the purpose of a session, the way in which it is run and the profile of attendees may influence the level of connection achievable in a given session.*
2. ***Link with psychological safety****: value of authenticity, candor, personal risk, identity*
3. ***Link with psychological availability:*** *Online facilitation requires immense concentration and embodied presence.*
4. ***Link with Practice Theory:*** *cultural discursive arrangements*
5. ***Link with Systems Theory:*** *There are multiple perspectives about how to run sessions. and also interrelationships between participants and the embodied facilitator, the virtual space and the content of sessions.*

E.3 The conditions for safety

E.3.1 Theme 5. Enhancing agency

This theme focuses on the importance of having choice about whether to participate in online services, when to come and go, as well as having control over which sessions or services to participate in. The right to choose between in-person, online and hybrid future possibilities of hybrid services is also discussed. Where participants feel they have agency, they can take ownership of the space and many thrive online and their social worlds are expanding as a result. Over time, confidence is enhanced, with some participants becoming more daring or "cheekier" online and taking more risks.

1. ***Link with meaningful connection:*** *Agency leads to more expansive connections through an enlarged social world.*
2. ***Link with Psychological safety theory****: The value of authenticity, candor, personal risk, identity*
3. ***Link with psychological availability:*** *Creating the conditions for agency involves ensuring that participants are free to make active choices about their participation.*
4. ***Link with Practice Theory:*** *cultural discursive arrangements*
5. ***Link with Systems Theory:*** *There is an interrelationship between the level of choice that and control people have around their participation and it is linked to a greater sense of agency and a sense of becoming more themselves online.*

E.3.2 Theme 6. Home comforts?

A reoccurring thread throughout the data is reference to the comfort of being at home in a familiar environment and its impact on a sense of safety. Familiarity with place, people and technology is seen to enhance safety and connection where home is a safe and stable environment and relationships are positive. Too much comfort can also be associated with complacency – a certain amount of discomfort is an inherent part of risk-taking. Not all homes are experienced as a safe sanctuary which also impacts on the extent to which people can freely engage online.

1. ***Link with meaningful connection:*** *home comforts influence degree to which connection is possible.*

2. ***Link with Psychological safety theory****: value of authenticity, candor, personal risk, identity*

3. ***Link with psychological availability:*** *participants need to be available to participate as part of the relational dynamic.*

4. ***Link with Practice Theory:*** *cultural discursive arrangements*

5. ***Link with Systems theory:*** *This relates to boundary issues between home and comfort levels and a tolerable level of discomfort that prompts trying something new. The interrelationship between comfort and risk-taking with home environment and personal relationships points to Ashby's Law of Requisite Variety.*

E.3.3 The nature of connection

E.3.4 Theme 7. The 'we' space

Connection arises when people feel seen and heard, when they are called by their own name. It is experienced as an energetic exchange, and involves facilitators allowing attendees to arise as a legitimate other before them. The strength of connection is in part dependent on the size of the group. There is a suggestion that connection also matters to staff. The interdependency between everyone is heightened when there is mutual regard for the other.

1. ***Link with meaningful connection:*** *The 'we-space' is pivotal in cultivating meaningful connections where people feel that they matter.*

2. ***Link with psychological safety theory****: value of authenticity, candor, personal risk, identity*

3. ***Link with practice theory:*** *relatings in social-political space*

4. ***Link with psychological availability:*** *Presence is required for an energetic exchange to be possible.*

5. ***Link with systems theory:*** *Interdependence is a key feature of systemicity. This theme points to the interrelationships and feedback loops between people, and it is also suggestive of multiple perspectives, where others arise as a legitimate other.*

E.3.5 Theme 8: Pixelated people:

Technology provides a site for practice. It is an ally for connection across a wider geographical spread. It can also be harnessed to provide new methods for facilitating. It acts as a leveller as disabling conditions are often less obvious on screen. It also makes it more difficult to detect nonverbal cues of discomfort, where they are hidden off-screen.

1. ***Link with meaningful connection:*** *It is possible to have a meaningful connection across a screen, which means that technology as a site of practice needs more attention.*
2. ***Link with psychological safety:*** *The screen seems to make it a safer space for some which may be linked to being able to hide what people do not want to be seen.*
3. ***Link with psychological availability:*** *Being online seems to be a good fit for some facilitators, prompting new activities and facilitation methods.*
4. ***Link with Practice Theory****: encountering each other as embodied persons in physical space-time through the medium of activity among material economic arrangements*
5. ***Link with systems theory:*** *There is an interrelationship between the site of practice and facilitation. The screen both facilitates and inhibits different ways of being online.*

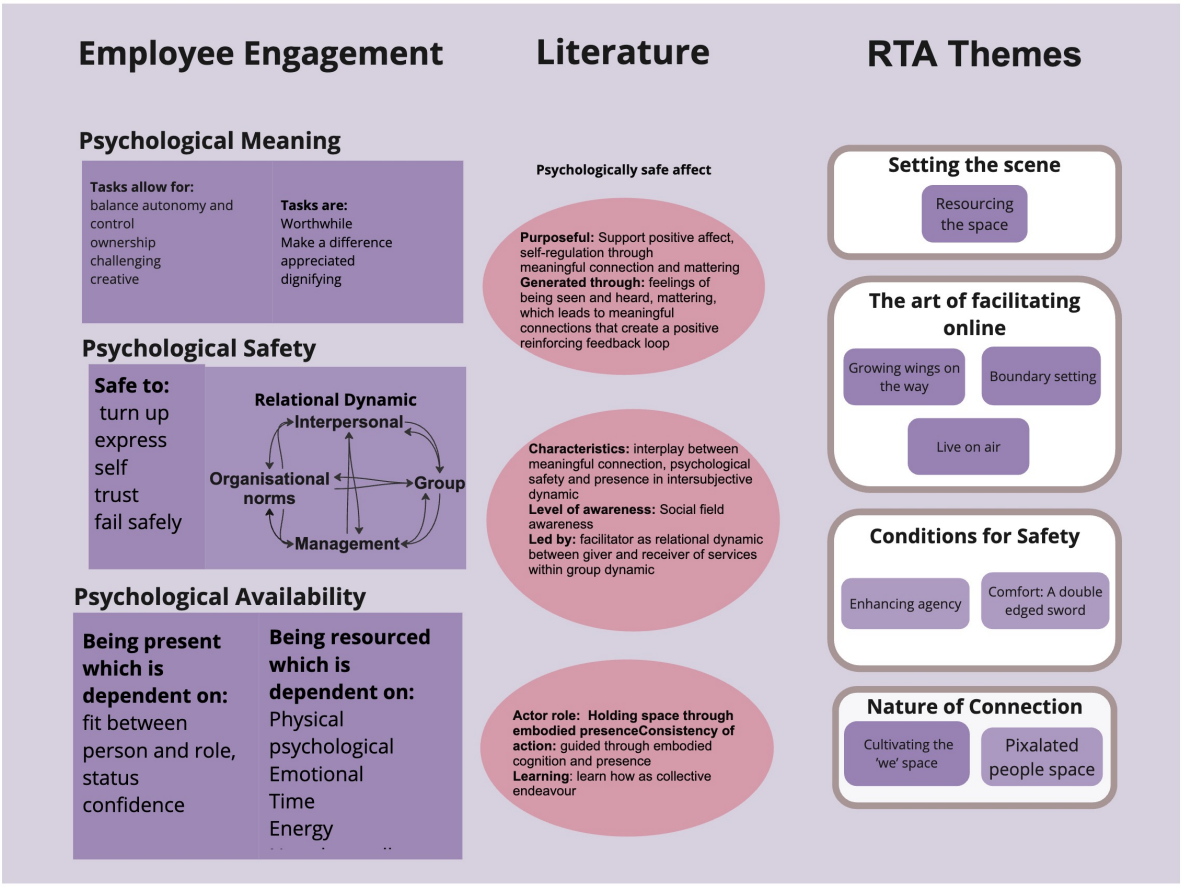

Figure E.1: Theme Descriptions World Cafe

APPENDIX F

Research Cycle 3: TASCOI analysis

Transformation sought: (*What input is converted into what output?*)

from a self-organised and ad hoc consideration of how to design safe virtual spaces to a shared framework or set of principles guiding the design and development of safe virtual space within the disability service niche.

Actors: (*Who is involved in carrying out the activities entailed by the transformation?*)

Service delivery staff: facilitators, trainers of online services, including disabled facilitators

Suppliers: (*Who provides the inputs into the transformation?*)

Managers: CEOs of organisations, managers of virtual services

Service delivery staff: facilitators, trainers of online services, including disabled facilitators

Service Designers: Digital Assistive Technology expert, IT expert

Customers: (*Who receives outputs of the transformation?*)

Attendees: disabled people attending services

Owners: (*Who is responsible for making sure it happens?*)

Managers: CEOs of organisations, managers of virtual services

Intervenors: (*Who, on the outside, is defining the context for the system's transformation?*)

Policy-makers: commissioner of services, regulator, policy advocates

Researchers: research, an academic, independent researcher in disability services

APPENDIX G

Research Cycle 3: analysis

G.1 Questions on System 3 Management

Table G.1: System 3 Management

System 3 Function	Q3: Who directly affects or is affected by virtual services and what is their role in creating a safe environment?	Q8: What kinds of actions do staff need to be able to take to deal with unexpected occurrences during and after sessions?	Q9 What resources are needed to ensure safety is sustained?	Q10: What mechanisms need to be in place to ensure the space is safe?	Q13: What kinds of supports would help staff develop their practice in creating safe virtual spaces?
Requisite Variety Autonomy & Accountability Collaboration & Conflict	x	x	x	x	x
Resources Development Negotiation	x		x	x	x
Communication & Information	x	x			x
Monitoring and Evaluation	x	x		x	
Emergency Alert System		x		x	

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