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The realisation of Benefits from IT Projects: Does Practice makes Perfect?

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Abstract

There is growing agreement that the potential benefits of implementing business technologies will not be realised through the relatively simple act of going live with a new software application. Indeed, there is clear evidence that organisations must explicitly plan for, and proactively manage, the realisation of benefits, if a new technology is to deliver real value to its host organisation. In particular, benefits need to be leveraged through carefully planned and co-ordinated programmes of organisational change, and on-going organisational adaptation. Inevitably these insights have encouraged academics, consultants and practitioners to develop tools and techniques to explicitly support the benefits realisation process. In this paper, we argue that the adoption of any such prescription, tools or panacea is unlikely to be sufficient, as benefits typically arise from the complex interplay between systems, people, contexts and processes, often over significant time-frames. We show, through the use of a public sector case study, that a more robust and effective solution to benefits realisation problem is likely to arise from the development of a capability to support the realisation of benefits, composed of practices, and we then question as to whether it's enacted through craftsmen.

Key words

Benefits realisation, Resource-based view, Capabilities, Practices, Craftsmen.

1. Benefits realisation – it's a journey, not a destination

It is widely acknowledged that a considerable amount of time, money, effort and opportunity has been wasted upon IT investments that have either been abandoned, or ultimately failed to deliver any appreciable benefit (Ewusi-Mensah and Przanski, 1991; Kiel; 1995). Indeed, it has recently been suggested that *'only around 16 per cent of IT projects can be considered truly successful'* (BCS, 2004). There is also an established stream of research to suggest that the root cause of this problem is the failure of project teams to explicitly consider the organisational impacts and implications of a new piece of software and to proactively manage the associated organisational change (Clegg et al, 1997; Doherty and King, 2001). The typical IT project team will focus upon the delivery of a technical solution, and only concern itself with organisational impacts once the system is operational (Markus, 2004, Peppard et al, 2007). Indeed, it has been persuasively argued that benefits are typically leveraged from the changes to organizational structures, cultures, working practices and business processes that accompany the introduction of a new technology, rather than from the technology itself (Ward and Daniel, 2006). Against this backdrop, it can be argued that organizations should

attempt to break away from their current techno-centric mindset which focuses on the delivery of IT solutions, on time and to budget. Success will only come from a shift in mindset and practice that recognizes that benefits will only be realised when IT development projects are re-conceptualised as being first and foremost exercises in organizational change. Although there has been an awareness of the need for a benefits-driven approach to IT investments that addresses organisational changes for some time (Clegg et al, 1997; Doherty and King, 2001; Markus, 2004), there has been little by way of obvious adjustment to the practice of systems development (Peppard, et al, 2007; Ashurst et al, 2008). The likeliest explanation to this apparent paradox can best be summarised in the maxim: '*easier said than done*'. The benefits from a new IT investment may be hard to realise, because they arise from the complex and highly opaque interplay between the software, stakeholders, contexts and processes (Hughes and Scott-Morton, 2006). Neither do benefits stem immediately from the introduction of technology, even when accompanied by appropriate organisational change: in many situations benefits emerge, over significant time-frames, as users experiment with and exploit their systems. Furthermore, benefits may only be realised once an organisation takes steps to manage its diverse business applications as an integrated portfolio (Kumar et al, 2008). Consequently the realisation of benefits from technology is a journey, not a destination, and it is not amenable to any simple prescriptions, tools or techniques. It is more likely that benefits will be realised through the long-term development of a capability for benefits realisation, comprising highly skilled and innovative staff, who are tasked with understanding and exploiting a new technology through its development, implementation and ultimately its operational life.

In this paper, we aim to describe a 'capability for benefits realization', and demonstrate that its successful introduction is predicated upon organizations making an explicit commitment to improving their ability to effectively manage change. More specifically, we use the results of a major empirical study to demonstrate that it is the inability of organizations to effectively manage organizational change, which is both hindering the realization of benefits from individual IT projects, as well as preventing them from breaking free from their traditional ways of managing IT development projects. The remainder of this paper is organised into four parts. First, we provide a brief review of literature related to the concepts of resources, capabilities, competences and practices, before applying these to the task of IT benefits realization. We then outline the research method adopted for the empirical part of this study and summarise the key findings. Finally, we explore the theoretical and practical implications of this work, paying particular attention to the value of the competences/practices approach, in the realization of business benefits through IT.

2. From Organisational Capability to Individual Craftsman

In recent years, resources, capabilities, competences and practices have all received significant attention in the wider management literature (e.g. Barney, 1991; Grant; 1996; Teece et al, 1997; Brown & Duguid, 2000). More recently, Richard Sennett (2009) has reignited interest in the role of the '*craftsman*'. In this section we demonstrate the relationship between capabilities, practices and craftsmanship, before briefly exploring how these concepts can be applied to the task of leveraging benefits from IT investments.

2.1 Capabilities for effective IT Management

The resource-based view (RBV) of the firm (Wernerfelt, 1984; Barney, 1991) posits that organizations should invest in those assets and resources that will best assist them in gaining a competitive advantage. Whilst physical resources and assets are clearly an important element of the RBV, there is a growing recognition that resources, *per se*, do not create value.

Rather, value is created by an organization's ability to mobilize, marshal and utilize these resources, through the exercise of competences and capabilities (Black and Boal, 1994; Bowman and Ambrosini, 2000). A capability can be defined as an organization's ability to *'perform a set of co-ordinated tasks, utilizing organizational resources, for the purposes of achieving a particular end result'* (Helfat & Peteraf, 2003, p. 1000). However, organizations will only attain a sustainable competitive advantage if they can assemble a set of capabilities that can be consistently applied (Teece & Pisano, 1994) and that competitors find difficult to imitate (Barney, 1991; Prahalad & Hamel, 1990).

In a prior study, we have conceptualised the ability to realize benefits from IT investments as an organizational capability that is enacted through a portfolio of distinct, yet complementary, practices (Ashurst et al, 2008). Indeed, as discussed in the following section it is through the effective adoption of these practices that benefits are ultimately leveraged.

2.2 Practices – a way of operationalizing capabilities?

One potentially rewarding way of adding granularity to a benefits realization capability is by decomposing it into a number of constituent practices, each of which is underpinned by the skills, knowledge and experiences of organizational employees. The concept of practice is increasingly used within the organizational literature and has been defined (Wenger et al, 2002) as: *'a set of socially defined ways of doing things in a specific domain: a set of common approaches and shared standards that create a basis for action, problem solving, performance and accountability'*. Whereas the terms process and procedure resonate with how organisational activities should be accomplished, the concept of practice is rather less formal or prescriptive, in that it embodies the notion of how individuals and teams *actually* discharge their responsibilities (Brown and Duguid, 2000). As the term *'practice'* relates to how employees choose to discharge their responsibilities, it is particularly relevant to knowledge-intensive activities, such as IS projects, where much of the effort is based upon individual and teams applying their personal knowledge and experience (Newell et al., 2004). A key characteristic of a practice is the notion of discretion: *'practice is not a mechanical reaction to rules, norms or models, but a strategic, regulated improvisation responding to the situation'* (Schutlze and Boland, 2000: 204). Lave and Wenger (1991) argue that a *'community of practice'* is composed of people (practitioners) who share an interest, a profession, and/or a craft. This then begs the question as to whether a group of individuals enacting practices, within an organizational context, should be viewed as *'craftsmen'*. A craftsman (or craftswoman) has been defined (Wright-Mills, 1951) as *a labourer who "becomes engaged in the work in and for itself; the satisfactions of working are their own rewards; the details of daily labour are connected in the worker's mind to the end product; the worker can control his or her own actions at work; skill develops within the process; work is connected to the freedom to experiment"*. Based upon this definition, it would appear that few workers, within an organisational context, would be given the space and latitude to adopt the role of a true craftsman.

2.3 Research Focus and Research Questions.

We have argued that today, all organizations must develop a capability for benefits realization, through which it can improve the performance of its portfolio of IT investments. However, this capability cannot be developed within the boundaries of the IS function, as research demonstrates the need for enterprise-wide co-operation and engagement to realize the benefits from IT investments. In delivering value through IT, the key resource is not technology but people. It is the skills, experiences and knowledge that employees can bring to bear on the tasks of crafting new technologies, whilst also redesigning organizational processes and services (Newell et al, 2004). To date there has been little empirical research

that has explicitly sought to paint a rich picture of an organizational capability for benefits realization, and its constituent practices. In filling this gap, we also wanted to critically investigate the role of practices, in delivering high quality business systems (does practice make perfect?), and question whether the adoption of practices, is indicative of the presence of craftsmen.

3.0. Overview of the Research Methods

Before reviewing the research methods, it is necessary to comment on our philosophical perspective (Lee, 1999), which can be broadly categorised as '*interpretive*' as our aim was to gain '*knowledge of reality*' through the study of social constructions, in particular, language and documents (Klein & Myers, 1999). The aim of this section is to provide a review of the overall research design, before then describing the targeting, execution, analysis and context of the case study.

3.1 Research Design

To provide rich and critical new insights into the realisation of benefits from information systems development projects, we needed to gain a high degree of access to IT professionals and business stakeholders working on a variety of IT development projects. We wanted to target a public sector organisation, as we perceived that they might have the most to gain from involvement in our research, as prior research suggests that such organisations have typically struggled with IT projects (Goldfinch, 2007; Fountain, 2001), and they might be more open about their experiences, than their private sector counterparts. Ultimately, we gained permission to conduct in-depth case study at a public sector organisation, which had a number of distinct IT projects underway, which could be studied.

3.2 Data Collection

Our primary data collection instrument was the semi-structured interview, which allowed for a high degree of flexibility, and we sought to interview a variety of stakeholder, some more than once. The interviews were either tape-recorded or detailed notes were recorded, depending upon each interviewee's preference. To provide a broader perspective, and to triangulate the findings, a number of key project events – such as steering committee or project meetings - were observed, and a variety of project and strategic documentation were critically analysed. Upon completion of each data collection exercise, a provisional analysis of the data was conducted, after which a series of follow-up meetings were held within the case organisation, to validate and extend the analysis, as well as helping to fill any gaps in our understanding. A more detailed review of the data collection strategy is presented in table 1.

3.3 Data Analysis

The notes made during each interview were reviewed and typed up immediately after the interview, after which additional '*marginal notes*' (Miles and Huberman, 1994) and a brief summary of key themes were added. This data recording and preliminary analysis was in line with the recommendations by Silverman (2000) that it is important to expand beyond immediate observations to have four levels of notes: notes made at the time, additional notes as soon as possible after the session, a fieldwork journal to record problems and ideas that arise, and a provisional record of analysis and interpretation. This approach to data gathering and initial analysis was very helpful as it made it possible to adapt later interviews to take account of earlier findings, and for example, explore specific areas or seek evidence to

support preliminary conclusions (Daniel and Wilson, 2003). Following the preliminary analysis of each individual interview, a hermeneutic-based-approach was applied to further analyse and make sense of all the research data that had been collected for the case study, as a whole (Butler, 1998; Lee, 1999). To ensure that a rich and valid interpretation of the data was ultimately achieved, the analysis was not conducted in a single iteration: the researchers sought to ‘*understand the whole*’ by continually revising it in ‘*view of the reinterpretation of the parts*’ (Myers, 1994; 56). Consequently, the researchers would keep re-visiting their interview transcripts and other documentary evidence, and where necessary initiate follow-up phone-based interviews, to help integrate the individual pieces of evidence into a coherent whole (Butler, 1998).

ID	Interviewee
C01	Director of business division (including IT) & sponsor of the Transformation Programme (2 meetings)
C02	IT Director and project manager for thin client desktop (plus email follow up)
C03	HR/Payroll project sponsor (Director of Organisational Development)
C04	HR/Payroll project manager – a member of the Transformation team responsible for the overall project (business and IT)
C05	Customer Services Manager and sponsor for the CRM programme
C06	Customer Services Operations Manager
C07	Customer Services Supervisor
C08	IT project manager for the CRM project
C09	Customer Services Assistant
C10	Transformation Manager
Observational events	
C11e	Tour of Customer Services Centre
C12e	Informal discussions with Customer Services staff
C13e	Attendance at leadership Forum event
C14e	Informal discussion with member of Transformation Programme Team

Table 1: Data collection at the Council

3.4 The Case Study Organisation

In response to pressure from the government to ensure that local government was providing value for money, the Council undertook a ‘*best value review*’ covering IT and various service functions (payroll, council tax collection etc). The review exercise resulted in a transformation programme and the outsourcing of some Council activities. The Transformation Programme was based upon business change and benefits realisation: “*In a compressed period of time we’re bringing about radical change in how the Council works using IT as a catalyst...The Transformation Programme plan and the Transformation Programme office is about monitoring the benefits realised and making sure benefits are realised at the appropriate time....IT is recognised as a key business enabler*”. The case study is primarily based upon three projects that were part of the overall Transformation Programme. These projects were: 1) a desktop renewal system, across all council PCs; 2) a human resources and payroll system and 3) customer relationship management, to “*challenge the way we operate and deliver services around the needs of the customer*”. At the end of the data collection period, all three projects were projected to deliver their planned benefits, and many benefits had already been realised. For example, the CRM system had increased the resolution of queries, at the first point of contact, from 70% to 83%, whilst also significantly improving customer satisfaction ratings. With respect to the HR system, the IT Director

commented *“It went in absolutely on time and on budget”*, and perhaps most importantly it achieved all of its primary objectives, most noticeably *‘a reduction in the incidence of sickness absence’*.

4.0 Developing a capability for benefits realisation.

The case organization studied had a far reaching and ambitious target for its strategic change programme: *“radical change in how the Council works, using IT as a catalyst”*, but *“in a compressed period of time”* (C02). In addition to benefits realization from the specific investments, in question, a further explicit aim was to build a benefits realization capability, comprising a toolkit of practices, which could be applied to the downstream exploitation of benefits, from its strategic initiative, as well as supporting all future IT projects.

Key stakeholders, within the case organisation, talked about developing a shared toolkit rather than adopting a specific project or systems development methodology. The Director of the Transformation Programme described how when he arrived at the Council he saw a latent change capability in people and the organisation. People had been doing the right things but did not know it and were not articulating it as managing change. One of the drivers for the toolkit approach he adopted was to release the potential in people and build on what they were already doing. The tool kit comprised of both standard tools, which were customised for use within the transformation programme, as well as a variety of practices that could be applied in a flexible way, across a range of projects.

A good example of how standard tools were adopted, but in a highly tailored way was Prince 2, which was adopted as the basis for managing all of the individual projects, in the transformation portfolio. They recognized that by itself it did not provide the focus on benefits and change that was required. As the Transformation Programme Director (C01) noted: *“PRINCE2 – we have adapted this. We embraced the fundamentals – it’s going to help. We’ve had a look at why programmes typically fail and we’ve come to a focus on business change. We need to get the capability to change. PRINCE2 doesn’t address change - we need broader skills”*. When they adopted PRINCE2 on a project they did so selectively making use of key elements that added value and fitted with the needs of the project and the experience of those involved: *“I’ve been through enough public and private sector projects to cherry pick what I felt was useful”* (C04). A second project manager took a similar approach: *“If I was producing stuff they didn’t find helpful I wanted to know – because I was putting a lot of time into producing these things and I was tending to play it by the book, I suppose I did tailor it, if it was obvious to me that something wasn’t of value to the project. – I wouldn’t just do it for the sake of doing it”* (C08). Other tools adopted on the initiative included modified versions of tools for benefits dependency planning, change control and risk management. One of the project sponsors commented upon the success of this approach, when he noted that: *“there was detailed reporting of risks and strong change control”* (C03). In a similar vein, the IT Director commented *“It went in absolutely on time and on budget and that was largely due to the fact that it was very tightly governed”* (C02).

We adopted Wenger et al’s (2002) definition of practice: *‘a set of socially defined ways of doing things in a specific domain: a set of common approaches and shared standards that create a basis for action, problem solving, performance and accountability’*. Using this definition, it was possible to identify plenty of examples of both *‘socially defined ways of doing things’* and *‘shared standards’*. Examples of socially defined ways of doing things included:

- **Daily team meeting:** At relevant periods of the project hold brief, daily team meetings to provide a focus for communication and management control.
- **Adaptive team structure:** Adapt the team structure during the project to reflect the changing situation and the expertise and interests of the team members.
- **Establish process-benefit interactions:** The ways in which benefits would be leveraged from specific business processes was explicitly mapped.
- **Time-box decisions:** Use the concept of ‘time-boxing’ to set a deadline for decisions to be made and avoid delays, and also appoint an owner for all important decisions.

Examples of shared standards included the adoption of a benefits mind-set, in which benefits were the focal point for all decisions and activities, and a focus on organisational learning, that ensured that any best practice was shared across the organisation.

They gradually developed and evolved the toolkit, linked with the education programme, and the developing experience of the people involved in the projects. They gradually adopted new practices, allowing time for people to learn how to use them effectively. The toolkit fitted well with the emphasis given to flexibility and adapting the approach taken to specific projects. However, the toolkit approach to benefits realisation wouldn’t have been successful without the two additional and highly related ingredients: cultural change and the prioritisation of people and skills. As one manager (C01) noted: *“we’ve seen a significant culture change - identifying risks beforehand and tracking them has been very valuable. We are more aware and receptive. We use risk management. We talk about lessons learned. There is a more open attitude. Management and leadership behaviours have changed, to more proactive / constructive”*. Through the implementation of risk management and lessons learned they are now more able to be open and honest about what has happened and as a result get insights into what to do differently. One of the teams worked in a separate space away from the main council buildings to allow the team greater freedom in adopting new ways of working. The project manager emphasized accountability and empowerment as part of a wider focus on the culture within the team. It was a significant break from the existing culture: *“we were given free range to develop our culture; we were given our own space away from the civic centre”*. (C04).

To deliver the intended benefits, the management team of the transformation programme also emphasized the importance of people and skills. One of the project managers makes the point very strongly: *“Let’s just remember that is about casting more than anything else – we could have done the HR payroll project with different people and it would have fallen flat. It really is about the people”*. *“They were one of the best project teams I’ve ever had the privilege of working with. This project team was hand-picked – I have to say superbly for skills and personalities.”* (C04). The Transformation Programme Manager confirmed this approach and explained how they were flexible in their approach to team design and governance for each project taking into account the skills and aptitudes of the individuals *“We have a programme level resource plan to look at requirements and capacity across City Service and to help us decide on an approach to the team for each project. For example, it’s no use having a real expert in the business area if they are not comfortable in looking at the area in new ways, if they can’t be flexible and think ‘out of the box’ (C10).*

5.0. Discussion and Concluding Remarks

The research reported in this paper makes an important contribution by demonstrating that it is possible for organisations to develop a capability, composed of a range of practices, that is specifically focussed upon the leveraging of benefits from IT-enabled transformation programmes. The transformation team, in the case organisation, has been successful in

benefits realization and developing skills for further benefits realization. Project sponsors, managers and the Transformation Programme team saw development of skills as an important outcome of the projects. As a result of participation in projects, there were more people with stronger skills for project delivery (managers / sponsors), and business areas with skills for participation in projects and exploitation of the capabilities provided by the projects. Learning to enact a toolkit of practices is leading to development of an effective organizational capability.

In addition to exploring the role and nature of the benefits realisation capability, we also wanted to pose two associated questions: does practice make perfect, and does the adoption of practice provide evidence of craftsmanship? Even if the adoption of the tool-kit of practices couldn't in any way be described as a '*perfect*' approach, it certainly gave the case organisation a more benefits-oriented, flexible and context-sensitive way of managing their IT projects. The question as to whether the employees who have evolved and adopted these practices should be portrayed as craftsmen requires rather more consideration. Richard Sennett's (2009) characterization of a craftsman incorporates the individual who has built up high levels of skills, through extremely long periods of practice, and who is '*dedicated to good work for its own sake*' (p. 20). Against this backdrop, it would be difficult to apply the label craftsmen, to members of the transformation team, as their skills hadn't been polished through years of practice, and there was little evidence that they wanted to produce good work for its own sake. Indeed, they often had to make compromises about quality, when working within the constraints of tight time-scales and budgets. However, Sennett also argues that the craftsman works '*instinctively*', without having to '*think about it*' (p. 50), and as one manager (C04) noted the case organisation's use of benefits realisation practices was becoming instinctive: '*It's becoming instinctual – through training and through repetition and exercise - like driving a car*' (C04). In summary, it might be fair to say that whilst members of the benefits realisation team couldn't unequivocally be called '*craftsmen*', the approaches that they employed exhibited elements of '*craftsmanship*'.

Although we have sought to adopt systematic and rigorous research approaches, in common with all attempts at social inquiry, this study inevitably suffers from a number of limitations. The single case nature of this work means that it is likely that there is still much about the adoption of practices and the development of a capability that we have yet to understand. There is, therefore, a pressing need for follow-up studies, which are explicitly designed to build upon our '*provisional*' results. For example, establishing a more complete picture of the capabilities, practices and craftsmanship required to realise benefits from IS/IT will need further work, particularly with organizations where there is an explicit focus on benefits realization.

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