Sustainable ICT – Action Planning for the New Economy

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Introduction

The global economy is showing promising signs of recovery, and the 16th Conference of the Parties (COP 16) to the UN Framework Convention on Climate Change, in Cancun, Mexico at the end of 2010, concluded with an approach to addressing climate change that is based on national action plans and reporting of progress against national targets. In the current economic environment, both sustainability and IT will play pivotal roles in any recovery. When these two powerful components come together, as in Sustainable ICT, it is clear that carrying on with an outdated plan or simply seizing some quick wins could be remiss, or potentially neglectful of a business imperative.

At the very least, sustainability and IT teams should jointly pause to take stock, review achievements, and confirm targets (including the objectives and actions to meet those targets). However, it is highly likely that objectives agreed in the past will not meet the needs of changing economies, and growth expectations.

During the economic recession, *Sustainable ICT (or Green IT* as it is often called) played a key role in business by contributing directly to cost savings and accelerating the adoption of new technologies. One of the most commonly cited examples by many organisations is the accelerated use of technologies to provide improved facilities for virtual meetings and collaboration. These technologies helped to reduce a significant cost to many organisations – that of business travel – while simultaneously helping to meet corporate sustainability targets. Many organisations were able to capture very tangibly the direct business value delivered by investment in such technologies and are now keen to maintain and even augment those significant benefits by making them sustainable.

The recovering economy is presenting organisations with a clear obligation to review their sustainability strategies and priorities in tandem with their other business priorities, to set new goals, and to measure and report progress.

So what is the future role of *Sustainable ICT* in supporting business recovery and growth? And what are the implications and priorities for business and IT to deliver successful and *Sustainable ICT*?

To set the scene for *Sustainable ICT* in 2011, we should review three significant influences:

/// The status and expectations of sustainability.

/// The changing state of the economy.

/// Business expectations of IT in the current economy.

Keywords
Sustainable ICT, economy, climate change, recovery, targets, sustainability, business value, growth

The Status and Expectations of Sustainability

In December 2009, business and government leaders gathered at COP 15 in Copenhagen with high hopes of global agreement on climate change priorities and action. They emerged largely disappointed, in part at least due to those high hopes – but with some notable positive indicators, specifically:

/// The presence of so many heads of state and government demonstrated a political will and commitment to stay the course on a long and complex journey.

/// The conference highlighted key players working together towards consensus.

/// The conference stressed the need to establish comprehensive plans to reduce the sources of human-induced climate change (mitigation) and to moderate the effects of climate change (adaptation) with international support.

/// The *Copenhagen Accord* (a document that was agreed to by COP 15 delegates) created an immediate focus for national policies from 2010 to 2020 as well as an important focus for companies' climate change strategies.

Disappointment however did not halt activity and there was undoubted recognition of the need to make progress, albeit at a national level if global agreement was to prove elusive. Following COP 15, a global survey of business leaders revealed that despite a challenging economic environment, and disappointment with the outcome of COP 15, organisations were continuing with their climate change initiatives and also increasing their activity in this area:

/// Over two-thirds of organisations already had a climate change programme in place.

/// The top driver of climate change programmes was energy costs, closely followed by changes in customer demand and new revenue opportunities.

/// Investment in energy efficiency topped the list of climate change initiatives planned in the next twelve months – with development of new products and services, and transparency in corporate reporting identified as other investment priorities

/// 70 percent of organisations planned to increase their spend on climate change initiatives between 2010 and 2012, with nearly half of such organisations saying that the increased spend will represent between 0.5 percent and more than ten percent of their revenue

Nevertheless, it was clear from comments made by survey participants and their responses that despite clear business drivers, increasing budgets and planned initiatives, organisations were struggling with execution [1].

The Changing State of the Economy and Business Expectations of IT

Now let's review expectations of IT in the recovering economy. Recent research among business and IT executives in organisations of varying sizes, in a variety of sectors in 15 countries, revealed high expectations of IT in our recovering economy but also some distinct uncertainty about the capability and readiness of IT to take on that role:

/// 40 percent of respondents intend to take an aggressive growth-oriented stance as market demand outlook improves, and 34 percent will pursue growth opportunistically.

/// Over 50 percent of respondents consider that IT will play a very important role in managing future economic and business trends.

Yet

/// 81 percent of respondents said IT needs to develop skills in understanding what the business needs from IT, and 71 percent of respondents said IT needs to improve its skills in communicating with the business.

/// Only two-in-five respondents have measures in place to quantify ROI on IT.

/// Only 15 percent of respondents believe IT is very well prepared for the future.

One more noteworthy finding in the survey results is that, for the most part, CIOs believe IT is doing a better job than their business counterparts think it is [2].

Other research confirms that 93 percent of organisations see sustainability as important to their company's future success [3].

Therefore, organisations recognise sustainability as important to their success, and consider that IT will play a critical role in future economic recovery and growth. However, there is a clear message to IT: to play that role effectively, it needs to take some positive actions if it is to fulfil its potential and meet expectations.

The Scope and Remit of Sustainable ICT and Some Misconceptions

Sustainable ICT is not only about IT making its contribution to a company's sustainability goals by reducing energy consumption and taking action in other IT operational activities, but also, and often more importantly, it is about enabling the business to meet its sustainability goals and targets. This extends significantly the scope of IT from simply the IT lifecycle of *Design, Procure, Run and Dispose*, to achieving business alignment, and identifying those business processes where IT can help the business to achieve its sustainability goals.

Despite an increasing profile and tangible measurable benefits to be realised, there remain a number of misconceptions about sustainability in general; some of the more common being:

/// It is expensive to implement.

/// It relates simply to saving the planet and is not a business issue.

/// It is driven by compliance.

/// The economic situation caused companies to halt their sustainability programmes and activities.

Additional misconceptions about *Sustainable ICT* include:

/// It is just about energy savings.

/// It is just about the data centre.

/// It is just about what goes on in IT's own arena.

In fact, the economic situation and the drive to cut costs actually accelerated a number of activities by virtue of their significant cost savings potential. Meeting sustainability targets was an added bonus. In this case, the easily-attained achievement was the accelerated implementation of technologies to enhance the quality of meetings and reduce travel costs – a significant budget item in many organisations. This achievement also presented an opportunity for IT to show how it could enable sustainable business processes.

How Should IT play its Role in the New Global Economy while increasing its Maturity in SICT?
First, heed the clear message from the business about gaining a real understanding of what it needs from IT, whatever the specific subject. Irrespective of the priority of sustainability up until now, in the new economy sustainability may be critical to success due to company reputation or as a competitive differentiator.

Alternatively, sustainability may have been a priority previously and it may still be one, but in the new economy the economic drivers may have changed from being regulatory-driven to being opportunities for new markets or products. Consequently, ensuring IT is well integrated with the organisation's sustainability plans and teams is key.

Once the organisation's sustainability objectives and drivers are confirmed, assess the current state of *Sustainable ICT* via discussion with business and IT stakeholders, and assess the level of satisfaction with the current state. Then agree a realistic target state, complete with timescales. Develop a plan to achieve the target state – with clear objectives, accountabilities, risks, dependencies, and measures.

Straightforward? Not necessarily. But why not? Because sustainability is still a relatively new, evolving and complex subject, because the contribution of IT is often seen as confined to the data centre, and because for those with responsibility for *Sustainable ICT*, it can feel like they are pioneers in uncharted territory with no map to guide them. This means that once the easily-attained achievements have been realised, it is unclear where to go next and how far along the journey they are.

A Framework for Action
If investment is to be focused on the right activities and the organisation is to see the tangible benefit of that investment, taking a structured approach is critical. The IT Capability Maturity Framework™ (IT-CMF™) from the Innovation Value Institute provides that structure for IT overall, and specifically for Sustainable ICT (see Figure 1).

Figure 1

The IT Capability Maturity Framework (IT-CMF)

Managing IT like a Business

ITG   IT Leadership & Governance
BPM   Business Process Management
BP   Business Planning
SP   Strategic Planning
DSM   Demand & Supply Management
CFP   Capacity Forecasting & Planning
RM   Risk Management
AA   Accounting & Allocation
ODP   Organisation Design & Planning
SRC   Sourcing
IM   Innovation Management
SAI   Service Analytics & Intelligence
SICT   Sustainable ICT *

SICT acts a standalone process with increasing maturity as well as influencing other critical processes in IT

Managing the IT Budget

FF   Funding & Financing
BGM   Budget Management
PPP   Portfolio Planning & Prioritisation
BOP   Budget Oversight & Performance Analysis

Managing the IT Capability

EAM   Enterprise Architecture Management
TIM   Technical Infrastructure Management
PAM   People Asset Management
KAM   Knowledge Asset Management
RAM   Relationship Asset Management
RDE   Research, Development & Engineering
SD   Solutions Delivery
SRP   Service Provisioning
UTM   User Training Management
UED   User Experience Design
PPM   Program & Project Management
SUM   Supplier Management
CAM   Capability Assessment & Management

Managing IT for Business Value

TCO   Total Cost of Ownership
BAR   Benefits Assessment & Realisation
PM   Portfolio Management

The IT-CMF provides the structure for business and IT leaders to collectively assess their current maturity, to set an agreed target maturity goal, and to agree what is important – so that they can set priorities for action. Each IT process within the IT-CMF consists of building blocks against which maturity levels are defined. The IT-CMF structure allows an organisation to assess their overall maturity in an individual IT process and to specifically identify where within that process action is needed to increase maturity, taking into account both their desired maturity and stakeholders' views of what is important. The IT-CMF also helps to identify where stakeholders agree and where they differ in their views so agreement can be reached and expectations managed. Finally, the IT-CMF identifies within that process where sufficient action may have been taken already so organisations can avoid wasting effort and focus resources elsewhere (see Figure 2). Such a correlation of maturity against importance provides the basis for a focused action plan with a framework against which to measure progress.

Figure 2

Maturity Curve and Building Blocks for Sustainable ICT

Category	Capability Building Block	
Strategy & Planning	A1	Alignment
	A2	Objectives
Process Management	B1	Operations & Lifecycle
	B1	ICT-Enabled Business Processes
	B3	Performance & Reporting
People & Culture	C1	Common Language
	C2	Adoption
Governance	D1	External Compliance
	D2	Corporate Policies

Sustainable *ICT, as one of the processes in the IT-CMF*, has nine Capability Building Blocks (CBBs) for success, grouped under four categories. The CBB that often receives most focus and activity initially in organisations is *IT Operations and Life Cycle*, which starts with procurement and moves through to disposal. Another important CBB is *ICT-Enabled Business Processes*, which provides for IT to support the business in attaining its sustainability goals. Many organisations focus on these two CBBs first. When they reflect on what has been achieved, they may find that recognition of achievement is less than hoped for, because insufficient attention was paid to the *Strategy and Planning* category and defining clear objectives so that progress could be measured in *Performance and Reporting*. The CBBs in the *People and Culture* category also often receive less attention. This means those with responsibility for *Sustainable ICT* miss out on valuable support because there is a lack of awareness and understanding of what is still a new and evolving subject despite it being a clear priority.

In conclusion, CIOs have two clear responsibilities: firstly to ensure they have a clear understanding of the organisation's current objectives and expectations with respect to sustainability, and secondly to ensure their plans are sufficiently comprehensive to ensure demonstrable business alignment and tangible achievements.

Eight-Point Action Plan

1 Confirm business priorities and drivers for sustainability.

2 Agree accountabilities.

3 Assess current state and desired future state.

4 Ensure integration with the organisation's overall sustainability strategy and programme.

5 Agree objectives, priorities, timeframes and measures.

6 Identify quick wins.

7 Develop and implement awareness, education and communication plans.

8 Set review points to monitor progress and make course corrections.

References

Action amid uncertainty – the business response to climate change Ernst & Young 2010.

Innovating for growth – IT's role in the new economy Ernst & Young 2011.

A new era of sustainability – UN Global Compact – Accenture CEO study 2010.

About the Author

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Innovation Value Institute (IVI)

The Innovation Value Institute (IVI) is a multi-disciplinary research and education establishment co-founded by the National University of Ireland Maynooth and Intel Corporation. IVI develops frameworks to assist IT and business executives to manage IT for Business Value and to deliver IT-enabled business innovation. IVI is supported by a global consortium of like-minded peers drawn from a community of public and private sector organisations, academia, analysts, professional associations, independent software vendors, and professional services organisations.

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