CIPS KNOWLEDGE

CIPS Guide – Beyond Project Management

The CIPS Guide aims to outline the principles and the key issues involved in planning and managing a complex project successfully.

This knowledge paper is supportive of Procurement professionals operating at (insert level) of the CIPS Global Standard

01 CPD HOURS

CIPS members can record one CPD hour

Contents

Section 1: Introduction

This guide aims to outline the principles and the key issues involved in planning and managing a complex project successfully. Although there are many project management guides on the market, complex programmes and the individual projects they comprise regularly come in late and over budget. There is no magic "one size fits all" solution; if there were these problems would not recur. This is an attempt to look ‘outside the box’ to identify the underlying reasons for these problems, and suggest how they might be avoided.

Many of the available guides just address construction or information and communications technology (ICT) industry projects. In reality although the emphases may vary a little, the principles of success are broadly the same regardless of industry or whether public or private sector. See Appendix 1 for further sources of information.

Throughout this guide the terms ‘programme’ and ‘project’ are used almost interchangeably. This is on the basis that in many organisations a ‘programme’ is thought of as comprising major and minor projects. However, other organisations use just the term ‘project’. Senior managers may express their ideas in terms of a major change programme, but those actually doing work on parts of this may well have a range of projects, and perhaps work programmes within projects, and so on.

1.1 High profile failures

It is worth noting that there is always more scope for confusion in and between organisations on even apparently simple or fundamental matters than people generally allow for. Perhaps the best high profile example in recent years was the failure of a US space programme because of misunderstanding between contracting parties as to whether metric or imperial measures were to be used. This shows that those involved must define and use the terms consistently; communications are much more difficult than we think.

ICT projects seem to be particularly liable to failure, and a number of studies have tried to discover the root cause of these failures. One such study, covering around 8,400 projects, found that:

- about one third of the projects were outright failures and were, or would be, cancelled before completion
- 50 per cent were in recovery, but would overrun their initial cost estimates by up to 200 per cent
- only 16 per cent were accomplished on time and within budget (reported in: Managing Office Technology 1997 under the title: ‘IT Project Management Can Succeed’).

Another study identified the ‘Big Four’ reasons for ICT project failure as:

1) inadequate project definition
2) lack of general information
3) poor scheduling and purchasing decisions
4) progressive loss of control over the term of the project

Appendix 2 refers to some ICT specific project problems.

During 2005 the media has been full of reports of two high profile examples of major programme and project problems - the failure of Sainsbury’s automated supply chain programme (which left it with the worst pre-tax results in its long history) and, in the public sector, the massive cost overruns on the Scottish Parliament building.

1.2 How to avoid failures - pre-planning

Bringing in projects on time and within budget is not impossible, but does depend upon getting a number of key factors right.

Every management guide published emphasises the importance of planning, but often the seeds of future problems already exist, unrecognised, at the conventional planning stage. The focus here is therefore on what is perhaps best referred to as the 'pre-planning' stage. Planning is hard and often unrewarding, but failing to plan often amounts to planning to fail.

Buzz-phrases such as the importance of 'communicating the vision' and 'working transparently with our people' are often used by senior management initiating new programmes. This is easier said than done. The record of failure shows that the communication skills actually needed did not exist, and 'our people' did not perceive the genuine transparency of purpose, and desire to involve all the stakeholders, evinced by those leading the work. Sometimes some cynicism may be justified; more often these problems have occurred despite almost heroic efforts by the project leaders to get it right. They may not have had the skills required. More and more words and guidance are not in themselves the answer. A useful starting point and mnemonic which drives home this point is the RASCI acronym, a tool used in process workflows to make it clear exactly which individual is:

- Responsible for the work
- Approves the work
- Supervises the work
- Consults on the work
- (must be) Informed about the work.

If it is unclear at the outset that these individuals are going to be, there is almost certainly a potential problem. Integral within the pre–planning and planning processes as tools for a successful project programme are:

- a realistic assessment of the risk factors
- the ability to write taut, workable and pragmatic contracts
- active contract management
- the application of rigorous change management procedures throughout the process
- a shrewd appreciation of corporate governance scenarios and their effects
- contingency planning - the old adage 'if it can happen, it probably will', invariably applies, so it is essential to allow for the unexpected.

There have been so many high profile public sector project failures that the Government has asked the Office of Government Commerce (OGC) to define and publicise best practice guidelines in the area. Although the guidance is aimed at the public sector, it is equally applicable to the private sector. See www.ogc.gov.uk for more information. One 'best practice' technique, designed to ensure that work does not proceed without a full, and independent, review at every critical stage, is the Gateway process. See Appendix 3 for further details.

Section 2: Starting out strategies

2.1 Ownership of ideas, pre-planning and 'the plan'

A new programme or project is, by definition, a change to the status quo and it is essential to be clear about the need for such a change at the outset. Projects come into being for a variety of reasons; for example, to meet an obvious need, to match the competition or because someone has a good (perhaps even original) business idea. Whatever the reason, the objectives must align with the business strategy and goals of the organisation.

If the project does not contribute to the organisation's long-term objectives then it has fallen at the first hurdle. The usual test of this is whether the idea can gain senior management ownership and buy-in.

However, there is always the risk that a proposal really exists because it is the pet idea of a senior manager (or the CEO). Possibly the organisation's objectives have been manipulated so as to accommodate this. If this is so, and the underlying rationale and cultural expectations of the organisation are different, contradictions in expectations will emerge during the work and worse, because there is no genuine alignment of motivation between all the parties, the call for scapegoats may be greater than the desire to move on and succeed.

Giving thought at the outset to the establishment of a Risk Register (even if it might be unwise to make it too widely known), that recognises the different issues and levels of risk involved, may be a wise move (see Appendix 4). Useful risk assessment techniques include SWOT (identifies Strengths, Weaknesses, Opportunities, Threats to the project) and PESTLE (focuses on Political, Economic, Social, Technical, Legal, Environmental risk factors). It is advisable to review the cultural, political and behavioural risks as well as the more usual technical, financial, commercial and legal ones, but it is critical that a comprehensive and honest approach is taken. There comes a point at which it takes more courage to say no than to go along with the prevailing climate of opinion.

2.2 Buy-in

All projects need well-planned senior project sponsorship - see the Programme and project teams section below.

For larger programmes especially, it is essential to obtain genuine buy-in from the Chief Executive downwards. This should include, as far as possible, firm ownership by all the stakeholders, especially those with a 'political' interest. (In some circumstances these may be real politicians, in which case life is extremely complex, but office politics can be very difficult too.) However, in fairness to these senior people, it is only right that in exchange for their future support they are properly briefed on the potential hazards, as well as the advantages, expected to derive from the programme.

At this stage too, fundamental choices, such as whether outsourcing and/or offshoring as a service provision model and the basis of the procurement models (e.g. Private Finance Initiative (PFI), Public Private Partnership (PPP), Joint Venture etc.) need to be considered.

CIPS and others have published guidance on these issues. It is important the implications of such choices begin to be identified early on, even if the full picture is not immediately available.

It is worth remembering that there is a difference between gaining formal approval from senior management and the less formal, but perhaps even more important, buy-in of the other stakeholders.

Before spending too much time and effort in the early stages, sound out a senior director to try and ensure that unforeseen difficulties at Board level are avoided. Funds are finite and choices have to be made as to which resources may be allocated to what and when. It may be that the Board has plans to expand into different markets/countries and this will soak up all available monies for some time to come. If the idea for the project comes from the Board itself the way forward becomes, in principle, much easier.

2.3 Wider issues

In the case of major public sector programmes there are other considerations such as whether government policy overall is favourable to the scheme. Duration is another major factor; the longer the project the greater the risk of changed priorities.

However, whether in the public or private sector, it is essential to establish senior sponsorship for all the stages, including clear approvals/gateways (see Appendix 3) and collective senior support.

2.4 Governance

Understanding exactly where responsibilities lie, and having a workable governance mechanism to reflect and back up corporate responsibilities in line with business strategy and goals, is essential.

It is only human nature for people to want to claim ownership of a proposal when it is attractive and likely to reflect credit on them. However, if things start to go badly, the same people may well let it be known they were always doubtful about its success and that somebody else was ultimately responsible. One way of avoiding this is to have a Senior Responsible Owner (SRO) at Board or equivalent level who signs off the proposal and must be involved in a similar way before changes are made. Of course, it is critical that the SRO fully understands his or her obligations and is fully in touch with the ideas being developed by the individuals responsible for the work (cf. RASCI), to avoid "project creep".

2.5 Plans

It is also often forgotten that plans (in the widest sense) are dynamic; they exist to be changed in the light of developing circumstances. Even more shocking to some, what actually happens may bear little relation to what was written down as the plan. The solution of course is to amend the plan to take account of the facts. It is advisable at the same time to record why the changes are being made. Unfortunately, especially when much has been invested or said on a certain planned outcome, too many people’s credibility and social standing may be at stake if the plans are changed to the extent necessary to fit the new facts. The result is that the changes are not made to the extent that they need to be, with the almost inevitable consequence (given the incremental nature of change in most projects) that gradually the published plan reflects reality less and less. Using the Gateway Process rigorously (see Appendix 3) ensures that any changes to the plan are reviewed and agreed before they are implemented.

Even if the plans are changed, unless proper change management systems are used and understood by all involved, the wider implications of the change may not be appreciated. It is like dropping a stone in the still water at the edge of a river; the scale of the ripples is often wider than expected, and they dislodge and send spinning away into the stream twigs and leaves which at first sight should not have been disturbed by the stone. All too often, in the context of major programmes, these apparently out of range twigs and leaves turn out to be critical issues connected with people and people management, or the expectations of those involved. In the final analysis, whether or not a programme is seen to be successful overall depends not so

much on whether it came in to time or budget (though these are first order measures of success) but whether the people affected like the result and feel it has improved their lives.

2.6 Programme and project teams

Many Project Management publications discuss the roles briefly outlined here - see Appendix 1 for more detail. It is the Project Sponsor's responsibility to ensure the right project team is in place and good practice to have this person supported by a Project Steering Group. The Project Sponsor's responsibilities include: overall financial control and approval of the programme; setting and reviewing the overall strategy; reporting to the Board (or equivalent) and other stakeholders on the project's progress; as well as choosing the right Project Manager (PM)(s) to run the team, or perhaps, teams. This last is crucial to success as, as well as being the key executive for each project on a day-to-day basis, the PM must also be a member of the Project Steering Group and able to work effectively at that level. It is a good idea to appoint members of the Project Steering Group formally, and to give them defined responsibilities which ensure they are able to contribute constructively but critically to the Group's work.

The Project Sponsor also needs to consider whether the background or discipline of the Project Manager is more important than the relevant skill set. It may be that the PM should be the purchasing professional but in any event it should normally be the person who is clearly the most skilled for the role. There are important issues of status and perceived status to take into account here; appointing the most skilled person may not be the best route if s/he does not have sufficient influence at Board level. In these circumstances the Project Sponsor is likely to have to take more responsibility at the reporting interface than would otherwise be the case, and the relationship between the Sponsor and Project Manager will need particular attention. Whoever is appointed must have a full understanding of the project objectives and have the necessary project and people management skills and competencies, to bring the project home to time and budget.

The Project Steering Group's responsibilities include providing expert advice and support to the Project Sponsor, monitoring the performance of the project and reviewing options and recommending actions as appropriate. It is good practice to include a senior procurement professional as a key member of the project team from the inception of need right through to post-roll-out.

One of the Project Manager's main tasks is to ensure the final project specification is fully worked up, compliant with all relevant legislation and still meets the intended need. The Project Manager is also the day-to-day manager of the work programme, and must take account of the need to rank the various performance targets in terms of their respective levels of importance. Only after all these have been decided and finalised can the most suitable procurement strategy be decided, but purchasing and supply management professionals should be involved in the upstream decisions to ensure there are no conflicts of policy. The Project Manager also has to select and appoint a team of experts who will carry out the detailed risk analyses, investment appraisals, and decide the best contract strategies.

In addition the Project Manager is responsible for co-ordination of the overall programme, ensuring that contractors keep to deadlines and contract completion dates. The PM should produce monthly status reports on the project showing progress in terms of time, cost and performance standards, and which demonstrate the relevance of the quality systems and control mechanisms in place, together with regular reviews of the implications for the achievement of the project objectives.

2.7 Resourcing options

Resourcing the project team adequately is a must and requires support at the highest level. Attempts to run project management on a shoestring usually end in failure. Ideally, staff must be taken away from their normal line functions and attached full-time to the team. Team member selection must not only be based on competency but also on the ability to act within a team with aligned motivation.

The option of employing external consultancy/resources at key stages in the project implementation should be considered – either to fill gaps in the internal skill base or to provide an independent viewpoint. To ensure ownership and buy-in the Project Sponsor is likely to be a member of the organisation, but many firms offer skilled and experienced Project Managers and, especially for organisations with limited major project experience, use of such people may well be the most cost effective route overall. CIPS and the Association for Project Management can provide advice – see Appendix 1. It can also be very helpful to seek a third party view during the course of the project, even if the project is managed internally. For Government projects the use of external reviewers is now a mandatory requirement of the OGC.

It is also beneficial to segregate the team physically from their normal departments, and advisable to define a role for them once the project is completed. If staff is worried about their future after the end of the project, their motivation to complete on time will be suspect. Giving any sort of assurance in this respect is particularly difficult for both commercial and legal reasons, though the use of temporary staff or interim managers to fill the gaps can help. However, it is likely that if a project is successful, the skills of the team members will be in demand.

2.8 "Silo Management"

Many organisations, despite sometimes genuine acknowledgement of their communication deficiencies, suffer from ‘silo management’ and managers, distracted by day-to-day concerns, do not want to consider the opportunities that a successful project elsewhere in the organisation may bring. This kind of thinking sometimes affects the most unlikely people, including those who in reality either are not touched by the proposals, or may even be beneficiaries. More positively, there may be suitable people available who have not been considered who can make the project a success. Unfortunately, there is no easy way to find out about those who might be needed when the project team does not know they exist, but having transparent and honest communications with as wide a range of contacts as possible is at least a starting point.

2.9 Feasibility study

Once it has been established who is driving the proposal (e.g. users and/or future project sponsor and manager) a feasibility study should be carried out, including a life-cycle assessment of the project. Environmental assessments, design considerations and end-user needs should also be built into the process (see OGC guidance at Appendix 3).

The Key Performance Indicators that apply must be established, and these are likely to include the increasingly important issues which arise around quality and continuous improvement, health and safety, the environment (duty of care and decommissioning) and ethical and corporate social responsibility. However, realistic expectations must always take precedence over blue sky wish lists. Guidance on all these topics is available from CIPS.

It is also important to recognise and set down plans to deal with any disruptive elements that might arise during the project, and to establish a mechanism that ensures that there is a continued interest and

momentum for the project throughout its life, especially if, e.g. in the case of PPP projects, it is a long term one with very long term contracts.

Planning for the new situation must be sufficiently rigorous to remove all traces of previous practices. A proper performance measurement and benefits check mechanism should be in place so that regular savings/value-add benefits can be reported. Case studies of many failed projects indicate that unduly skimped resources, cash, training or equipment are frequently a contributing factor in the failure.

Other issues to consider include the development of a change management strategy. Changes can be either minor, fundamental or involve the total cancellation of the project before completion. The change management procedure should also include people development, and training courses that address appropriate skills development. Organisations with ISO 9001 accreditation should find making these provisions almost an automatic activity. Such organisations may also find an acceptance within management that investment in change costs money to save money.

Finally, it is essential to recognise the downside risks and not ignore the need for contingency and business recovery plans. Very few projects/programmes ever go according to the original plan, as there are considerable external factors which alter circumstances, assumptions and expectations of participants and customers.

2.10 Business case

When the ground-work has been completed, a case has to be made to the Board (or equivalent) that links both the feasibility study and the business strategy. Putting forward a good business idea is not easy, and costing it correctly is of the essence.

There must be a clear pay-back that meets the Board's criteria in terms of both money and time. Quantifying the 'soft' benefits is particularly difficult and it is tempting to under-estimate the difficulties and risks. It is important to decide on the scope of the project as soon as possible and best to maximise the scope at the start so as to avoid 'scope creep' during the project.

Cost savings should not be the only element in the benefits realisation plan/business case; cost avoidance opportunities and future improvement arguments should help to create a sound case based on the totality of the merits of the proposal. Realism means all internal costs, including realistic contingency estimates, should be included in the feasibility study and business case. Ultimately, and in most companies, the Finance Director will have the final say regarding how costs should be presented and what financial criteria need to be met. However, it is very important that the project team and purchasing people on it understand fully what costs are going to be included and why. This can be a very grey area. For example, for those staff working full time on a major project there isn't a problem as all their costs are normally attributable to the project. But what about other staff who gets involved, particularly those that become heavily involved but are not deemed to be part of the project team. What percentage of their costs can be charged to the project? Or, as often happens, their costs might be taken as being part of 'normal' overheads thus excluding them from the project costs. There can be no single, simple answer, as different companies will approach this in different ways. The important point is to address these matters and agree how to proceed.

Section 3: Transition to implementation

3.1 Tactical management of the project team

On a large, complex project it is normal practice to have various sub-committees overseeing different aspects of the project and reporting progress to the main project team. It is important to establish the remit and responsibilities of the main project team and of any sub-committees at the outset. For instance, is the project manager (PM) to keep control centrally, with all decisions involving, for example specification changes, design issues or with any financial implications, referred to the main project team meeting once a month, or should decision-making be devolved down to a lower level with a summary of changes reported back to the PM once a month? How often should the various teams hold progress meetings? Do all strategic decisions have to wait for the main project team meeting or is the PM empowered to make these decisions between meetings?

The appointment of the right person to run each committee can make a big difference to the success of the project. If staff are not motivated or involved either because they haven't bought in to the project, or because they feel they have been taken away from what they perceive to be their main role, then this will obviously impact on their enthusiasm and support for the project. Progress meetings may become routine trots through an unchanging agenda, or drag on through time-wasting discussions with some committee members hardly contributing; such meetings produce very little of value. The PM should watch for danger signs such as the same actions re-appearing in meeting minutes, or decisions shelved or put off for any length of time. A common sense approach is needed - when the project plan is set in stone despite the fact that changes are occurring on a daily basis, there is going to be trouble ahead. What is written down must follow reality, not the other way round.

In a large programme which may take several years to complete, there may be a lack of continuity when staff moves elsewhere. It is obviously important to try and retain key members of the project team throughout the process, and where this is not possible, to ensure an effective handover of responsibility. This is where ownership of decisions and effective leadership of the project can fall down - people are replaced, different departments take over, new teams are appointed and no-one takes responsibility for cost or time overruns at the end of the day because it was down to someone else. It is vital to have the support and involvement of the Board/CEO from the outset - and to the end, especially for major and long-term programmes. Continuing senior sponsorship is necessary throughout, so it is good practice to ensure the Project Steering Group reports regularly to the Board, and, so as to avoid the common problem of post-project ownership when things get difficult, that these same people know that they will be responsible for corporate strategy after implementation.

One way of engaging continuous interest within the organisation and enhancing communications may be to consider the use of roadshows and presentations to remind those not directly involved that the project programme is still carrying on. Sometimes, but only in a carefully managed way, this can be an opportunity to involve new people in the work, perhaps as specialist advisers. Internal user and wider stakeholder reactions are important when planning a major change, and thinking through the corporate governance, ethical and social responsibility, people, motivational and resource implications can need as much attention -at all times - as the financial, technical, Q&HSE (quality, health, safety and environment), duty of care and commercial issues.

3.2 Choosing the right contract strategy

The project team's remit will include deciding on the procurement strategy, carrying out detailed risk analyses, and assessing who is best placed to accept the risks. Deciding to transfer core risks from a large client to a contractor (who may have relevant expertise but is less well capitalised and resourced overall) is a

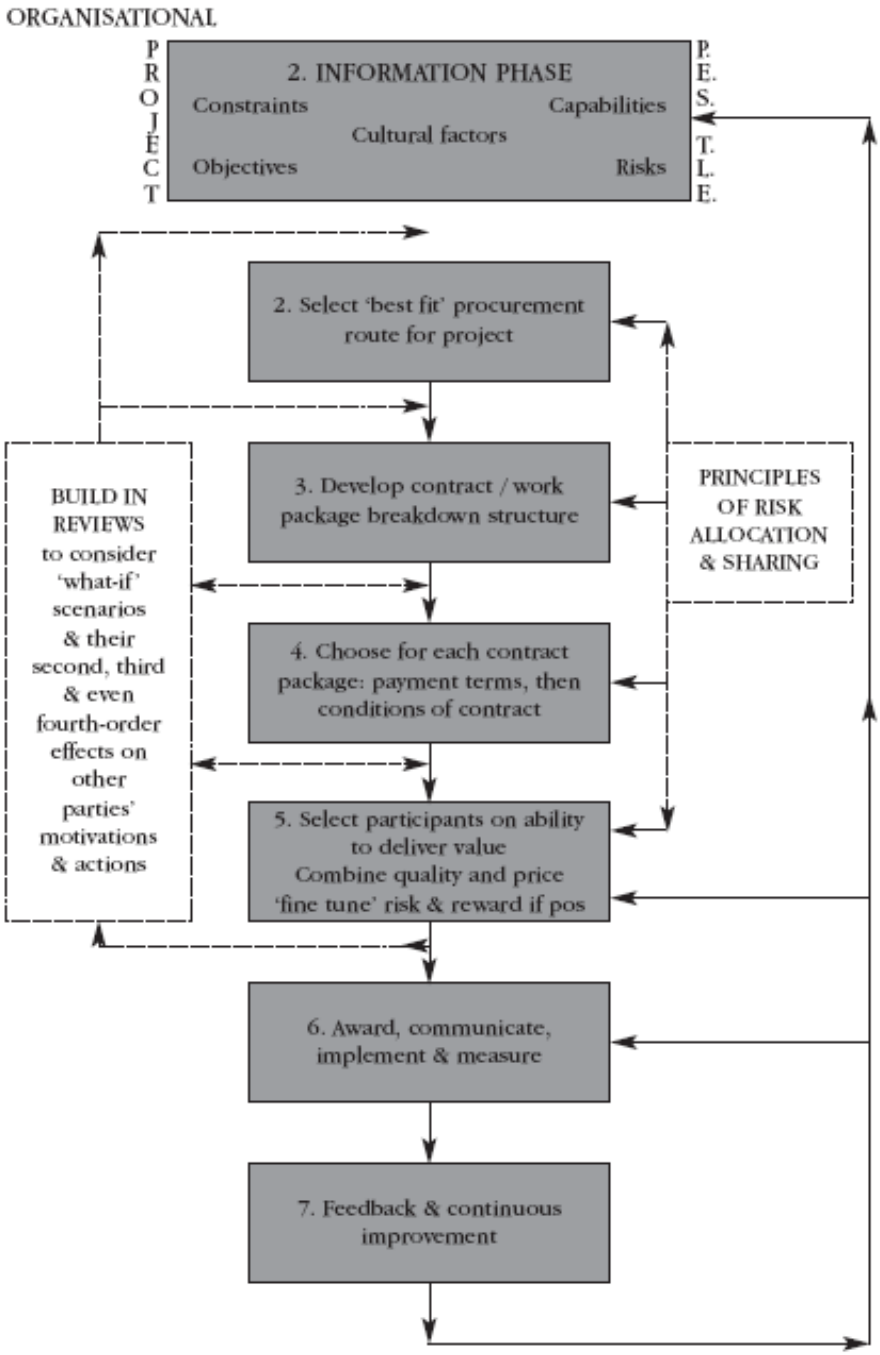
mistake many organisations make; it is better to retain or manage out some risks than find, at the critical time, that the selected contractor is struggling with a risk scenario he understands less well than the client. Other responsibilities include evaluating the supplier market, establishing partnership and alliancing objectives, contract strategies, design liability etc.

For government organisations the contracting process will need to comply with EU directives and other constraints and opportunities. Advice on using PFI and Public Private Partnerships (PPP) is available from the 4Ps (Public Private Partnerships Programme), a dedicated unit to assist local authorities in developing PFI projects and other partnership initiatives (see contact details in Appendix 1).

Although there is lots of advice available on procurement strategy, it is regrettable that too often in large prestige projects the procurement experts are not consulted until the project is underway, for whatever reason – sometimes it is from a distorted perception of the purchasing professional's potential contribution to the project. There always seems to be a desire to get things moving whether or not the design details are finalised (e.g. the recent case of the Scottish Parliament building) or before a proper risk assessment has been carried out. Although it is natural to want to get started, it is essential to take the time, regardless of the pressures, to consider the different options for allocating and running the contract as the right choice will pay dividends in the long run.

The decisions to be taken such as whether the project is going to be based on the 'traditional' route-e.g. separate design and implementation contracts or contractor-designed or management contract-based routes, and the role of incentives: cost reimbursement or target costs, alliances or partnering, must all be considered. Having a procurement specialist with the relevant expertise in the project team to advise on these matters is essential since those without relevant knowledge may not even know what the options are. Whichever route is chosen it is important that client and contractor objectives are aligned as far as possible so that all parties have a stake in the risks, and also the potential benefits, such as cost reductions, improved quality, and/or increased profit (profit is not just ££s, but time, quality, reputation etc.).

The model at figure 1 is a useful overview of the process involved in developing a procurement strategy:



3.3 Assessing and prioritising potential suppliers

Although different organisations will have their own approaches to these processes, in principle the project team will usually have undertaken a pre-qualification exercise prior to tender. This is popular with both clients and contractors; with the former because it eliminates potential contractors who may be weak in terms of financial situation or practical experience; and with the latter as, with the elimination of unsatisfactory companies, they have a more level playing field on which to tender. Each of the contractors will, of course, also tend to have their own Project Manager, acting as the counterpart to the client's Project Manager.

To maximise the chance of success a rigorous supplier evaluation procedure is essential; one important pre-condition being to appoint a team responsible for managing this process. Typically, such a team should include representatives from all the relevant departments within the organisation, representatives from senior management, and individuals representing the business users of the systems.

The procurement approach must ensure that selection criteria do not simply rely on the basis of the features claimed by the supplier (which may or may not be relevant or accurate) but are on the basis of demonstrated capability to satisfy the stated requirements of the project, together with evidence of conformance to the required standards. Those tendering for projects, for example, must be able to demonstrate their capability to support the system over its entire anticipated life cycle. They must also be able to demonstrate the compatibility of system components. Good Project Managers are likely to have visited sites that have installed similar equipment to see it working for themselves and to have considered how best to engage all the stakeholders in the process. One approach which can be successful is to use departmental 'change champions' at the stakeholder interface.

Suppliers are assessed against a variety of criteria, technical capability, financial stability, past performance etc., but there are also many people issues to consider when initiating a long-term contract. In terms of relationship management it is important that the people representing both parties who manage the contract post-award can work comfortably and effectively together.

A relationship cannot be managed effectively without mutual respect and professionalism. Where the relationship chemistry is wrong the relationship is usually going to fail. This is why it is important, during the selection process, to meet and test the team who will actually be assigned to the contract. (Where the sales and marketing team conduct the pre-contract presentations and subsequent negotiations, and then introduce other people to manage the contract, problems are likely to occur.) In the same way, it is worth including a contractual requirement that the buying organisation is involved in the supplier's selection of a replacement contract manager(s) should the person originally identified then move on to another role.

3.4 Contract drafting

As mentioned previously, it is strongly recommended that a senior procurement expert is involved in the project from the outset and it also follows that s/he should take the lead responsibility for drafting the contract(s). In many organisations this is seen as the province of the Legal Department, but expertise in the principles of contract drafting are a core skill of a competent purchasing department and involvement in the project team should mean these individuals are well placed to produce a flexible, user-friendly contract which meets the needs of the Project Manager.

The Legal Department's skill should be complementary- to hone and clarify the detailed text. For all these reasons it is strongly advisable to appoint the purchasing specialist as the lead negotiator in the discussions with suppliers.

Section 4: Implementation

4.1 Placing contracts and contract management

(See CIPS website www.cips.org and other publications listed at Appendix 1 for more detailed guidance).

Placing the contracts is not the end, or even the beginning of the end, but the stage at which turning plans into reality is likely to show up any real problems which need immediate resolution. It hardly needs noting (though the reality of many projects suggest it doesn't happen that often) that identifying the difficulties and taking action require experience, realism, honest communications with all who may be affected, keeping on top of the job at all times, clear decisive leadership and strong project and change management structures.

Good communications (efficient and effective) with all stakeholders continues to be essential, all the more so in multinational teams when members of the team do not have English as their mother tongue. In such cases it is better not to use jargon and to recognise that sometimes even straightforward concepts may have to be re-explained. Holding regular team meetings is an important way to maintain good communications and these must be attended by all team members. There is only so much that can be accomplished by email or on the telephone.

The project implementation plan must have proper milestones, up-to-date risk analysis, a thorough training needs analysis and sensible implementation dates. If it is feasible (financial year imperatives often mean it is not) the plan should be such that rollout is undertaken at the least busy time for the organisation.

However, rigorous pre-implementation trialling, shadow and dual working are all techniques experienced Project Managers will use to try to smooth the introduction of the new. If it is going to be difficult, the more everybody dreads it the better will be the reception when it turns out to be not as bad as they thought.

The mobilisation phase is crucial as a litmus test of how things might pan out. If mobilisation goes well, with the selected contractors demonstrating the kinds of behaviours and expertise which align with the project team's approach, the chances are that, even if there are problems later, the right motivations are in place to enable them to be overcome. Conversely, if initial problems occur and are left to fester the chances of putting matters right later are reduced.

Ideally, contractor selection will not have taken place without the project team meeting and being able to assess the capabilities of the key contractor personnel. Changing to other (untried) teams during the course of the project should be avoided as far as practicable, unless of course circumstances demand a wholesale change to put things back on course. However, except for the most minor projects, change from the plan will occur as the work is done and the practicalities of implementation enforce the need, for example to make design changes. Changes mean more or less profit - as defined above - for the contractors. This is where it is important to ensure all the parties' motivations are aligned so they can accept the implications of this. The PM's role as a communicator and negotiator is critical. Operating the change management arrangements well and amending the plan so that it stays realistic are also important.

Some of the other issues the PM has to keep under review, but which are easily lost sight of under the pressure of day-to-day business (especially after the initial settling down phase and if the Project Sponsor and Project Steering Group's involvement is tending to become distant), are the need to keep the range of options as broad as possible, and to use benchmarking and market testing to test them all rigorously, especially the shortlisted ones.

It is also important to keep an open mind for learning. With this in mind, regular visits to sites that have installed similar equipment so as to keep up to date with possible problems are worth considering. If it does not already exist, the Project Manger should encourage the existence of a 'lessons learned' culture so the lessons from the mistakes made by earlier, similar projects are not lost.

Above all the Project Manager needs to ensure that developments in the project adhere to best value and political imperatives so that budget constraints are not ignored.

Section 5: Completion

5.1 Post-project review

Once the project has been completed a post-project review should be held to evaluate whether the project met the initial criteria for success. Issues to examine at this stage include whether the original Key Performance Indicators are still identifiable - if not, are there controlled, adjusted KPIs, and is the audit trail visible? Other issues include: whether training needs were adequately implemented; how realistic was the Risk Register; were the cost/benefits analysis correct, and which lessons have been learned?

As suggested above, corporate governance issues should be reviewed at each stage of the project and particularly at the end to ensure that there are no ongoing social or ethical implications for the organisation which have not been thought through. The review results should be as transparent as possible with post project feedback meetings, encouraging active learning for all, at all levels, including contractors. Working in a genuine 'no blame' culture is the only way many less than ideal practices may come to light for future learning.

Completion of the installation phase is likely to be only the start of the maintenance phase which, if the project was properly planned, will have been fully allowed for. The implementation project team's work may be done, but others will need to take over. Continuity is important and in the same way, it is worthwhile ensuring that very senior people in the organisation continue to sponsor the new facilities after the formal end of the programme.

5.2 Successful outcomes

Judging the success or otherwise of a project is often a question of perception. The Scottish Parliament building with its spectacular cost and time overruns is seen as a costly waste of money at present, but may in the future be seen as an example of cutting edge architecture of which the Scots can be proud. It is worth remembering that not all projects are judged on their value for money - and some projects may be successful for the client but a disaster for the contractor (e.g. the Cardiff Millennium Stadium).

The case studies in Appendix 2 focus on ICT projects that for a variety of reasons were unsuccessful and it is useful to learn lessons from these. Many of the projects that fail are well known, especially those in the public domain, as they generate a lot of publicity, but it is also worth reviewing the many projects that are successfully brought in to time and cost every year. The Association of Project Management holds an annual competition for project managers of successful projects. Details can be found on their website (see Appendix 1), which is a good source of useful advice and information.

Appendix 1

Sources of information and case studies

1. Office of Government Commerce – Now superseded by the Cabinet Office – documents @ http://webarchive.nationalarchives.gov.uk/20100503135839/http:/www.ogc.gov.uk/index.asp

2. CIPS guides and information - www.cips.org

3. Procurement Routes for Partnering - Dr J Broome (ISBN 07277-3136-X)

4. Outsourcing Dilemma: The Search for Competitiveness - J Brian Heywood (Seminal Text) ISBN: 0273656171

5. IdeA website - www.idea-knowledge.gov.uk

6. PFI/PPP guidance - www.local.odpm.gov.uk/pfi/index.htm www.4ps.gov.uk

7. Association for Project Management - www.apm.org.uk

8. Using Virtual Teams to Manage Complex Projects: A Case Study of the Radioactive Waste Management Project www.businessofgovernment.org/pdfs/DeMarieReport.pdf

9. Heathrow Terminal 5 Case Study

www.dffn.org/ResearchDocuments/Casestudies/DFFN_T5.pdf

10.PFI Case Studies

www.hefce.ac.uk/finance/fundinghe/PFU/casestudies/nottingham.htm

www.hefce.ac.uk/finance/fundinghe/PFU/casestudies/oxford.htm

www.hefce.ac.uk/finance/fundinghe/PFU/casestudies/herts.htm

www.hefce.ac.uk/finance/fundinghe/PFU/casestudies/rncm.htm

Appendix 2

When projects go wrong

Issues specific to ICT projects

Unfortunately business worldwide and the UK public sector in particular, is littered with examples of ICT procurement projects which for one reason or another went awry. These notes refer specifically to ICT project problems.

Historically, some major ICT projects were headed up by IT experts, but this is not always an ideal structure. Information Technology may be critically important, but it is still only a means to an end. It is important that such major projects are led by business people, particularly those who will have to live with the new systems, and make them work. (This does not preclude such business leaders working very closely with, and being advised by, IT experts.)

Software enhancements can be problematic when using off-the-shelf computer modules. The advantages of using off-the-shelf software are often negated by users insisting on customisations (i.e. enhancements) to accommodate their specific requirements.

To avoid endless and costly variations it is recommended that any enhancements are subject to approval by the Project team, but on a highly selective basis, as it may be preferable to change existing procedures. This is a situation where it can be beneficial to have business specialists, rather than IT experts with their detailed knowledge of local previous practice only, leading the multifunctional teams. If an ICT project is necessary because of dated ICT equipment, then it may be especially difficult to prepare an accurate costed-out business case model as the knowledge of what is actually available in the marketplace may be lacking. It is therefore good practice to analyse the likely requirement for software upgrades in years 1-3 after roll-out and build in cost allowances for this and also build in the need for sufficient licences to operate the system.

Here are some further points for consideration.

- Do not allow any residual manual/ICT practices to impede roll-out.
- Ensure that a thorough training needs analysis is undertaken early in the project implementation plan, and plan the eventual roll-out to take place at the least busy time for the organisation.
- Ensure that any interfaces to legacy systems are recognised and dealt with early. These should be properly costed and added to the business case.
- Ensure that the PC/systems audit is undertaken early and that desktops/servers etc. are renewed or upgraded to facilitate use of the new system.
- Ensure that benefits are returned to users, not held in the centre.
- Ensure the risk analysis leads to a realistic contingency plan so that problems can be minimised. The nature of some ICT projects can mean that the whole future credibility of the organisation depends upon virtually everything working effectively as soon as the new system goes live. The greater the risk, the more effort should go into contingency planning to try to reduce risk and to have, if possible, back-up systems in place.

Case studies

A fairly recent problematic project was the Libra project for magistrate's courts - see Computer Weekly of 6 February 2003 p16 and 18 in an article entitled: 'NHS Courts £5bn disaster by following the Libra Route'. Fujitsu, the supplier, later proposed an increase in the projects costs to £400m, a 273 per cent increase on the original bid price of £146m.

Three earlier, well-known, examples are as follows:

i) St Albans City Council

The Council purchased software from ICL for the collection of the poll tax. However the software was defective and as a result the poll tax figure was set too low, resulting in a considerable shortfall in Council revenue.

The Council commenced proceedings against ICL whereupon the defendants argued that it was not realistic to expect software always to be free of defects and that in any case any such defects could easily be rectified once the package became the property of the customer. However, statutory legislation requires that unless there are express terms to the contrary there is an implied contractual term that at the point of delivery the goods must be:

a) Of satisfactory quality, and b) fit for their intended purpose.

Clearly, the software as supplied by ICL did not satisfy these criteria. The judge accordingly found in favour of the plaintiff and awarded substantial damages of over £1.3m.

ii) Wessex Regional Health Authority

In 1982 the decision was taken to develop an approach to an information system which would cover all information requirements within the Authority. This was known as Regional Information Systems Plan (RISP); its precise objective being "to use modern technology in order to optimise the use of information in the continuing improvement of the effectiveness and efficiency of clinical and other health services".
In September 1986 the contract for both the hardware and the software was awarded to an Andersen Consulting/IBM consortium, even though they had earlier been advised that their tender for the hardware alone had not been successful. Crucially, the contract did not contain any stipulations as to quality, nor did it specify a maximum price.

The principal problems with the project are summarised below:
- poorly defined scope of RISP
- poor general project management
- poor supervision of software consultants
- inadequate financial control

The end result of the project was that the Authority still did not have the system that they considered essential for their long-term plans. It was estimated that about half of the £43m cost of the project was wasted.

iii) London Ambulance Service

The computerised despatch system went live on 26 October 1992. However, within the first few hours it became apparent that the system could not handle the loads being placed on it. Among the specific problems arising was:

- failure of calls to reach ambulances
- incorrect vehicle locations
- failure to identify duplicate calls
- poor prioritisation of error messages
- calls being lost in the system

The system closed down the following day, and the day after reverted to semi-manual operation. The Chief Executive resigned, and the Health Secretary ordered an internal enquiry. Whilst there were a number of factors leading to the disaster, poor procurement certainly played a part. In particular, although the software supplier (Systems Options) was a software house with a good reputation, it crucially did not have any significant experience in designing or developing packages for safety-critical command and control systems.

The enquiry team took the view that, given the very tight deadlines which were applied, not to mention the complexity of the system, the probability was that no software house, whatever its size, could have developed a suitable solution. However, it is reasonable to suppose that a larger, more experienced software house would have recognised the danger signals early enough to have taken some effective action.
Source: '**Buying IT**' by *K Burnett* (Gower Handbook of Purchasing Management Ch 21)

Appendix 3

OGC Gateway Process

The Office of Government Commerce (OGC) publishes 'best practice' guidelines for government procurement projects and these include a mandatory series of Gateway Reviews (see www.ogc.gov.uk). (OGC superseded by Cabinet office but information can be found in the archives http://webarchive.nationalarchives.gov.uk/20100503135839/http:/www.ogc.gov.uk/index.asp)

The Gateway Process is based on well-proven techniques that lead to more effective delivery of benefits together with more predictable costs and outcomes. In simple terms, it is a review of a delivery programme or procurement project carried out at a key decision point by a team of experienced people, who must be totally independent of the project team. NB It is essential that the external reviewers have the right skill levels and experience of delivering a project successfully. Although designed for use in government contracts, the principles are relevant to any commercial project.

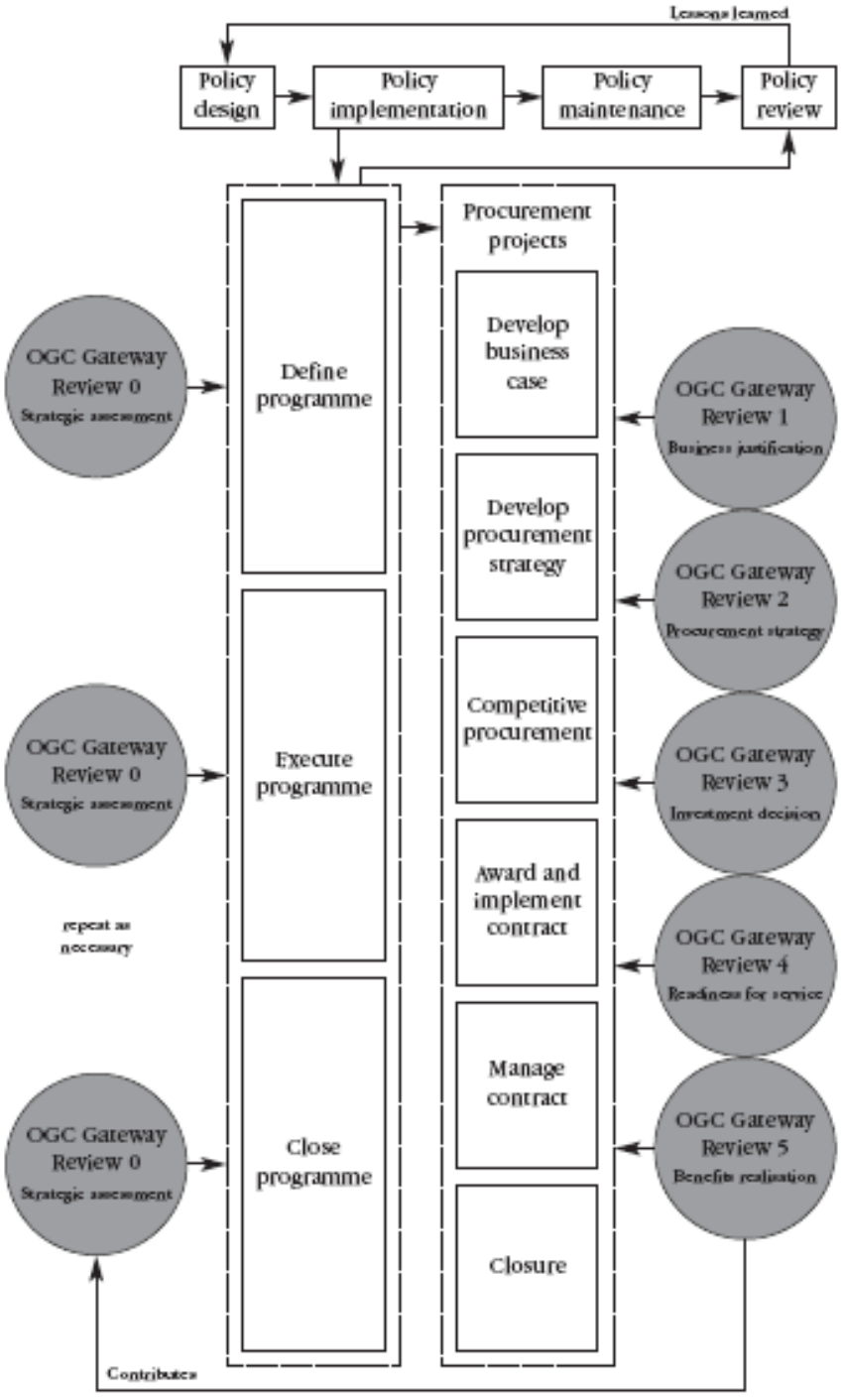
There are five OGC Gateway Reviews during the lifecycle of a project; three before contract award and two looking at service implementation and confirmation of the operational benefits. A project is reviewed at the OGC Gateway Review appropriate to its lifecycle (as shown in Figure 2).

Gateway Review 0 is a programme-only review that is repeated throughout the programme's life; it can be applied to policy implementation, business change or other types of programme.
It sets the programme review in the wider policy or corporate context.

Gateway Review 1 Business justification - reviews the business case - that it meets the business need, is affordable, achievable, with appropriate options explored and likely to achieve value for money. This includes whether expert advice has been obtained on potential options, satisfactory feasibility study carried out, scope and requirements specifications are realistic, clear and unambiguous and major risks have been identified with outline risk management plans developed.

Gateway Review 2 Procurement strategy - assesses the project's viability, its potential for success and whether the project is ready

Figure 2: The wider context of the OGC Gateway™ Process



Appendix 4

Risk Register

A Risk Register is a management tool for identifying, assessing and managing risk to acceptable levels. It provides a framework both for capturing problems that may arise and adversely affect the programme delivery and for instigating actions to reduce the probability and the impact of that particular risk. A Risk Register should be set up during the start-up of the project, ready to record project risks, including any noted in the Project Brief. (NB Where suppliers and/or partners are involved, it is essential to have a shared understanding of risks and agreed plans for managing them).

The Risk Register, in relation to a specific activity or plan, lists all the identified risks and the results of their analysis and evaluation. Information on the status of the risk is also included. These details can then be used to track and monitor their successful management as part of the activity to deliver the required, anticipated benefits.

A Risk Register can include the following elements:

- risk identification number (unique within the register)
- risk type (where indication helps in planning responses)
- risk owner raised by (person)
- date identified
- date last updated
- description
- cost if it materialises
- probability
- impact
- proximity
- possible response actions
- chosen action
- target date
- action owner/custodian (if differs from risk owner)
- closure date
- cross-references to plans and associated risks, and may also include
- risk status and risk action status

Examples of typical risks

Strategic/ Corporate: Commercial, financial, environmental, strategic, cultural, acquisition, political and quality risks.

Programme, project and operational risks should be escalated to this level against set escalation criteria - e.g. not acceptable, outside agreed limits, could affect strategic objectives.

Programme: Procurement/acquisition, funding, organisational, projects, security, safety, quality and business continuity risks.

Project and operational risks should be escalated to this level against set escalation criteria - e.g. not acceptable, outside agreed limits, could affect programme objectives.

Project: Personal, technical, cost, schedule, resource, operational support, quality and provider failure.

Strategic and programme related risks should be communicated to this level where they could affect project objectives.

Project managers should communicate information about project risks to other projects and operations as appropriate.

Operations: Personal, technical, cost, schedule, resource, operational support, quality, provider failure, environmental and infrastructure failure.

Risk identification

- Look at what is at risk and why.
- Consider the opportunities opened up by the current activity (e.g. programme or project) as that may also clarify where risk lies.
- Aim to identify the 20 per cent of risks that would have 80 per cent of the potential impact.
- Ensure that everyone involved has a sound understanding of the mission, aims and objectives and plans for delivery.
- Check that there are realistic plans for how providers could deliver the outcomes sought from the activity; check that there is shared understanding of the risks, whilst recognising that customers' and providers' perspectives on risk will not be the same.

Risk analysis

- Assess the probability of risks occurring and their potential impact.
- Set tolerances for individual risks, with reporting arrangements for escalating problems if risks exceed agreed tolerances. Use the Summary Risk Profile (see later) to inform the analysis, support risk referral and subsequently to monitor progress.
- To determine the degree of review required (internal or external) on major projects use the Project Profile Model (part of the Gateway process) to identify the likely exposure to risk.

Response to risk

Address each risk as appropriate:

- transfer it to the party best placed to manage it (note that business and reputational risk cannot be transferred)
- tolerate it
- terminate it
- treat it by addressing the probability or impact and so contain it to an acceptable level

Put in place processes that will actively encourage co-operation and open dialogue between all parties. Ensure that providers share information about problems at the earliest opportunity so that small issues do not escalate.

Communication strategy

You will need to ensure that appropriate communication mechanisms exist and are adopted.

The strategy for communicating risk should cover all stakeholders and, where directly affected, the public:

- identify who is responsible for the channels of communication, through which good, and bad, news is published
- identify whose opinions, positions and interests must be taken into account so that the management of issues is tailored appropriately so it is possible to take advantage of opportunities, eg. identify if the outcome is likely to be adopted by those it is intended to help

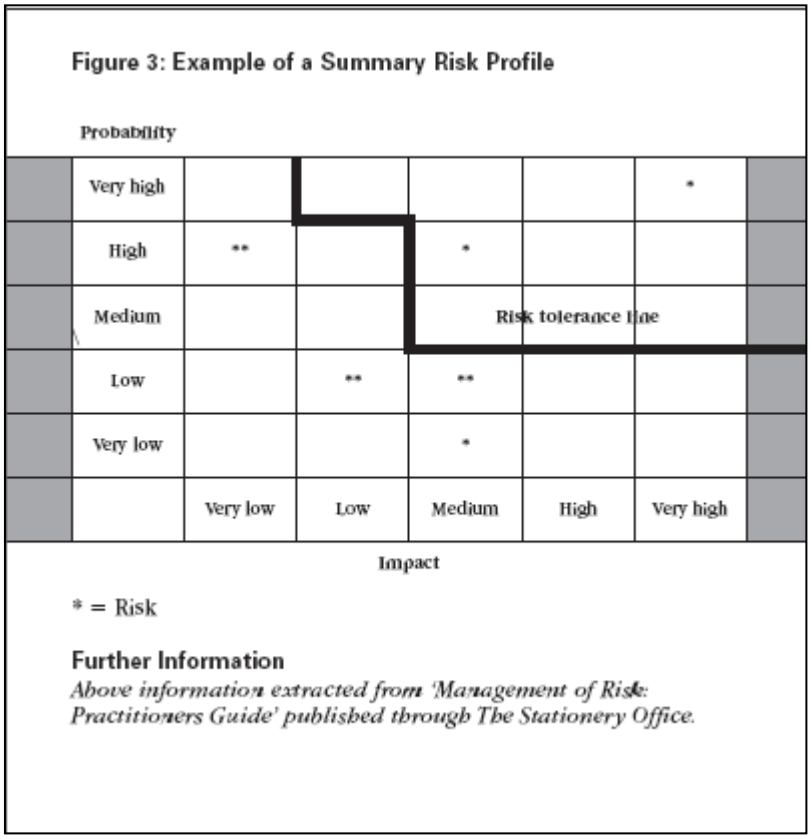
Techniques to assist the management of risk

A wide range of techniques is available to assist in managing risk; for example, to analyse risk, to determine the organisation's current capability to manage risk, to assess the complexity of projects that are proposed or currently underway or to assess uncertainty relating to the project.

A major concern is the appropriate communication of risk information, in particular where escalation is required. The 'Summary Risk Profile' (SRP) is a simple mechanism to increase visibility of risks. It is a graphical representation of information normally found on a risk register. This graph should be updated in line with the risk register on a regular basis. The profile shows risks in terms of probability and severity of impact with the effects of mitigating action taken into account.

The SRP is often referred to as a probability/impact matrix. Each risk (indicated by * on the diagram) would normally have a number or other reference and supporting details. The position of the risk tolerance line would depend on the organisation and its project.

Figure 3: Example of a Summary Risk Profile



Further Information

Above information extracted from 'Management of Risk: Practitioners Guide' published through The Stationery Office.