

<u>White Paper, March 2014</u> <u>Catherine Crowley, Dr Clare Thornley</u>

How Can I know When it's Time to Stop an IT Project?

## Abstract

IT projects should deliver value to organizations but there are cases when, however well planned a project may have been, changes in the environment and/or in the strategic priorities of the organization mean it can never deliver value. Value is a subjective term and simply means, in this context, something that is important to the organization which would generally result in profit in a commercial entity or improved service in a public entity. This white paper addresses the problem of how to ensure that you will have the capabilities in place to know when your project can no longer deliver value and to take appropriate action. It does not discuss in detail the technical issues of project management execution, as a well-executed project can still fail to deliver value. Rather, it looks at the specific question of knowing when projects can no longer deliver value and putting measures in place to both prevent and address project escalation. We show how a capability-based approach can improve your ability to quickly identify projects that have started but now can no longer deliver value. This capability increases the agility of the organization and makes it easier to develop and maintain competitive advantage.

KEYWORDS: Project escalation, project management, business value management, project abandonment, benefits, capability, competitive advantage, IT Capability Maturity Framework<sup>™</sup> (IT-CMF<sup>™</sup>)

## Introduction

## 1. Business Value and Stopping Projects

Why should you want to get good at stopping projects when completing them is generally seen to be the objective? It seems to be human nature to see project completion as a success and project abandonment as a failure. However, there are cases when it is important to stop a project because things have changed and its completion can no longer bring value to the organization. Importantly, this can be the case even if the project has been well planned in terms of its original business case, and is doing well on objective metrics such as budgetary control and scheduling. A project can be 'going well' in terms of cost, time, and meeting defined requirements, but it may also be drifting out of alignment

with the overall strategic needs of the organization because of an important change in the external or internal competitive environment. Value is something that is important to the business but what constitutes value can change, sometimes quite quickly, because business priorities change and/or the external environment changes. If projects that can no longer deliver value are allowed to continue this is known as project escalation (Keil, 1995). This specific term "project escalation" is used to describe the way that failing projects are allowed to continue despite overwhelming evidence that they are destined to fail or, from another perspective, where there is both continued commitment and negative information (Keil, 1995). We are referring here to a

continued commitment to failing projects such as 'runaway' or 'de-railed' projects. This should not be confused with the usual use of the word "escalation" which normally refers to the action of raising an issue for resolution to a higher authority.

Clearly the relationship between the business priorities, as reflected in the strategic and business plans and the external environment is one of complex interaction. There are at least two possible scenarios for a value shift. Firstly, the project is capable of delivering the planned value but there has been a change in what is important to the organization and that the planned value is no longer of value. Secondly, what is of value to the organization does not change but new, unforeseen information or events - such as a global shortage of raw materials or economic and or political instability in the target region which was the planned market - mean that it has become impracticable for a particular project to deliver value. Both these scenarios change the ability of a project to deliver value.

There is the problem of knowing when it is time to change priorities (what is of value to the business) and there is the problem of making sure that this change is reflected quickly in what the business is actually doing and also not doing (and how quickly the value can be re-assessed). In this white paper we focus on the second problem. Firstly we identify the key issues relating to the problem and then provide some suggestions on how to address them. This white paper provides guidance on practices and approaches which make it easier to stop projects that need to be terminated. In many cases what you need to do to prevent project escalation is pre-emptively ensure, per-project kick-off, that there is a sound business case and effective governance systems in place. It is important to remember though that even the best planned project, with an excellent business case, may need to be stopped because of the nature of the changing competitive environment. It is the readiness and ability to deal appropriately with that change that is the focus of this paper.

#### 2. Why is it important to stop projects?

Projects that can no longer deliver value that are not stopped continue to drain resources from the organization. Eventually, or in some cases quite quickly, this can have fatal impact for an organization – particularly, when one considers the high cost associated with capital IT projects. The inability to identify and terminate 'escalating' projects reduces the ability to stay in business or, in the case of public organizations, can negatively impact the delivery of a quality service.

Agility, the ability to respond quickly to external change, is a key factor in maintaining competitive advantage. The focus is normally on being able to start new projects or products quickly but it is also important to be able to stop quickly and cancel projects that will not bring value. Flynn (Flynn et al., 2009) suggests that an organization that is good at knowing when to stop projects is also good at learning from projects. Thus improving your maturity in this area will have desirable wider positive impact of delivering successful, business aligned projects. The practice of continuing with doomed projects may also be an indicator that there is poor articulation and communication of what is really important to the organization (what is value for that organization). This is a problem that needs to be addressed not only due to its drain on resources but because of its corrosive effect on the ability to innovate and stay competitive.

The Standish Group (Webpage) state that 79% of IT executives said it is difficult or very difficult to recognise when they should pull the plug on projects. There is a tendency to continue commitment to a project even when its value is in doubt due to underlying emotional and political factors (Cleland et al., 2000). For example, the project manager and team members may fear loss of power, status or even their job as a result of such project termination. Organizational politics may also come into play where the project in question is a 'pet project' of some senior executive sponsor or where groupthink leads the team to believe all project difficulties can be overcome in time. So, the question is what can you do so that your organization is less likely to carry on with projects that are well past their ability to deliver value and make informed and timely decisions on 'when to pull the plug?

### What are the Key Elements of Project Escalation?

Project escalation is about continuing commitment to a failing course of action arising due to changing value priorities or a changing competitive environment. Project escalation has been defined as the decision to continue in the face of negative feedback. This feedback can be about prior resource use, uncertainty surrounding the likelihood of goal attainment, and the lack of a clear evidence about whether to continue or not (Keil, 1995) (Brockner, 1992). The decision to call a halt to a problem project is not an easy decision to make. A choice has to be made on continuing the project, which is associated with certain costs, or abandoning it, and normally there is some

ambiguity associated with the consequences of either action. Although, currently facing negative interim outcomes, the eventual project outcomes may or may not be negative (Pan, 2006). The Hubble telescope and Sydney Opera House are some notable examples that were initially viewed as project failures, but today are seen as outstanding successes (Baker, 2002).

A project arrives at an escalation decision point through a combination of psychological, social, and organizational factors (Keil, 1995). The Project Manager and Project Sponsor have several, sometimes conflicting, considerations to take in a decision to de-escalate a project. How do they know the project is escalating if the criteria to judge this have not been clearly defined at the project start? Is there a good Business Case to refer to, that details the expected generation and realization of benefits? (Zwikael and Smyrk, 2012). Are there relevant metrics available to judge the effectiveness of the investment in delivering value? There are usually multiple stakeholders with varying expectations, and perceptions of success and failure are complex in that one person's success can be another person's failure. (Al-Ahmad et al., 2009).

There is the problem of sunk costs and justifying the project decision-making to date in the face of prior resource use (Keil et al., 2000). What level of risk is appropriate to take, when so much has already been invested? '*Risk and reward* often go hand in hand, and a world without escalation would be a world in which managers failed to take the kind of risks that can produce large rewards' (Keil and Mähring, 2010).

A good Project Manager will build up team commitment to the project. In the case of escalating projects, this very commitment can work against the Project Manager. Commitment is an emotional state. Who wants to be a whistle-blower and risk their reputation and incur team hostility (Southon et al., 1999) when there are no guarantees of acceptance? Likewise, the Project Manager and Sponsor, who usually make the decision, have their reputation, and the resulting likely taint of failure to think about. To address project escalation there must be a way to overcome both the 'mum effect' i.e. reluctance to report observed project issues, and the 'deaf effect' i.e. reluctance to hear bad news about project problems (Cuellar, 2009, Keil and Robey, 1999).

# Five things you can do about project escalation

IVI's IT capability maturity framework [IT-CMF] can help you to ensure that projects provide value for your organization. A capability comprises the differentiated resources that generate operational and strategic value for an organization (Bannerman, 2012). The IT-CMF takes a capability-based approach because this consistently leads to improved performance. (Donnellan et al., 2011, Curley et al., 2012, Kenneally et al., 2013). The IT-CMF provides the tools to assess how good, or mature, an organization is in certain key areas, or critical capabilities [CCs], and provides a clear roadmap to improve practices and increase maturity. We look at particularly relevant CCs from the IT-CMF which can help you improve your performance in recognising and stopping value-less projects. This is mainly discussed in terms of resisting the forces of project escalation; that is, what are the barriers to stopping projects and how can we overcome them?

Reducing the chances of project escalation is a complex problem with many facets ranging from financial reporting issues to the softer issues of managing people's fears of failure. A low maturity approach is characterized by ad hoc attempts to fix the project in hand while higher levels of maturity focus more on an organization-wide improvement in change management and learning (Flynn et al., 2009). Improving your capability drives project performance. Having high levels of capability in project management is critical to an organization's ability to respond to change (Bannerman, 2012).

A capability-based approach allows you to address all these issues and reduce the chance of '*runaway*' non-value delivering projects being allowed to damage your organization. Below are five things you can do to counter project escalation.

## 1. Focus on business value alignment and realization

It is essential that every project has a sound business case, describing how it will bring value to the organization, and that this is reviewed regularly and maintained. Too often the focus is on delivery of the technology itself, and not on information and its effective use to deliver value (Marchand and Peppard, 2008). Instead, project definitions and methodologies need to support the generation and realization of benefits and accountability in order for outcome realization to significantly improve project success. The project owner proposes the business case for approval by the funder and should be held accountable by the funder for its

eventual realization (Zwikael and Smyrk, 2012). There must be agreement on the primary objective of the project by all stakeholders which, in turn, should be clearly communicated and regularly enforced (Keil and Mähring, 2010). A project should be driven by a clear set of testable benefits. (Southon et al., 1999).

If a project claims it can deliver new unexpected value, despite the clear failure of its originally intended value, then Keil (Keil and Mähring, 2010) suggests that a new business case should be generated to guard against the invention of a new rationale for continuation. The relevant CCs in these cases are: Benefits Assessment and Realization [BAR], Portfolio Planning and Prioritization [PPP], Portfolio Management [PM], and Program and Project Management [PPM].

### 2. Ensure there is good governance

The governance of projects to allow failure sounds initially contradictory and there is a tension between rewarding competence and also allowing the possibility of acknowledging failure (Staw and Ross, 1987). There should be 'separation of *powers'* so that the person who decides whether to stop a project is not the same person as the one whose idea the project was in the first place, thus avoiding the pitfall of self-justification (Staw and Ross, 1987, Zwikael and Smyrk, 2012, Pan et al., 2006). The governance structure needs to include regular 'stepping back and taking stock' reviews that take an outsider perspective and that always consider other options (Keil, 1995). The level of sunk cost should also be disregarded when deciding whether to continue a project (Pan, 2006). Negative events impacting the value of the project should be prepared for in advance and, if they happen, big decisive changes should be made to the project, including termination, rather than small adaptations (Charvat, 2003). It should be assumed that unless structures, procedures and rewards are put in place to counteract them then the forces of inertia will tend to mean that failing projects will be allowed to escalate (Pan et al., 2006, Keil, 1995, Keil et al., 2000). Improving capability in this area can be achieved using the critical capabilities IT Leadership and Governance [ITG], Programme and Project Management [PPM], and Benefits Assessment and Realization [BAR].

#### 3. Communication and transparency is vital

There is a high level of change and uncertainty associated with IT projects (Bannerman, 2012) and, therefore, a need for transparency exists so that all stakeholders can see what is going on with the project. This will enable issues to be identified at the earliest opportunity. In order to stop projects there must be some

way for bad news about the project to be said and heard. This is a challenge as people generally don't like being the bearer of bad news and, even if this problem is overcome, the listener generally doesn't want to hear it. Communication is very important in times of change (Keil and Mähring, 2010, Charvat, 2003). Not only is it important to have good communication processes in place, but people must also be explicitly encouraged and rewarded for alerting projects to bad news and problems. Straw and Ross (1987) and (Keil, 1995) suggest providing incentives for a good project process, in terms of recognising problems and dealing with them rather than just rewarding completion. The idea of having bad news only reporting meetings is proposed by Flynn et al (2009) and the importance of dealing with barriers to bad news reporting is dealt with by (Cuellar, 2009). In terms of actual reporting systems, accurate financial information is essential and there must also be a way of managing the flow of money to projects (Keil and Mähring, 2010). The relevant CCs here are IT Leadership and Governance [ITG], Portfolio Management [PM], and Benefits Assessment and Realization [BAR].

#### 4. Stakeholder management is key

Project success depends on satisfying the stakeholders and being accepted and largely used by the end users after deployment (Al-Ahmad et al., 2009). There is a need to be aware of the importance of stakeholder resistance and its potential impact on the success of IT projects (Greenwood et al., 2010). Managing stakeholders during the project development may prove crucial to project value attainment and help offset project escalation. This includes managing evolving stakeholder expectations and stakeholder interrelationships that may develop over time (Pan, 2005).

There is a potential tension between wanting a project manager with the charisma and drive to successfully complete a project whilst also having the ability to successfully stop it if necessary. There are also complex factors, including perceived credibility and gender, which make it more or less likely that someone crying 'stop' will actually be listened to (Cuellar, 2009). In one sense it can be useful to have some turnover of project staff but this can cause problems of low morale (Staw and Ross, 1987). Greenwood advocates using Stakeholder Impact Analysis methods to identify and gain understanding of the underlying socio-complexity sources of risk to the project success (Greenwood et al., 2010). All the people management issues have conflicting and complex requirements,

such as managing the tension between change and continuity or success and failure, so it is particularly important to reach a high level of maturity in people management capability. There is a case to be made for matching the risk propensity of the project manager to the project to enhance the probability of project success (Keil et al., 2000). The relevant CCs to address these issues are People Asset Management [PAM], Programme and Project Management [PPM], and Benefits Assessment and Realization [BAR].

## 5. Develop a value culture that supports learning and innovation

A culture should be developed that encourages problem disclosure (Keil and Mähring, 2010). It is easier to stop projects if there is culture based around business value for the whole organization rather than loyalty to particular projects. There needs to be an understanding throughout the organization that stopping projects that do not bring value to the organization can prevent the organization as a whole failing.

There is a move towards 'fail fast' project management approaches (Glick, 2013), which develop rough prototypes and then discard them quickly if they don't work out, suggesting that careful planning of complex and expensive IT projects may not always be the best approach. There is also a suggestion that stopping projects should just become part of what a business does, thus moving towards the model of an experimental organization. In some cases it can be useful to reduce the links of a project with the central purpose of the organization. This may appear to go against conventional advice on the importance of business cases linked to an organization's strategic objective, but it can open up space to improve innovation. If a project is labelled as peripheral or experimental it is treated on its own merits and stopped on its own flaws rather than being seen as an integral to the organizational mission. Current work on project escalation also shows that getting good at stopping projects makes an organization generally better at learning and thus increases maturity in a range of different areas (Flynn et al., 2009). The relevant CCs to instil a value culture and improve capacity in learning and innovation are Benefits Assessment and Realization [BAR] and Innovation Management (IM).

What you can do about Project Escalation	IT-CMF Critical Capabilities to Reference
Focus on business value alignment and realization	Benefits Assessment and Realization, Portfolio Planning and Prioritization, Programme and Project Management, and Portfolio Management
Ensure there is good governance	IT Leadership and Governance, Programme and Project Management, and Benefits Assessment and Realization
Communication and transparency is vital	IT Leadership and Governance, Portfolio Management, and Benefits Assessment and Realization
Stakeholder management is key	Benefits Assessment and Realization, People Asset Management, and Programme and Project Management
Develop a value culture that supports learning and innovation	Benefits Assessment and Realization, and Innovation Management

## Table 1: IT-CMF CCs that can help address project escalation

## Conclusion

Increasing your maturity in project escalation management can be complex, but it has multiple benefits. Using information from projects that have been stopped provides a means of continuously learning about what works and what doesn't work in generating business value for your organization. Also, the alternative, not being able to stop doomed projects, is dangerous and possibly fatal to your organization.

The IT-CMF can provide you with guidelines on how to improve your current practices to increase your capabilities in vital areas of IT management. This will help you gain agility and competitive advantage. Please contact us at: <u>ivi@nuim.ie</u> or +353 (0)1 708 6931 or visit <u>www.ivi.ie</u> for more information on how we can help.

## References

- AL-AHMAD, W., AL-FAGIH, K., KHANFAR, K., ALSAMARA, K., ABULEL, S & ABU-SALEM, H. 2009. A taxonomy of an IT project failure: Root Causes. International Management Review, 5,93–104.
- BAKER, B. 2002. The Fall of the Firefly: An Assessment of a Failed Project Strategy. Project Management Journal, 33,53.
- BANNERMAN, P. L Why Good Project Management Is Not Enough: Liabilities of Incumbency and Newness. PMI Research and Education Conference, 2012 Newtown Square, PA.: Project Management Institute.
- BROCKNER, J 1992. The Escalation of Commitment to a Failing Course of Action: Toward Theoretical Progress. The Academy of Management Review, 17,39–61.
- CHARVAT, J. 2003. Re-engineering IT Projects: Knowing When to Stop. Cost Engineering, 45, 10.
- CLELAND, D. I., IRELAND, L R & IRELAND, L 2000. Project manager's portable handbook, McGraw Hill.
- CUELLAR, M. J. 2009. An Examination of the Deaf Effect Response to Bad News Reporting in Information Systems Projects.
- OURLEY, M., KENNEALLY, J. & DRESCHMEER, R 2012. Creating a New IT Management Framework Using Design Science. In: HELFERT, M. & DONNELLAN, B. (eds.) Practical Aspects of Design Science. Springer Berlin Heidelberg.
- DONNELLAN, B., SHERIDAN, C. & CURRY, E 2011. A capability maturity framework for sustainable information and communication technology. IT professional, 13, 33–40.
- FLYNN, D., PAN, G., KEIL, M. & MÄHRING, M. 2009. De-escalating IT Projects: The DMM Model. Communications of the ACM, 52 , 131-134.
- GREENWOOD, D., KHALEH-HOSSEINI, A. & SOMMERVILLE, I. 2010. Lessons from the Failure and Subsequent Success of a Complex Healthcare Sector IT Project. arXiv preprint arXiv:1003.3880.
- KEL, M. 1995. Pulling the Plug: Software Project Management and the Problem of Project Escalation. MISQuarterly, 19,421–447.
- KEL, M. & MÄHRING, M. 2010. Is Your Project Turning into a Black Hole? California Management Review, 53, 6–31.
- KEL, M. & ROBEY, D. 1999. Turning Around Troubled Software Projects: An Exploratory Study of the De-escalation of Commitment to Failing Courses of Action. Journal of Management Information Systems, 15,63–87.
- KEL, M., TAN, B. C. Y., WEI, K-K, SAARINEN, T., TUUNAINEN, V. & WASSENAAR, A. 2000. A Cross-Oultural Study on Escalation of Commitment Behavior in Software Projects. MISQuarterly, 24, 299–325.

- KENNEALLY, J., WILSON, B., PORTER, M. & MURNANE, S. M., STEPHENBUDDRUS, UWEBOUTEMY-DENIAU, MARION HOYT, JOHN 2013. Leveraging IT Capabilities to Accelerate Business Value Impact from Electronic Medical Record Adoption. Innovation Value Institute.
- MARCHAND, D. A. & PEPPARD, J 2008. Designed to fail: why it projects underachieve and what to do about it. Research paper, 11, 1–28.
- PAN, G. The Hidden Dilemmas in Software Development Project Decision-making: Persist or Desist? PACIS, 2006. 92.
- PAN, G., PAN, S L., NEWMAN, M. & FLYNN, D. 2006. Escalation and de-escalation of commitment: a commitment transformation analysis of an e-government project. Information Systems.burnal, 16,3–21.
- PAN, G. S 2005. Information systems project abandonment: a stakeholder analysis. International Journal of Information Management, 25, 173–184.
- SOUTHON, G., SAUER, C & DAMPNEY, K 1999. Lessons from a failed information systems initiative: issues for complex organisations. International journal of medical informatics, 55, 33–46.
- 22. STAW, B. M. & ROSS, J. 1987. Knowing when to pull the plug. Harvard Business Review, 65, 68–74.
- 23. WEBPAGE, T. S. G. The Standish Group [Online]. [Accessed 14th January 2014].
- 24. ZWIKAEL, O. & SMYRK, J 2012. A General Framework for Gauging the Performance of Initiatives to Enhance Organizational Value. British Journal of Management, 23, S6–S22.

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