Original Article

IT governance and project management: A qualitative study

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ABSTRACT This paper presents the results of a qualitative study of information technology (IT) project management and governance. Interviews were carried out with 10 senior managers in different organisations who had been involved in major IT projects. It follows on from a study carried out by Stone, Ekinci and Foss concerning success and failure in customer relationship management (CRM) system implementation. For this research, the net was cast more widely than just customer-focused projects, because of the need to attract respondents who had recently completed major systems projects. Most of the projects included the customer as a main focus, however. In writing this paper, we have also referred to our experience of involvement in CRM projects. The results supported the idea that project governance and project management are closely related but not identical. A company may have good project management, but not good project governance. Governance of IT projects is of course facilitated by having experienced, well-trained senior project management, and by the organisation having an established methodology for managing projects. The paper identifies that project management is not, however, enough, and that project governance and IT governance in general may be weak even if the project management is strong. Governance sometimes needs to be challenged and 'shaken up'. It may require investment and work to ensure senior management commitment, as well as an injection of governance skills and possibly even articulation or re-articulation of governance culture. Governance should also address IT strategy alignment and return on investment, as well as project completion. The paper supports the notion that focusing on project governance increases the chances of better project delivery. This seems to be a better strategy than risking accidental success.

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INTRODUCTION

In a paper published in 2008, we explored the reasons for customer relationship management (CRM) system success and failure.[1] Since then, we have broadened out our research programme, to include coverage of major systems projects with some focus on the customer or stakeholder, even if they are not 'pure CRM'. One of the central topics that came to our attention during this broadening was the question of information technology (IT) governance, and thus we decided to carry out a small study focusing on this topic.

IT governance is the process and structure that ensure that organisations deploy their IT investments appropriately to ensure that the resulting activities – whether programmes, projects or operations that they fund – are carried out properly and achieve the desired results.[2,3] Governance covers many different aspects of IT management – the principles of IT strategy and their relationship to your organisational strategy, the architecture(s) upon which organisations base their IT and the extent to which it is integrated and standardised, an organisation's policies towards IT infrastructure, its organisational applications – including how it diagnoses and fulfils organisational needs, and its financial investment in IT. Governance covers all the assets that may be involved in IT, whether human, financial or physical, or data or intellectual property.

IT governance is an essential component of corporate governance. Corporate governance relates to how (customers, processes, policies, laws and institutions) a corporation is directed and to how different stakeholders (directors, managers, shareholders, staff, suppliers, customers, banks, and so on) work with each other to achieve corporate goals. Although corporate governance is implemented through different models, good corporate governance allows organisations to work productively and efficiently while minimising corruption, abuse of power, and providing managerial accountability in both private and public sector organisations.

Where IT projects are concerned, IT governance and change management are closely related. Change management is a structured approach to moving individuals, teams and organisations from a current state to a desired state in a number of phases, which ensures a successful and sustainable outcome. In the same way, IT governance is also a continuing process rather than a one-off project that requires continuous changes. In a complex IT environment, relatively simple changes can a have a large effect on higher-level business processes, and thus change management tools become essential to the IT governance process. Typically, IT governance process design starts with an IT governance plan. This is followed by its implementation and the assessment of the results against the desired outcome. Further changes and implementation of the revised plan may be necessary in order to ensure continuous improvement. The objective of change management in this context is to ensure that standardised methods and procedures are used for efficient and prompt handling of all changes to controlled IT infrastructure. There is no standard solution for IT governance, but change management disciplines should be adopted early on in the governance cycle, to support the development of a comprehensive IT governance programme.[4]

In recent years, IT governance has attracted much more interest from practitioners, management consultants and academics, and has become the responsibility of the board of directors and executive management, partly because of the costs and risks of developing IT, partly because of the knock-on effect of failures, and partly because of the much wider applications of IT in organisations and its strategic importance because IT has shown to support, sustain and grow the

business. As suggested by Nolan and MacFarlane in their *Harvard Business Review* paper, as more and more organisations change marketing tactics and other firms choose to adopt new technologies to stay ahead of the competition, board-level technology has become increasingly important. Despite the fact that corporate information assets can account for more than 50 per cent of capital spending, in managing the governance of IT, many boards used to apply a set of tacit or explicit rules shaped from what they perceive to be best practice of other firms. Today, however, it is clear that in most large companies, the board is now involved in IT decisions, and that the board expects tough governance standards to be applied to major projects by senior IT management.[5]

The aim of this study is to investigate applications of IT governance in organisations in the UK, specifically as applied to IT projects, rather than overall IT spend.

BACKGROUND OF THE STUDY

Why is IT governance important?
Most organisations depend critically on the successful deployment of their information and communication systems, to help them deliver efficient and effective operations and to achieve the changes they need in order to translate strategic plans into actions. Too often, organisations focus on their IT strategies, policies and budgets, failing to recognise that without good governance, these are unlikely to be translated into the desired results. If IT is not governed properly, things can go badly wrong. For example

— Issues and problems are buried and stay buried.
— By the time problems emerge, it is often too late to address them properly, and thus programmes and projects slip.
— Costs rise beyond what is budgeted, and unless the programme, project or operational capability is protected, it will have to be descoped in order to remain within budget. Even if the budget is increased, the problems caused by the rising costs and slippages may never be solved, so that the resulting programme is weak as well as late.
— When management confidence is lost, the programme may be cut dramatically, to focus on minimal deliverables; it may then be gradually rebuilt over time as confidence returns. Meanwhile the organisation will have suffered.
— User departments suffer budget freezes until the programme starts to deliver again, and thus cannot provide alternatives or progress elsewhere.
— Final solutions are often extremely scaled down, or are completely written-off.
— Success tends to be accidental, rather than delivered with intent.

Good governance results in a framework for accountability for taking and implementing IT decisions and for obtaining the desired results from them. The main attributes of good governance include

— an organisational strategy that is set out so that its IT implications can be identified clearly;
— clear assignment and governance of internal resources;
— board sponsorship of, ownership of and involvement in governance policies;
— clarity, quality, consistency and measurability of governance;
— encouragement of behaviours and internal/external relationships that support your governance policies;
— application of governance to external suppliers as well as to internal activities;
— appropriate use of shared governance structures, including main board, executive board, audit committee,

change programme boards and internal and external auditors.

The key questions an organisation needs to answer if it is to achieve good governance are as follows:

— Does the organisation understand the meaning of governance and the need for it?
— Is governance part of the IT strategy and plan?
— Who owns and who manages governance?
— Who are the stakeholders for governance?
— What value do they derive from each programme, project or operations capability that is the focus of governance?
— What are their needs for good governance?
— What are their accountabilities in governance?
— How does internal and supplier programme self-assurance take place, and how is it audited and reported?
— Who should manage it (that is ensure that it takes place and is productive and adds value)?

How can you ensure good governance?

The only way to do this is to 'govern your governance', by ensuring that you regularly review the governance process, particularly if you experience problems that seem to be due to weak governance. This involves reviewing the following:

— involvement and accountability of the board/senior management;
— accountability for innovation;
— strategy, planning, financial cases/returns;
— change capability assessment and change management;
— quality of processes, outputs, and so on;

— management of human resources and teams, including incentives;
— management of knowledge relating to IT project, programmes and operations;
— purchasing and supplier management, including staff validation and performance review;
— programme, project and process management and review;
— technology and data management;
— development and deployment processes for policies, systems, and so on, including usability and stakeholder/user acceptance;
— benefits realisation and measures;
— governance ownership, accountabilities, structures and processes;
— problem/issue/risk forecasting, management and resolution;
— review management.

For projects of long duration, that is, years rather than months, frequent review is sensible – during development, deployment and benefit exploitation.

One of the key challenges faced by organisations is to answer the question – how much IT governance is required? Sambamurthy and Zmud[6] suggest that key determinants of IT governance can be classified into three broad categories: corporate governance, economies of scope and absorptive capacity.

Corporate governance

Organisations committed to strong corporate governance do so partly to lower their organisational coordination costs. Also, the mode of corporate governance strongly influences the mode of IT governance. Firms that centralise corporate governance tend to centralise IT governance, whereas firms that have decentralised their corporate governance tend to decentralise IT governance.

Economies of scope

Economies of scope are benefits accruing to an organisation when it is able to share

its resources across multiple goods/services (for example, reducing cost due to better synergy). They often arise from the sharing of knowledge and distinctive managerial competencies. This relates to absorptive capacity.

Absorptive capacity

This refers to the ability to value, assimilate and apply new knowledge. It demands knowledge and communication and partly determines innovation performance, aspiration level and organisational learning. The theory was first introduced in 1990 by Cohen and Levinthal.[7] Two concepts related to absorptive capacity are as follows:
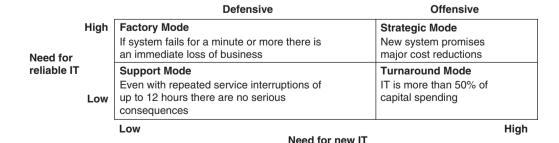
— *Receptivity*: Awareness of, identification of and taking effective advantage of technology.
— *Innovative routines*: Practised routines that define a set of competencies an organisation can use confidently and that are the focus of its innovation efforts.

Where IT governance is concerned, the key issues are how strong and well articulated corporate governance is, how it translates into IT governance, how both are deployed over the whole organisation, and whether it knows how to use IT governance to support innovation.

According to Nolan and McFarlane, IT governance decisions should be based on four involvement modes, shaped by two types of strategies: defensive and offensive.[5]

Defensive strategy establishes how much the organisation relies on cost-effective, uninterrupted, secure, smoothly operating technology systems. It relates more to operational reliability. Offensive strategy establishes how much the organisation relies on IT to gain competitive advantage through systems that provide new value-added services and products or high responsiveness to customers. It places strategic issues either at or above the same level as reliability. Offensive IT projects tend to be ambitious and risky because they often involve significant organisational change. Figure 1 shows the IT Strategic Impact Matrix and the four involvement modes.

As can be seen from Figure 1, organisations' engagement with IT governance varies according to four strategic modes: factory mode, support mode, strategic mode and turnaround mode. Depending on where organisations locate themselves on the matrix, IT governance may be a routine matter best handled by the existing audit committee or a vital asset that requires intense board-level scrutiny and assistance. What board members need to know about IT activities depends on the firm's strategic mode, as well as firm size, industry and competition. Both the factory and support mode are extensions of defensive marketing strategy. Organisations in factory mode need highly reliable IT systems to run operations smoothly and constantly,

		Defensive	Offensive
Need for reliable IT	**High**	**Factory Mode** If system fails for a minute or more there is an immediate loss of business	**Strategic Mode** New system promises major cost reductions
	Low	**Support Mode** Even with repeated service interruptions of up to 12 hours there are no serious consequences	**Turnaround Mode** IT is more than 50% of capital spending
		Low	**High**
		Need for new IT	

Figure 1: The IT Strategic Impact Matrix.
Source: Nolan and McFarlane[5].

for example airlines. They do not need state-of-the-art computing. Those in support mode depend less on IT, as they have less need for reliability and for strategic IT – they will not suffer terribly if a system goes down for longer periods. From an IT project perspective, this means that it may be better to delay problem projects until they can be perfectly or near-perfectly implemented.

Organisations in turnaround mode heavily rely on new IT systems that promise major process and service improvements. Here, technology typically accounts for a high percentage of corporate expenditures, and all the manual systems are transferred into the new IT system. At the same time, firms have a comparatively low need for reliability when it comes to existing business systems, and they can withstand repeated service interruptions of up to 12 hours without serious consequences. Organisations in strategic mode favour total innovation as their main business principle. New technology informs not only how they approach the marketplace, but also how they carry out daily operations. Like turnaround firms, their IT expenditures are large. According to Nolan and McFarlane, not every firm wants or needs to be in this mode, but some are forced into it by competitive pressures, for example if they fall behind more competitors who use information systems as the cutting edge of innovation. From an IT project perspective, this means that it may be better to complete a project even if it is not perfect.

Organisational responsibility for IT governance

IT governance is usually implemented at different layers of the organisation. Leaders report and receive directions from their managers, and managers report up to the executive, and the executive to the board of directors. Although many organisations recognise the potential benefits that technology can achieve, the successful ones

also understand and manage the risks associated with implementing new technologies. The IT Governance Institute suggests that the enterprise's challenges and concerns include the following[5]:

— aligning IT strategy with the business strategy;
— cascading strategy and goals down into the enterprise;
— providing organisational structures that facilitate the implementation of strategy and goals;
— insisting that an IT control framework be adopted and implemented;
— measuring IT performance.

Selig states that effective IT governance is built on three critical factors: (1) leadership, organisation and decision rights; (2) importance of flexible and scalable processes improvement; and (3) the use of enabling technology. The process of IT governance starts with setting clear objectives for the organisation's IT in order to provide the initial directions. This is followed by strategic planning and execution of the IT objectives. The implementation of the IT governance strategy, policy and action plan will ensure that IT governance is managed more effectively. A continuous loop is then established for measuring performance, comparing it to objectives, leading to redirection of activities and changed objectives where appropriate.[3] A solid foundation for IT governance is published best practices and guidelines, for example Control Objectives for Information and Related Technology (COBIT) and The Code of Practice for Information Security Management (ISO 17799).[8]

Our research

To explore how IT governance is implemented in British organisations, we decided to do some qualitative research. We interviewed senior managers in

10 organisations about a recent large IT project in which they had been involved. The respondents were one national retailer, five financial institutions, one regulatory authority, two central government departments and one information services provider.

The respondents ranged from middle management to the most senior management. Two were Chief Technology Officers/CIOs or equivalents, one was a Director of IT Transformation, and one managed relationships with internal stakeholder, one with suppliers, while the rest had more specialist roles. Some had been in IT for many years, while others were relatively new to the discipline. Most had been extensively trained — some at university level — in project management, while others were involved in project management through another role.

We asked them the following questions:

Section 1: About you

1. What is your role?
2. How long have you been in it, and what roles did you hold before?
3. What is your experience of project management? Have you been trained in it?

Section 2: The project

4. What was the most significant large IT programme that you have undertaken in the last 5 years and what did it involve? What were the objectives, scope and focus of programme, what resources were required, which suppliers were involved, what contributions were they supposed to make, what organisational activities were supported by the project and what benefits were expected?
5. What was the duration and cost of the programme? If it is still running, what is the expected cost and duration of the programme? If the programme is completed, what was the cost and duration compared to the plan?
6. What was the split between IT and other costs, for example, people costs in other departments, on the programme and within IT, between hardware, software and implementation? Did the costs turn out as expected?
7. Who were the main stakeholders in the programme? What contribution did they make to the programme and what benefits did they expect and get? How did you keep stakeholders informed about the progress of the project, and any problems? What process did you have in place for getting feedback from stakeholders as the project progressed?

8. What were your main learnings from the project, in terms of how to manage the project and deliver it on time, relating to your people, and your stakeholders and suppliers?
9. What was the role of IT and business consultants in the project? What was the main contribution they made? Were there any specific weaknesses, and what did you learn from this?
10. Were you following any particular professional standards or methods in the definition or implementation of the project? If so were the standards useful or a hindrance?
11. How if at all were your senior managers involved in the project? Do you consider that your board of directors or equivalent was sufficiently engaged? What more could they have done to ensure success?

Section 3: Governance

12. What was your general governance approach to the project?
13. Did you have a governance budget, and if not, why not? Did you use a particular externally or internally developed governance framework?
14. Was any particular software used to support the governance process? How was organisational accountability allocated?
15. What was the role of any of suppliers in governance? What was their contribution of knowledge of about typical risks of such projects? Did they share risk? How did they participate in reviews? What did they do well and what could they have done better?
16. Were rules and rights drawn up for those involved in the project, either in delivery or as stakeholders?
17. How were project requirements gathered and validated, and what governance process was used for maintaining and controlling these requirements?
18. How was alignment with business objectives and requirements secured?
19. Who determined the change management or project management approach and how was this implemented?
20. What was your project budgeting approach and how was it governed?
21. How were governance metrics determined?
22. Who determined and then implemented criteria for prioritising projects and activities and making decisions?
23. How did you review progress?
24. How were risks identified and managed?
25. How did you undertake problem analysis and resolution?
26. What were your governance processes to ensure application of accountability, processes and criteria?

FINDINGS

The questionnaire was completed via face-to-face or phone interview. The main points that emerged were as follows.

The projects

These were very varied. One involved developing a system to sell the product of another large financial institution, which had very stringent security requirements. The retailer's project aimed to replace its back-office systems and business processes and implement an Enterprise Resource Panning (ERP) system. One government project was to manage the authorisation, control, accountability and assurance for European funding being distributed to projects within regions, including the development of new business and financial processes to transfer roles from centre to the regions. Another financial project involved the development of a completely new point-of-sale system. Another involved development of a new credit-modelling system. The other one related to improving access support. The regulatory authority's system was developed to centralise data on all transactions carried out by regulated companies. One was the replacement of a bank's core banking platform, another bank developed a platform to integrate finance and risk.

The suppliers

The suppliers used varied. In one case, there were two major change partners: one a partner who combined two roles – business change partner and a software implementation partner – and the other an infrastructure partner. In another case, a large software developer was developing the software. Another only used in-house development as a matter of policy. Another used a large system implementer who was the prime contractor with a number of sub-contractors, for delivery and hosting. Another outsourced most of its modernisation work to India. Another used a mix of in-house, partner and external development. One used a mix of IT and business consultants.

The suppliers were in some cases an integral part of the project management and

governance approach, attending programme board meetings. Suppliers were not, however, invited to all meetings. Communication was a problem:

> Suppliers delivered on time and to budget but could have communicated better (particularly with regard to issues and problems.

> Suppliers were not open about programme level risks but were better at code level risks, though they were good at coming up with mitigating actions for the risks the client identified.

One mentioned in particular the need for suppliers with 'fierce attention to detail'. The same respondent mentioned that the IT supplier was deemed not to be a necessary member of the main project board:

> Suppliers' input into the project management process had often been too detailed, and that the suppliers should have considered more carefully the audience for the information they were bringing or sending to the main project board.

The above findings highlight the importance of a number of communication factors. A key part of good project management is that the different parties agree what is to be communicated, to whom, how and when, and at what level of detail. IT projects are generally very complicated, and thus too much or too little information can cause problems to be obscured. Where project governance is concerned, a central part of good practice is ensuring that the significance of the information that suppliers and clients pass to each other is appreciated by the other party. It is not enough to hide behind the lame excuse 'we did tell/warn you'. Where information indicating serious problems or risks is concerned, the true partnership that should exist between supplier and customer should lead to each party checking that any such information has not only been received, but also that its significance has been understood and that it has been acted upon.

Budgets and timings

The projects were all large, ranging from £0.5 million to nearly £30 million, although several respondents pointed out that the total commitment was hard to quantify, for example because part of the effort was effectively business as usual, or because of the involvement of non-IT resources. IT costs varied as a proportion of all costs, from being most of the cost to less than 10 per cent. Most project budgets and timescales were adhered to. Timescales were typically 1 to 2 years, but one was 3 years and one was 5 years. In two cases, the advent of the respondent as a new project manager had led to a great tightening up of a previously slightly lax budgeting situation.

The long duration of projects clearly puts project management and governance processes under stress, for reasons associated with stability of the team, as we describe in the next section.

Involvement of senior managers

All respondents realised the importance of senior management involvement. Some had problems with achieving the desired level of engagement and had to work hard at it.

> We set up a sponsoring group, including executive management within the partner organisation, and used this as our governance approach, with all projects reporting to the group.

Some respondents, however, had experienced the problem of 'musical chairs' among senior management.

> We had five changes in the senior user manager during the course of the programme.

Another respondent said that this was a very good reason to get projects done quickly.

The involvement of senior managers had interesting consequences:

> Senior management insecurity about the project led to the involvement of too many consultancies. A significant problem was the lack of vision by a key sponsoring director,

who later moved on to other responsibilities. All this moving around destroyed trust and communication, led to a lot of rework, re-evaluation and often reduced budgets.

> Senior management must be involved from the beginning.

> If senior executives involved in a project leave half-way through, it may be worth 'turning the clock back to reposition the whole project', as otherwise there may be severe problems with the project, ranging from lack of understanding to lack of stakeholder commitment.

Thus, for project management and governance to work in projects of longer duration, new personnel, particularly senior personnel, need to be fully briefed on project management and governance processes, and warned against changing project specifications.

Stakeholder involvement and governance

The main stakeholders in the programme were the heads of the user department, although in one case where the systems involved interface with the other companies system, the stakeholders included the equivalent senior user from the partner organisation. Most projects had a strong approach to governance – which is not surprising, as we were looking for good examples. In two cases, it was tiered, with meetings at regular intervals for each level, with clear escalation procedures. In some cases, the governance approach was based on PRINCE ideas.[9] Regular meetings of different stakeholder groups were the norm. There was high awareness of the need for what one respondent called a 'robust and rigorous process'. Companies used a mix of progress reports, highlight reports, newsletters, bulletins and video conferencing to communicate with key stakeholders. Performance criteria were generally clearly specified and reported upon. One public sector respondent put particular emphasis

on the importance of e-mailing the wider group of stakeholders (which included a variety of public and third-sector organisations) when there was something significant to update them on.

Process was important:

> We have a joint IT-business planning process, directed from the Board to drive operating planning. It requires submissions from all departments including IT. This planning group agrees on priorities and develops a balanced portfolio.

> We use a steering committee approach, with a Project Review Board (the top sixteen managers in our company). We use audit to identify irregular attendance at this board.

No respondents allocated a separate budget to governance (other than a budget for project communication).

It seems that companies with strong awareness of the connection between project management and stakeholder management were more satisfied that their governance approaches were robust. Stakeholder management is a relatively new management discipline – although it has long been part of communications management – whether in public relations or human resources. It has recently emerged as a very important discipline in the public sector, which is ahead of the private sector, where it is conventional to break it up into the management of different communities, for example staff, customers, owners and other departments.[10]

Project management and learnings

Some of the main learning points from the projects related to governance and the deployment of resources to achieve the desired outputs:

> Simply recognising the work as a formal project was key.

> A strong focus on delivery was essential.

We had to ensure that we devoted adequate business resource to support the workload, clarifying requirements, testing etc, right across the project lifecycle.

> We focused on getting the right people to do the right things; getting buy-in to plans; getting the contract right for all parties and 'putting it in the drawer'; agreeing on the terms of reference for all stakeholders.

One respondent identified that the informal way people would commission work was a problem.

> There were too many informal projects going on that were not part of the project tracking and resource management process, and this caused problems in resource management.

Having an independent viewpoint was important:

> An independent project management organisation is key. If an external contractor is used to develop a particular part of the deliverable, it is important to ensure that that project be managed by another company.

Methodology was also important:

> We used a strong project management disciplines (based upon PRINCE), from the very earliest days of set-up, particularly where it came to identifying roles and responsibilities.

The value of the rigour introduced by such methodologies was a common theme, and the importance of weekly reporting on deliverables was stressed. The difficulty of managing risk and the difficulty of embedding learning from managing the project into the company's culture were also identified.

One respondent mentioned the learning from another project that had gone less well:

> The learning from the clear project management approach adopted for this project (the subject of the interview) was not transferred. However, we now have a change manager, with the duty of ensuring that all projects are well managed.

Stakeholder relationships were key:

> Our main learning was about the management of relationships. What made the project work was the strong relationship between the business team and the IT development team.

The response was clear-cut across the respondents – all used structured project management methodologies and associated software, whether PRINCE, another public software or one proprietary to their company. Another respondent identified the importance of not underestimating how long it would take to work through user acceptance testing, and of accepting that this might delay a project.

One respondent learnt how to deal with the offshore supplier. 'They always said Yes, but this actually often meant 'No' or a 'Yes but…' So from Mid Development onwards we added 30 per cent to all of their estimated timings'. Another respondent pointed to the importance of tracking consultants and other external suppliers, to ensure that they delivered their plans and promises.

The main conclusion from this part of the research relates to the importance of broad awareness that project management and project governance are significant management disciplines, which are both essential to the successful management of large projects. They are helped by the use of standard project management tools, but these are the start point, not the end point. Stakeholder management is key, as we have already mentioned, but so is a stable approach, and a proper balance of incentives.

Objectives, rules and rights, project charters

One respondent mentioned that the project did have a project charter. Another had a project delivery method that included specification of these aspects of the project. One had this just for the board of directors, but not for stakeholders. One respondent referred to the way in which his company drew up terms of reference for the project, including project structure and the people involved. Others had formal terms of reference for everyone involved in the project, including stakeholders, delivery teams and governance.

Focus was generally maintained on objectives, rules and rights through constant engagement of business stakeholders, regular project meetings and frequent sign-off points. One respondent, however, voiced his doubts, mentioning that he was not sure that his business appreciated that there was a problem that needed fixing. He described his company's change management process as 'complex'.

We have already discussed the issue of communication above. This section highlights the importance of a framework within which the communication should take place.

Gathering project requirements

This process seems to have been thorough for all respondents. Some used their

tiered governance structure as the channel. Several had formal phases in which user requirements were gathered and then worked on by technical teams and with business users, and signed off by senior managers. One respondent stressed that getting project participants to map out requirements, process flows visually and compare them with the existing situation was critical to success.

> We engaged stakeholders, through 'heavy duty process mapping' to understand the relevant processes and how to change them.

> In a large organisation like ours, gathering requirements is very hard – with subject matter experts and many different stakeholders needing to be consulted, requiring a full time person just to book diaries, set workshop dates, book locations all over the country and make travel arrangements, just to make sure right people were working together. If people don't turn out, they are unhappy about decisions and want to retake them. However, once the

requirements were gathered, we had very clear version control, including final sign off at every stage by our senior sponsor (CFO), who was supported by a full time project manager.

Several mentioned the importance of change control, and one stressed the importance of tying contractual change control to budgets.

The software chosen can pose a choice:

It is critical not to modify the package to fit processes but rather to do it the other way round. Many of our processes are 'commodity' and could be changed and improved through the package. However, this led to a different question – where does a company like ours differentiate itself where it concerns processes? Some processes must be kept as differentiators or sources of competitive advantage.

This area is one of the most critical in all complex projects. Requirements cover a very wide range of topics, from technical requirements that concern only IT staff, to the functional requirements of users, through to usability requirements, which determine whether useful functions end up being used as they should be. Projects in marketing, sales and service often involve two groups of non-specialist users – staff who interface with customers and (increasingly, because of self-service) the customers themselves. Customers are rarely asked about their requirements. Non-specialist staff may be asked about them but may not be able to articulate, still less anticipate, the requirements that they may have in the future (and as we have seen, it may be between 2 and 5 years before a system for which the requirements are being gathered is implemented). Thus, the term 'requirements gathering' must not be interpreted as 'gathering objective requirements' – much judgement, interpretation and insight is required to arrive at a set of requirements that will truly meet the needs of users when the system goes live. Similarly, as the

organisation moves on, requirements change, and thus change management (and its governance) becomes particularly important, especially in long-duration projects.

Project budgeting

In general, the approach followed here was highly structured.

There were budgets for each key activity, with costings provided for changes, while costings were owned by the project office and reported in to the board. Our finance director was on the project board.

Costings were governed by business case submission based on their business case scope review and driven by priorities. The steering committee authorised the budget and changes.

Formal estimating of costs (including supplier costs) was carried out for all workstreams, including provision for cost changes during programme life and an overall risk buffer, which was different for different workstreams.

Costs were reported weekly to the programme board.

This was not, however, always so:

Costing was more of an art than a science, and it was not always clear where the money was coming from.

Thus, while organisations may have good formal cost control, this may mask some uncertainty as to how much is being spent and where it is coming from. The authors' experience of major CRM projects confirms this. At a high level, budgets may be reallocated from marketing or customer service to systems if the project is exceeding its estimated cost. Project costs may be hidden by reallocating staff formally working under other budget codes. This should not, however, be regarded as 'bad practice'. Few large systems projects have the luxury of perfect predictability – whether this relates to development activities or costs. It is natural that user

departments that are anxious to see the completion of 'their' system do what they can to expedite its completion, even if it means that some other activities suffer. A user department must make its own judgement about its priorities. Perfect budgeting and innovation rarely go together.

Governance

Where governance to ensure the application of accountability, processes and criteria was concerned, some respondents said that this took place through normal project management and board management processes. In some cases, however, a tougher approach was needed:

> Our internal audit function was involved, to keep people 'honest' and to ask difficult questions.

> The project steering committee provided a governance pack for the capital expenditure committee and the company Board. When a project was approved, accountabilities and involvement were reviewed.

In one company, however, there were no processes for this, and another had difficulties:

> This was a tough area, with appointments to the governance board being based on the organisation or department for which they worked and their role, rather than their capability to be board members, so sometimes we had a skills mismatch.

> Our main learning was the need to shake up governance regularly. We also needed to get the right balance between academic/research work and 'real' project work that produces deliverables. The mix was wrong at the beginning of the project, with not enough delivery, and this hampered the project manager's attempts to engage some important stakeholders. We had problems with control too – it was frustrating to have project managers working for me that did not belong to my organisation.

In some cases, respondents admitted that they had no metrics for governance, or no separate metrics other than normal project progress metrics, or simple box-ticking exercises. There was one star exception:

> We applied corporate governance metrics along with CMMI (Capability Maturity Model Integration).

In one case, the respondent taking up the role of manager of the project led to the introduction of different metrics.

This does not necessarily indicate poor practice. Good governance is primarily a cultural phenomenon, which cannot be measured simply, for example solely by complying with a checklist. This is similar to our view that good customer management is the result of the interaction of many factors.[11] We would, however, certainly argue that an assessment process can be developed for governance – our checklist at the end of this paper indicates its possible components,

Project prioritisation

Project prioritisation was handled in all companies within projects by their project management and/or business planning framework.

> Priorities between projects are down to individual business units, and then requirements become part of the wider set of business requirements for IT, for which priorities are discussed and set at the CIO level.

> Overall prioritisation is a board matter.

The good news here is that all respondents indicated that they had a framework for prioritising projects. This is a fundamental component of good governance.

Project reviews

Generally, project reviews were weekly, with various techniques used for identifying success and problems, such as RAG (red–amber–green) scoring, highlight reports and slips against milestones identified in the project management software.

The seniority of those involved in weekly reviews varied.

The interesting point here is the frequency of reviews – which was high. This suggests that companies have learnt the risks of infrequent reviews.

Role of consultancies and other externals

Most companies did not use consultants. Where they were used, the experience of using consultancies was generally positive.

> Consultants introduce experience to the planning process – the consultancy we used asked each workstream to develop an initial plan and then pulled the plans together, challenging inter-dependencies and allowing cross-workstream challenges. The consultancy also chaired the workstream meetings, and developed a matching governance structure. We had a consulting partner who really did have the required breadth of experience and resources to handle the project. Many consultancies claim that they have more experience and capability than they actually have.

> We used consultants for their specific business expertise and technical knowledge, plus support.

The experience was not, however, always positive:

> We used an IT consultant (expert in our development environment) to improve the company's testing capability, and three contractors to work on business acceptance. These consultants absorbed quite a lot of time as they were not familiar with either us or our systems.

In some cases, the major management consultancies were closely involved in the governance approach, perhaps sitting on project boards. One respondent, however, commented:

> Suppliers were not sufficiently open quickly enough. More transparency and openness would have made things better, and given us a better capability to respond.

Our conclusion here is that the independence of consultants is valued, although companies are wary of the costs and the introduction of self-interested agenda. In our experience over more than 20 years, clients that place everything in the hands of consultancies and those that place nothing in their hands take large though dissimilar risks. Refusing to use consultants shuts the door to the introduction of experience from similar projects. Some clients believe that they can overcome this by hiring people who have implemented similar systems in other companies, but in our experience these people may become absorbed in their particular roles in the project, so that they cannot contribute their full experience. In addition, the experience of one similar implementation is not as valuable as experience of many similar implementations. At the other end of the spectrum, giving consultants too great a role in project implementation and governance can increase costs – not just because of higher day rates, but also because of expansion of the consultants' role. A golden mean is of course the ideal approach, but in the fray of a large project, it is usually hard to know where that golden mean is.

Change management approach

Here there were two main approaches. Some companies had a standard change management approach, with prescribed tools, documents and templates covering configuration and change management. Others did it through their own efforts and/or through appointing experienced project managers.

The discipline of change management, which is much wider than project management, is becoming more widely understood, but still has some way to go. We look forward to a time where it

is regarded as a normal and constantly used discipline.

Risk and problem management and resolution

Most companies covered risk and problem management and resolution through their change management and project management processes (in particular regular project meetings), though one respondent identified that it was difficult where business partners were involved. Typical risks identified were where stakeholders changed, where projects were very large, and where system usage was low and affecting performance. In fact, as one respondent stated, usage can be too high or too low (for given tasks), and thus it was important to model this. Another respondent identified the importance of planning for mitigating risk at project planning stage. Good practice was exemplified by several respondents:

> We have a standard risk management approach of identifying owners of the risk, planning for mitigation, identifying the cost of mitigation actions and of bringing contingencies into place. This allows go/no go decisions to be factored into the plan well ahead of bringing in the contingencies.

> We keep a risk register throughout each project, running RAG reports on them.

> We use a risk-based project management approach, reviewed monthly.

> We run risk workshops. For each risk identified, we assign a budget for mitigation, to be included in the overall project budget. The budget is generated by a formula containing an estimated impact and likelihood and the costs required to fix each risk.

Where problem analysis and resolution were concerned, experiences and approaches varied:

> The key is to identify the issue first. Then we use consultants for process mapping and skills transfer. If consulting resources are insufficient,

we escalate the problem so as to get resources allocated.

> The key is to get the right people in the room together to thrash out a solution.

> We identify problems and resolve them in normal weekly team meetings.

> Our three biggest problems are scope creep, project management skills, and estimating timings for different elements of the project plan. So I have appointed a software development manager, with whom I work very closely in estimating timings, or in checking the timings that the development team proposed. This does lead to the occasional mistake, but the key is to ensure that we learn from them (eg identifying one particular manager who always said things were on track when they were not).

We were pleased to see a relatively high level of maturity in risk and problem management. Too often, risk management is given lip service. Particularly dangerous is weak communication, as we have already identified.

CONCLUSION

Our research showed that most companies that responded had strong project management approaches and strong, well-qualified project managers, for the major projects that were the subject of the enquiry, and that respondents perceived that these two factors were very important in ensuring successful project delivery and in the successful governance of projects. In some cases, the project management approach had been long established; in others it had been established as a result of the efforts of the individual respondent.

The project management and governance methods used by the respondents' organisations helped them to cope with most of the vagaries of their IT projects. A few problem areas stood out, however, such as coping with senior management churn and ensuring that consultants and other suppliers were managed appropriately. These are two prime problem areas in

project governance and IT governance, and thus the findings hint at a general weakness in IT governance that might be infecting project governance.

Our findings support previous studies that suggest that successful implementations of IT governance depend on senior management involvement (and constancy) and good project management ability. Project management, project governance and IT governance are not the same thing, however, and it is possible to have strong project management and weak project (and indeed IT) governance. Our findings also supported the idea that changing how projects are governed played a significant role in delivering success. This seems a better approach than relying on accidental success. Whether this works or is advisable depends on the stage at which this is carried out.

Management implications

The main implication for management is that as soon as a major IT project is envisaged, an organisation should ask

(a) Whether it needs governance?
(b) Whether – if the organisation has a general approach to governance – the project in question has any special governance requirements?
(c) If so, what are the requirements?

In our view, the findings show that governance sometimes needs to be challenged and 'shaken up'. It may require investment and work to ensure senior management commitment, as well as an injection of governance skills, and possibly even articulation or re-articulation of governance culture. Governance should also address IT strategy alignment and return on investment, as well as project completion.

For projects involving large customer databases, it is important to distinguish between IT governance and data governance – a very different topic that sometimes gets confused with IT governance.

Data governance is a continuing need, irrespective of the state of IT development.

To help organisations determine their overall governance approach and the approach for particular projects, we have produced a checklist of the points that companies should review in determining their approach to project governance. Typically, these should be used by the IT department as part of its management development process, to train project managements and senior IT and user managers, and in the business and project planning processes of the IT department (by identifying the importance of each factor to the company, and the need for action).

ACKNOWLEDGEMENTS

REFERENCES

1 Foss, B., Stone, M. and Ekinci, Y. (2008) What makes for CRM system success or failure. *Journal of Database Marketing and Customer Strategy Management* 15(2): 69–78.
2 The IT governance institute. (2008). http://www.itgi.org/template_ITGI.cfm?Section=About_IT_Governance1&Template=/ContentManagement/HTMLDisplay.cfm&ContentID=19657, accessed 10 October 2008.
3 Selig, G. (2008) *Implementing IT Governance – A Practical Guide to Global Best Practices in IT Management*. New York: Van Haren Publishing, (ISBN 9087531192).
4 Jennings, T. (2004) Change Management: An Essential Tool for IT Governance. White Paper Butler Direct Limited 1–18.
5 Nolan, R. and McFarlane, F. (2005) Information technology and the board of directors. *Harvard Business Review* 83(10): 96–106.
6 Sambamurthy, V. and Zmud, R. (1999) Arrangements for information technology governance: A theory of multiple contingencies. *MIS Quarterly* 23(2): 261–290.
7 Cohen, W. and Levinthal, D. (1990) Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly* 35(1): 128–152.
8 http://www.isaca.org/.
9 PRINCE (PRobjects IN Controlled Environments) is a de facto project management standard used extensively by the UK Government and is widely recognised and used in the private sector, both in the UK and internationally. It covers the management, control and organiztion of a project. PRINCE2 refers to the second major version of this

method and is a registered trademark of the Office of Government Commerce (OGC), an independent office of HM Treasury of the United Kingdom.

10 For more on stakeholder management, seeStone, M. Semmens, A. and Woodcock, N. (2008) Managing Stakeholders in the Public Sector. Report for the Public Management and Policy Association, September 2007 and Stakeholder Management and Engagement – Lessons from Public and Private Sectors, WCL.

11 For more on the assessment of customer management, seeStone, M. Woodcock, N. and Foss, B. (2003) *The Customer Management Scorecard*. London: Kogan Page.

APPENDIX

GOVERNANCE TOPICS

In this list, we have classified the topics as being important for project governance, project management or both, and scored them (A as critical, B as important, C as nice to have and D as not relevant) based on our research and experience for their general importance for each type of governance. Of course, their importance for a particular organisation may vary according to the type of organisation, its general experience with projects and the particular project. The point of scoring them is really indicative, to stimulate readers into considering how important the factors are for their particular situation, rather than to pronounce upon their general importance.

The board	Importance for project management	Importance for project governance
Awareness of past performance as a board, knowledge of results of actions	D	A
Objective setting process, including core purpose (of organisation, change programme, supplier), measures of success, financial case, SLAs, and so on	D	A
Strategy – clarity, organisational and financial realism, communication, allowance for risk, compliance	D	A
Innovation process with clear governance	C	A
Evaluation of programmes by risk/reward//urgency/timescales	A	A
Development of options, choice process/criteria, prioritisation	A	A
Clarity and comprehensiveness of frameworks for assigning accountability and governance	D	A
Clarity and comprehensivs of measurement frameworks	A	A
Process for debating, setting and monitoring service-level agreements and monitoring possible conflicts between efficiency and performance, within and between departments, suppliers, and so on	B	B
Ability to describe governance structures and processes	D	A
Awareness of interdependence between different aspects of board accountabilities, including policy interdependence and financial interdependence	D	D
Adequate assignment and governance of internal resources including directors' (or other senior managers') sponsorship and involvement, organisational resources (eg requirements, testing and deployment), funding, audit and risk management support	D	A
Understanding of sources of power and relative strength in the organisation and how these can be transformed into advancing the organisation	D	B

The board	Importance for project management	Importance for project governance
Adequate attention to external requirements including supplies, contractors, contracts, external risk management and other dependencies	D	B
Appropriate use of shared governance structures including main board, executive board, audit committee, internal and external auditors	D	A
Lack of conflict of interest – internally and externally	B	A
Process for assigning governance, including identifying stakeholders for it, identifying the benefits they should expect to be yielded for properly governed activities, and their roles and responsibilities in governance	B	A
Process for monitoring success of governance (ownership)	B	A
Clarity on how performance and financial measures are used	B	A
Capability to structure change management approaches	B	A
Capability to structure supplier management approaches	B	A
Openness to evidence on failure	A	A
Capability to manage recovery after failure	A	A
IT principles		
Clarity of principles, for example, enterprise operating model (eg low cost, customer intimacy, product leadership), speed of deployment, focus on costs, flexibility, integrity, measurement approaches, standards – technology and data, reuse, use of commodity products, financial criteria	D	B
Clarity on decision-making principles for architecture, data management and infrastructure – what capabilities and activities should be standardised organisation-wide	B	B
Prioritisation of capability requirements and associated infrastructure	C	A
Plan and process for updating IT capabilities	B	A
Outsourcing principles	B	A
Approach to testing and piloting	B	B
Exception management	A	C
Ownership of IT change	B	B
Portfolio management of IT investments and management efforts reflecting departmental/unit and overall priorities	B	A
Focus on asset utilisation	C	B
Organisation and processes		
Structure for governance	C	A
Relationships and behaviours that support governance	B	A
Relationship between organisation-wide and departmental/unit-specific decisions and implementation	A	A
Existence of executive/senior management committee focused on governance	C	A

The board	Importance for project management	Importance for project governance
Existence of IT leadership committee	C	A
Organisational process and change teams with IT members, and IT teams with functional or departmental members	B	B
Relationship managers in IT and units/departments, teaming, internal relationship management	A	C
Service-level and charge-back agreements between IT and organisation/functions/units	B	B
Commitment to identifying non-conforming individuals and departments and to gaining reform	B	B
Incentives for compliance, disincentives for non-compliance	A	A
Stability in governance organisation and processes over time, while allowing planned evolution	A	A
Communication of and education in governance principles and processes and their rationale, using all relevant means – Intranet etc	B	A
Regular planning processes incorporating review of governance, including classic SWOT of current approach, given organisation-wide strategy and operational requirements	B	A
Assessment of CIO and other top managers for their governance performance (financial, service levels, value to the organisation, management of process)	C	A
Quality/issue management		
Quality plan	B	B
Processes for monitoring and testing quality	B	B
Process for logging and managing change and tactical requests, including ensuring resources are not diverted	A	B
Agreement on quality metrics, and on how to revise them	A	B
Testing process management – functional and non-functional requirements, usability, acceptance, beta testing, regression testing (to ensure any problems resolved do not cause more problems), performance testing (stress, load, stability, reliability), benchmark/comparison testing, security testing	A	B
Involvement of users/stakeholders in defining quality requirements	A	B
Process for searching for issues/problems based on past history	A	A
Process for identifying issues/problems and documenting them	A	B
Process for resolving them and revising any downstream dependencies and budgets, including escalation processes	A	B
Involvement of users/stakeholders in identifying and resolving problems/issues	A	A
Process for revisiting resolution	A	B
Supplier management		
Clarity of objectives or outcomes	A	A
Realistic expectations of deliverables	A	B

The board	Importance for project management	Importance for project governance
Analysis of competence, quality, trustworthiness, motivations and incentives of suppliers	A	A
Quality of contracts or contract management	A	A
Assurance (and self-assurance) of programme management	A	B
Assurance (and self-assurance) of working methods or application of new methods	A	B
Identification and deployment of appropriate skills	A	B
Interlock of supplier's work with work of rest of organisation (not just deliverables but incentives and motivation)	A	B
Supplier selection process – including understanding supplier profiles, development of clear set of criteria for assessing suppliers' cultures, process for reviewing non-price or product issues	A	A
Ensuring staff actually involved in programmes, projects or operational delivery are as promised at contracting stage, and validated to have the required quality	A	B
Supplier segmentation – from strategic partners to tactical suppliers, with appropriate justification	D	B
Coupling of purchasing management with management responsible for downstream delivery, to ensure that downstream delivery requirements properly taken into account in purchasing	B	A
Process for ensuring knowledge/skills transfer	B	B
Aware of own culture and tendency to gravitate to certain kinds of supplier	B	B
Establishing values and incentives of suppliers and individual players within the supplier (eg sales versus delivery) and ensuring match with own – as applied to change and routine operations	B	B
Process for taking up and challenging references (beyond those provided), researching and probing successes and failures, awards and legal actions, identifying who is supplying successful clients, and who is supplying failures	B	A
Understanding the organisation's specific needs and matching them to supplier capabilities	B	B
Process (and associated governance) for managing problems and issues before you encounter the first ones	B	A
Supplier relationship management process, agreed with supplier	B	B
Evaluating supplier capability – from listening to your needs, understanding them, providing relevant propositions and solutions and measuring delivery of them	B	B
Address the relationship before the event(s) which put the relationship at risk	A	A
Conflict resolution process	A	A
Use of relationships and contracts to share risk and reward, include 'repeat game' opportunity and recovering deliverables, time and money even when the programme faces difficulties or changes	B	B

The board	Importance for project management	Importance for project governance
Monitor performance with the supplier at all levels, using internal audit and assurance capabilities with suppliers and programme streams as required to increase delivery confidence and early warning of issues	A	B
Benefits, outcomes and measures		
Codification and sharing with staff the 'core purpose' of the organisation	B	B
Aligning organisational purpose with customer's perspective and the benefits they expect and staff's perspective and the culture and values required for successful delivery	B	B
Clear objectives and outcomes for programmes and departmental operation, with a logical understanding of what programme features and work contributes to specific benefit delivery	A	B
Programme and operations definition fully interlocked with the board's growth and other primary objectives, and with their documented personal responsibilities for organisational risk management, to ensure that the board gives proper attention	B	C
Evidence-based assessment of management capabilities, capability and experience (of staff, suppliers and customers/stakeholders) 'gaps' as a basis for the whole board to agree on a prioritised plan with mutual allocation of resources and responsibilities	B	B
Clear set of supporting processes that 'measure benefits to get better', rather than 'measure transactions to get busier'	B	B
Tracking of investments and benefits over time	A	A
Management of programmes, projects and operational delivery		
Processes to define programmes/tasks and allocate accountability for their design, management and success	A	B
Clearly defined objectives and scope, ensuring programmes, projects and operational activities are split into packages of deliverables with intermediate objectives, control over scope creep	A	B
Agreed formal tracking processes for different levels and stages of projects and programmes	A	B
'Objective' assessment of past programme, project and operational management performance – delivery, budgets, and so on and learning from successes and failures	A	B
Clearly defined programme, project and operational management processes with appropriate system support	A	B
Clear hierarchies of programmes, projects, portfolios and operational delivery with interlock issues managed, particularly where major programmes or projects may disrupt operational delivery	A	B
Processes for ensuring resource availability	A	B
Processes for assuring programme, project and operational delivery quality (including self-assurance)	A	B
Process for milestone and checkpoint definition and management	A	B
Processes for identifying non-conforming programmes, projects or operational delivery	A	A

The board	Importance for project management	Importance for project governance
Processes for governance of contribution of external suppliers, including self-audit if appropriate	B	A
Processes for ensuring and maintaining user/stakeholder involvement	A	B
Processes for recruiting, training and deploying programme/project/ operational managers	A	B
Processes for building and managing programme, project and operational delivery teams, based on requirements, skills, capabilities, and so on	A	B
Validation processes for any programme, project or operational delivery package definitions	A	B
Processes for involving externals in developing and implementing governance processes where internal resources are not available	A	B
Processes for managing stakeholder/user expectations and communicating with them	A	B
Processes for transferring to operations of any new developments that are outcomes of supplier initiatives or internal programmes or projects	A	B
Involvement of organisational representatives, stakeholders, users and suppliers in definition, prioritisation, trade-off etc of programme, project or operational delivery requirements, the adoption (where appropriate) of associated organisational change and the achievement of objectives and outcomes (delivered benefits), including methodology for managing trade-offs if all objectives cannot be met	A	A
Testing strategy for new services, systems, and so on, for example, early walk-through and acceptance of documented requirements, organisational logic, information flows, user requirements, user acceptance testing for any changed facilities	A	C
Training and organisational change carried out in parallel to any changes in specific functions, with final usability training deferred just before deployment	C	B
Parallel development strategies for new services, functions, systems, and so on	C	B
Processes for managing internal diffusion of innovations	C	C
Minimisation of dependencies is used wherever possible to de-risk the critical path/s and enable unbundling or other organisational trade-offs or changes to occur during the programme	A	B
Risk planning and management		
Published risk plan that considers all significant risks including external risks, major and minor programme risks	A	A
Risk plan reviewed at every programme board meeting	A	A
Allocating to board members individual and shared responsibilities for risk management, documented and accepted within the annual personal and board review processes	A	A
Internal and external professional assurance of programme and risk management approaches	A	A
Specific review points ('gates') where internal and external stakeholders get an unbiased checkpoint review	A	A
Process to ensure response to problems	A	A
Process for identifying and rescuing troubled/overspent/overdue programmes	A	A