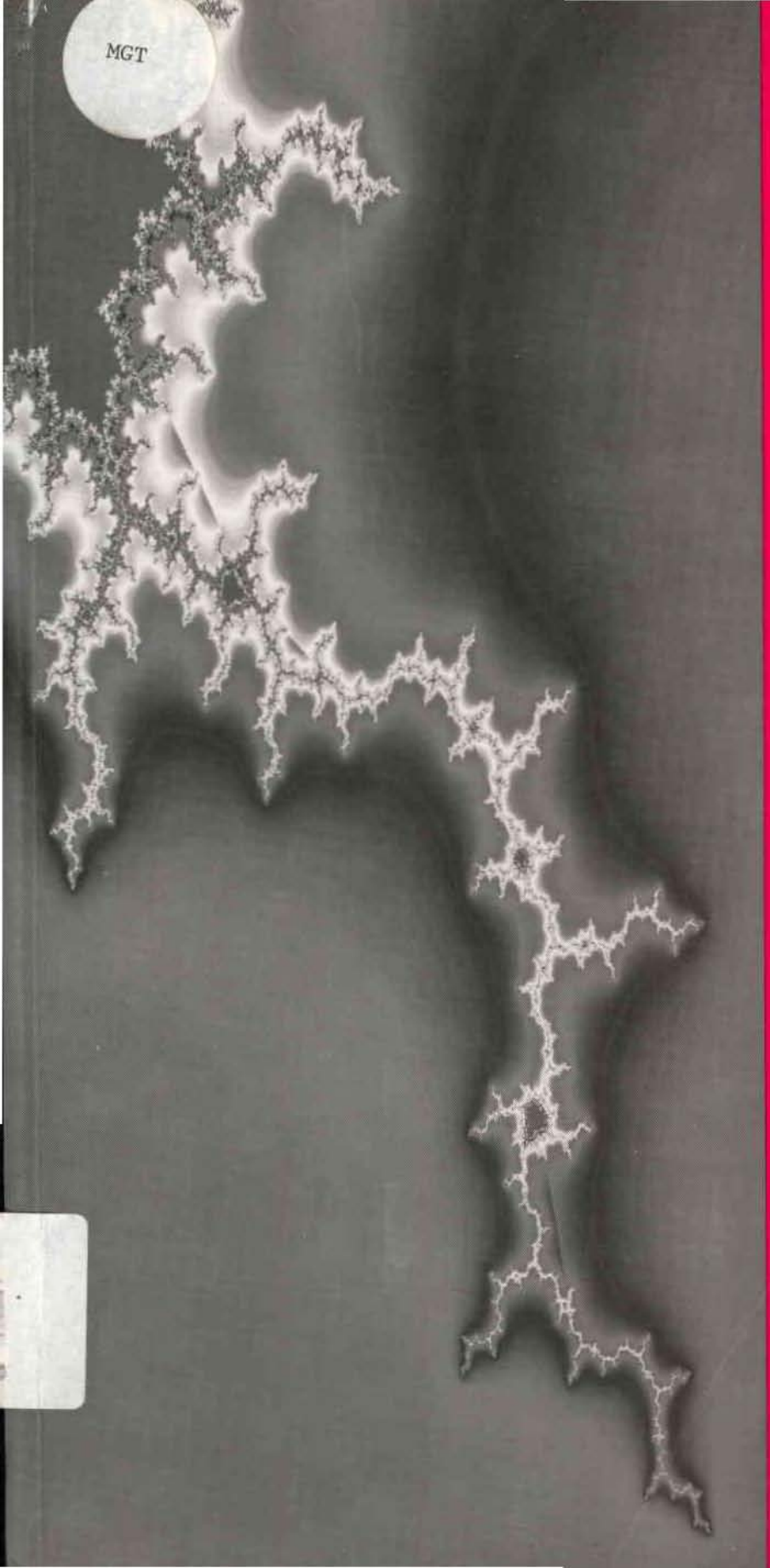

Programme Management Case Studies

Volume Two

Programme and Project Management Library

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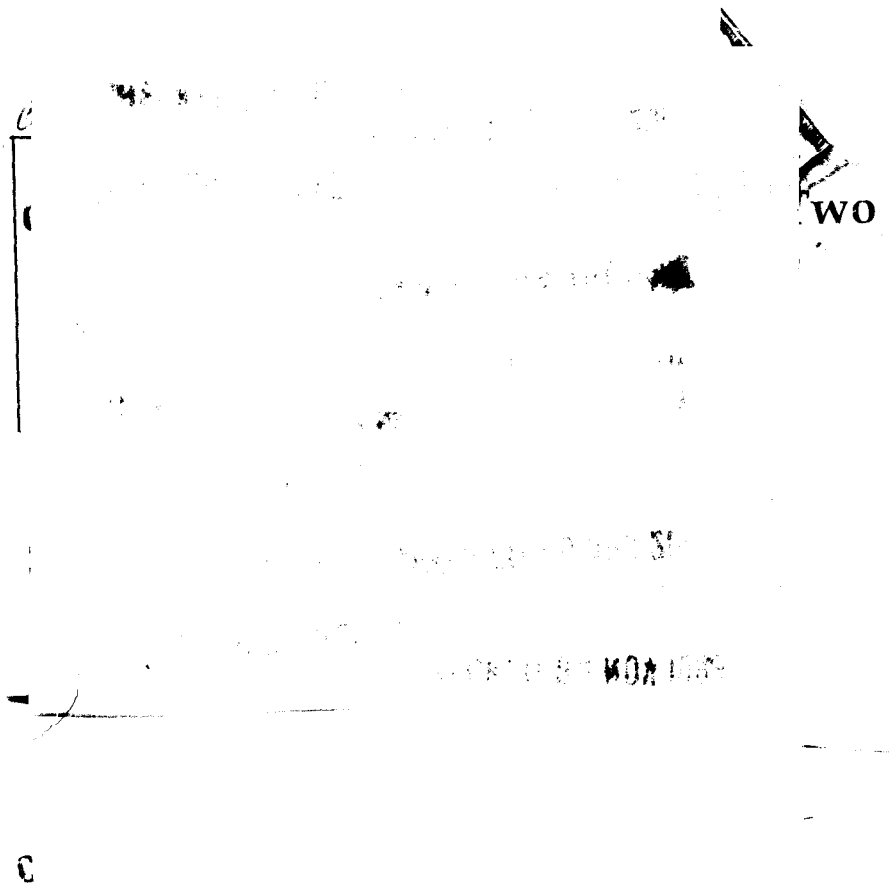
Programme and Project Management Library



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Contents

1 Introduction

1.1 Purpose

In today's public services, changes are taking place more rapidly and with greater impact than ever before. Initiatives such as Next Steps, the Citizens' Charter and the Private Finance Initiative have changed the way public services are delivered and managed. There is a drive towards improved choice, flexibility and value for money, and a need to provide better information to citizens about services available to them. Information needs arise from such initiatives and are also identified in strategic planning of information systems (IS). IS strategies identify the portfolio of projects, policies and service requirements to support an organisation's changing business objectives.

The response to the challenges that face the public sector has to be managed effectively since it may involve daunting, large-scale changes to work patterns, information systems, organisation structures and ways of delivering services. Such changes must be introduced while the organisation's overall aims and objectives are kept in sight, and services to the public continue to operate without deterioration.

Programme management is the approach recommended to public service organisations for managing the response to these challenges and for implementing the portfolio of projects arising from IS strategies in support of changing business objectives.

This is the second volume of programme management case studies from CCTA. The case studies have been provided by management consultancies which advised and assisted their client organisations in setting up programmes. They are presented, anonymously, from the point of view of the client organisations.

The common theme to the studies in this volume is how the programme management approach was adopted to co-ordinate multiple projects, often in situations where existing projects, with interdependencies between them, had been suffering from lack of co-ordinated management and where business benefits were not being achieved.

None of the programmes described here followed the CCTA programme management guidance to the letter. The approach taken in each was that which most comfortably fitted the organisation and the nature of the programme being conducted. Throughout this volume the terms used are related to those in the CCTA recommended approach and variations in approach are discussed. The volume will thus give readers insights into how the CCTA recommended best practice might be adapted to their own environment.

1.2 Audience

It is anticipated that advisors to Chief Executives and senior business managers will read these case studies to confirm that programme management is a successful approach that can be applied to their own organisations.

The case study *Getting ready for business* (Chapter 3) describes a programme of large-scale organisational change that was successful because a programme management approach was adopted.

The management of programmes across organisations and organisational units with some degree of autonomy is of growing interest in the public sector and elsewhere. Increasingly, fragmented public sector bodies will need to conduct electronic business between themselves (and with traders and the citizen). Where this implies changes in working practices, infrastructure and systems to achieve the new business operations, a programme management approach is appropriate.

Two case studies of particular interest to Programme Directors are presented along this theme: *Gaining consensus from stakeholders in a programme* (Chapter 4), comes from a public sector environment, and *Programme management in a pan-European enterprise* (Chapter 5) is an interesting view of a private sector programme.

Regaining control where projects are not achieving expected progress is the theme of *Management control in a programme* (Chapter 6). Programme Managers may find useful information here.

Programme Directors and members of Programme Executives (fulfilling the roles of Programme Manager,

Design Authority and Business Change Manager) will find valuable insights in the final case study, *Roles and responsibilities in managing third party suppliers* (Chapter 7) which looks at suitable organisational arrangements for a programme of contracted-out projects.

1.3 Structure of this volume

Chapter 2 describes how the case studies have been assembled and relates their themes to published CCTA guidance on programme management.

Chapters 3 – 7 contain the five case studies. Each case study is followed by a brief commentary from CCTA relating the specific issues raised in the case history to CCTA guidance (pointing out differences in approach where appropriate).

Annex A gives a short profile of the consultancies involved in the programmes who provided the content of the case studies. They are listed in the order of the case study they were concerned with. These and other companies can provide third party support to set up and run programmes, and training in programme management. Annex A does **not** constitute an 'approved' list of service providers.

A Bibliography gives further reading on programme management, the CCTA project management method PRINCE and related items.

Finally there is a Glossary of the programme management and PRINCE terms found in the case studies. For a more extensive set of definitions covering all programme management concepts, the reader is referred to the CCTA volume *A Guide to Programme Management* and for PRINCE definitions to the *PRINCE Reference Manuals*. Details for these volumes are given in the Bibliography.

2 Overview of the case studies

This volume presents five further case studies in programme management. In the first volume, case studies were chosen to illustrate how the contributors tackled key aspects of the CCTA recommended approach.

This second volume describes:

- a successful large-scale organisational change programme
- the need for programme management to manage a change initiative affecting many participating organisations
- a convincing case for bringing many projects together in a pan-European programme
- a case study in collecting management control information across projects
- managing relationships with contractors within a programme.

2.1 Conformance with CCTA guidance

The views expressed in these case studies are from those involved in the programmes described, and do not necessarily represent an approach endorsed by CCTA.

A complete match to the concepts in the CCTA guidance will not be found within these case studies. What they serve to illustrate is that the concepts of that approach must be adapted to fit each organisation's circumstances and the change programmes contemplated. Where appropriate, there is discussion in each case study and in a summary from CCTA at the end of each one which reflects on variations of approach.

2.2 Synopses

Getting ready for business (Chapter 3)

This case study describes how a programme management approach helped a newly formed Executive Agency to manage the large-scale change required by its new status. The change required a new corporate plan and IS Strategy, re-engineered business processes and a

revamp of its legacy mainframe systems to improve the organisation's customer responsiveness.

Gaining consensus from stakeholders in a programme (Chapter 4)

Increasingly, business is being conducted electronically between government Departments and Agencies. Independent IT systems are being co-ordinated to facilitate co-operative working and automatic information exchange. This case study shows how aspects of programme management have been used to co-ordinate some computerisation projects across one area of public service. Interfaces between participating organisations will be piloted under this programme of work. The challenge is to obtain the consensus, buy-in and involvement of the separate organisations concerned and to retain a flexible approach that can cope with a volatile business environment.

Programme management in a pan-European enterprise (Chapter 5)

A private sector enterprise operating across Europe adopted programme management to face a developing crisis. Business change and infrastructure projects had been initiated to retain a competitive edge and support efficient operations and future market growth. These had been planned independently, giving rise to inefficient use of resources and lack of coherent direction for local staff to understand and follow. The case study shows how senior management came to be convinced that programme management, along the lines of the CCTA recommended approach, could control the interdependencies of the over 80 separate projects that were running.

Management control in a programme (Chapter 6)

A controlled environment for managing a programme requires accurate progress information from the programme's projects, at an appropriate level of detail to track and manage interdependencies between projects, especially in a partnership of separate businesses. This case study describes project control within a programme.

Roles and responsibilities – managing third party suppliers (Chapter 7)

An office relocation and refurbishment was managed as a large single-objective project using programme management. The programme embraced a number of smaller projects. This approach was necessary in order to deal with the complexity of the exercise, the risks of low levels of project management expertise and lack of co-ordination of project activity. Uncertainties about the

choice of technological solutions at the outset, the need to maintain integrity of infrastructure design and changing business requirements all needed to be faced. In this case study, the programme management team worked hard to bring together and keep interdependent projects under control.

2.3 CCTA commentaries

At the end of each case study there is a brief commentary from CCTA outlining differences in the approach taken in the programme from the best practice recommended by the Programme and Project Management Library volumes on this topic, saving the reader the need to cross-refer to the published guidance.

2.4 Glossary

To help the reader further, the glossary at the end of this volume gives the CCTA definitions of those of its programme management terms to be found in these case studies, even if their usage in the case studies does not always exactly match the CCTA definition.

Getting ready for business

3 Getting ready for business

This case study was provided by

Coopers and Lybrand

3 Getting ready for business

This case study investigates how business successes followed from managing large-scale change as a programme. The change took place when a government department created an Executive Agency to manage part of its service function.

A programme of large-scale change was undertaken by the largest pension fund in Europe with 1.6 million members. This covered England and Wales from a base in north-west England. IT support for the core administration was at this site, with additional IT support services based in the south-east.

The organisation became an Executive Agency as part of the Government's Next Steps initiative and was forced to review its aims and objectives in a way which had not been required while its functions remained part of a large government department. When first established the agency would have staffing levels of between 400 and 500 people, with running costs of around £20 million per annum.

3.1 The situation

The Agency inherited a number of 'legacy' systems and was locked into two main suppliers of IT infrastructure. This situation was undesirable, offering little scope for influencing the future direction of the inherited IT systems to meet the Agency's own business needs.

The Agency's Chief Executive engaged consultants to conduct an IS Strategy study. The consultants identified the gap between the systems the Agency had in place and those needed in order to support the newly clarified business aims.

The study helped to identify a portfolio of projects to fill this gap. With hindsight, it would have been of benefit if the concept of managing these projects as a programme had been agreed at the outset as this would have given better initial focus to the following work.

This was predominantly an IS programme since the core business of the enterprise was dependent on its IS systems.

The 'legacy' systems were mainframe based, bespoke systems. Difficulties with the existing systems included:

- modifications arising from changes in legislation and subsequent regulations which were not easy to apply to the software
- new facilities such as membership statements proved difficult and slow to implement
- data currency was a problem since system data had to be downloaded to the remote users of the system and uploaded once transactions were complete
- in addition much of the information on members' accounts was retained in paper files rather than in electronic form on the system.

Some processing was undertaken on a knowledge-based system (KBS).

Other interaction with the data was from remote users at dumb terminals.

A further problem inherited with the legacy systems was the separation of the administrative data from the accounting data. The accounting data was accessible by other systems outside of the pension fund processing.

3.2 Problems

Fifty per cent of the running costs of the Agency were split between services provided by two incumbent suppliers. Under the Government's *Competing for Quality* initiative, market testing would have to be carried out on the services for the strategy to realise cost savings and to deliver value for money.

There was a risk that a straightforward market test of these services would play into the hands of the incumbents – the outsourcing of these services would leave the winning service provider or providers with the upper hand. The programme level approach helped the agency to recognise that the biggest market test could be undertaken on functions that embraced much of the former two areas of support and that the existing suppliers had, in fact, a great degree of overlap in the facilities they provided.

3.3 Why Programme Management was used

The Chief Executive of the Agency was receptive to a Programme Management approach. The initial review of the Agency's IS capabilities included an assessment of the Agency's capacity to manage the projects to implement the programme – the low level of expertise in this area was a major risk (see Figure 3.1). There were clear interdependencies between the projects which lent weight to the need for using a programme approach.

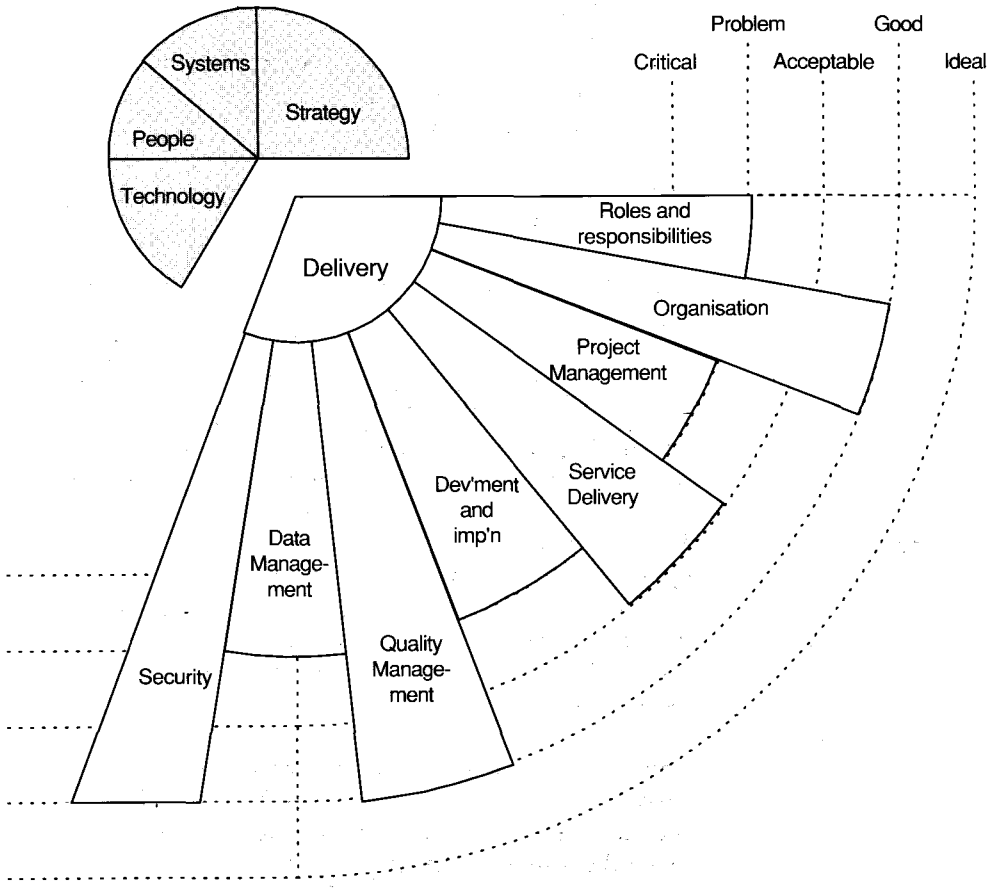


Figure 3.1: Capability assessment: IT delivery

The initial programme scope was flawed because it was based solely on the IS Strategy, which in itself proved too narrow a focus. A key problem was accommodating the required changes to working practices.

When these interdependencies were recognised, the strategy was revised to embody a vision for the Agency, including a programme of all projects to help the management team decide which of the proposed projects were critical to achieving the strategic benefits and which could be justifiably deferred to the future.

The market test invited innovative approaches to meeting the business needs. There was always the temptation to move too quickly from drawing up a strategy to defining projects – only when the management team pulled back to view the approach from the programme level could the most effective approaches be seen. Some niggling problems that kept emerging during the programme possibly only arose from the earlier rush into project level thinking.

Some projects could be identified as non-critical, when seen in a programme context; for example, a document image processing project was not key to the corporate strategy. Legacy projects already under way could be put on hold, and some were jettisoned altogether since the business process they were to support was discarded through the Business Process Redesign study.

3.4 Expected benefits

The market testing exercise to be held towards the end of the programme would provide the benefits to be realised – these were substantial and met the initial promise of the strategy study.

The programme would be paid for, and additional cost savings realised, from the savings in running costs that the programme would bring. Running costs for IT support included £2 million for development of computer support for new requirements (pension fund regulations, changes, improvement in services), £2 million for maintenance, and £6 million per annum for database administration, customer services and accounting services. The target for the programme was to reduce these running costs to £4.9 million by the end

of the programme. Another benefit for the Agency was freedom from a situation where its own IT hardware needs were influenced by its suppliers' business strategy market.

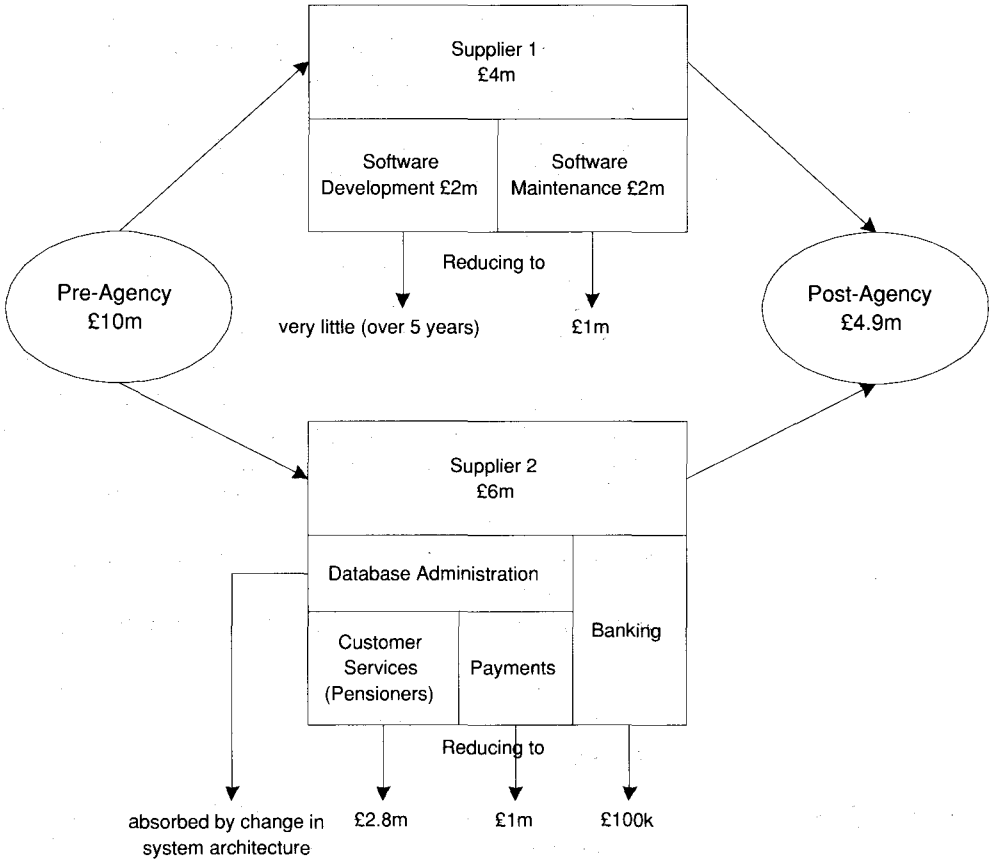


Figure 3.2: Reduction in running costs

Because the accounting element of the programme was key to its success all accounting processes needed to be combined.

Flexibility to respond quickly to customer needs was also sought. One set of 'customers' was at ministerial level, requiring changes of policy to be implemented within a target four months, rather than the previously typical two year timescale. The individual members of the fund

were quite mobile in employment terms and the legacy system involved some duplication of data (if only temporarily) which implied a waste and potential inaccuracies. Improved responses to enquiries from members and a single database record of their personal account details was required.

Before becoming an Agency and before the BPR study was carried out, the organisation was divided into functions serving types of customer. The new processes would be customer based supporting a full range of services. The work processes would be prototyped in 'model offices'. Suggestions for work process design were welcomed from all levels of staff involved. Including staff in this way gained their commitment and encouraged them to put forward their own ideas for improving efficiency, which were often accepted.

3.5 How programme management worked

The organisation was set up as an Agency in October 1992 and initiated its IS Strategy study in January 1993. The study was complete by April 1993 and an outline implementation plan quickly drawn up.

It was recognised that the strategy study, focused as it was on IS, did not take account of the wider picture of business strategy which the organisation should draw up. One of the symptoms of the incompleteness of the IS Strategy was that a corporate data model was seen as a 'black box' which could be defined in more detail as implementation proceeded. In addition, the business case supporting the IS Strategy statement was not strong enough and the IS Strategy should have be aligned to the Agency's corporate strategy and business plan. This would form the *blueprint* to be implemented by the programme.

The Agency then prepared its Corporate Plan, which then had to be sold to the head of the sponsoring department and the Agency's management team. Other interested parties in government (such as HM Treasury) also needed to be convinced that the corporate plan was sound.

The vision embodied in the Corporate Plan had three key strands – people, money and systems. Detail had to

be added to the vision to create a *blueprint* for the programme to implement. It was decided to conduct a Business Process Re-engineering (BPR) study, with the assistance of another consultancy.

The BPR study was a prerequisite to specifying the new systems and services needed to support the business. Existing working practices revolved around the legacy systems and did not meet the newly clarified business objectives. It was hoped that the study would streamline the business processes and people processes inherited with these legacy information systems. The most difficult prospect would be to 'sell' the BPR findings to key personnel.

The BPR study analysed the way the business was run and highlighted opportunities for streamlining. For example, four hundred forms and variants of forms were reduced to eight! 'Selling' the BPR findings became easier, since an unexpected by-product of the BPR study was the staff's increased awareness of their own involvement.

Based on the findings of the study, several new approaches were adopted. There was a new focus on the customer, which resulted in a requirement for training. The 'model office' workshop approach was used for designing and testing the new work environment. Staff were required to learn a broader range of skills and more responsibility was delegated to junior staff members, with commensurate remuneration tied in. Senior managers had to be encouraged to think laterally rather than vertically, that is, across the business needs rather than down through their functional area.

The biggest shift in the IT area would be to move from bespoke systems to the use of application packages. To persuade the management team that such solutions were viable, potential suppliers were invited to hold workshops to demonstrate how requirements could be met and to pilot software applications.

It was clear that there was an opportunity for rationalisation of the various legacy systems. A revised processing model was required, as shown in Figure 3.3.

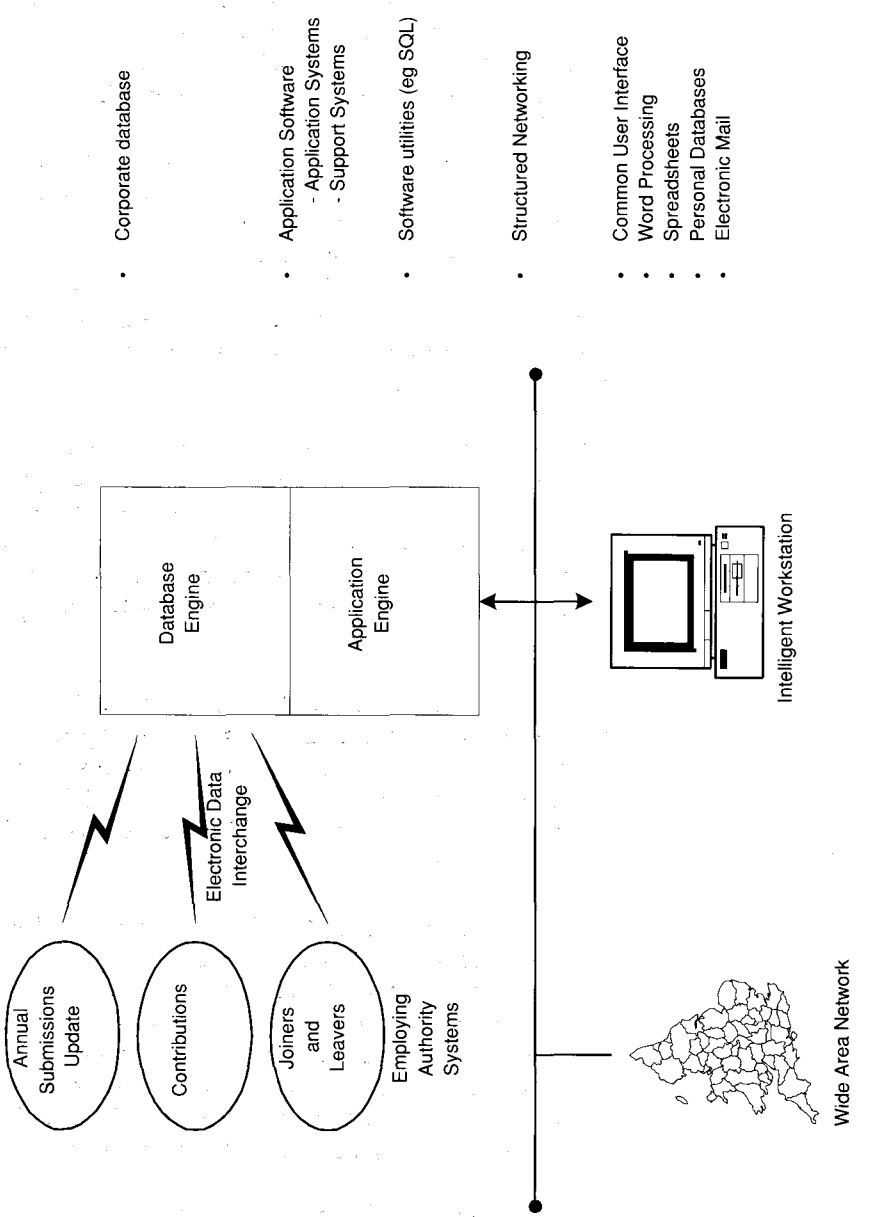


Figure 3.3: Revised processing model

The new IT infrastructure would be based on a client/server architecture utilising Wide Area Networks (WAN) with possible electronic data interchange (EDI) links to external organisations and document image processing (DIP) to follow at some point in the future.

A number of market tests were proposed for the programme, including catering, office support and accounting services. But it could be seen when viewing from the programme level that while some of the market tests were for strategic functions, others were for peripheral functions, and that the strategic market tests were the key to the realisation of the benefits identified in the strategy study.

One of the inherited development projects was a knowledge-based computer-aided settlements system. This project had no key dependencies within the programme and was therefore left to run its course outside the programme. Another such project not included in the programme was a departmental pay and grading review.

European Journal notices of the procurement were posted in June of 1993. As recommended by the Corporate Plan, an IT director with private sector experience was appointed – by December 1993 – to oversee the market testing and benefits delivered from the programme.

Following the market testing in the autumn of 1994, the major procurement of IT and other key services was timed for March 1995. A year later would see the implementation complete and benefits starting to accrue, about ten per cent of the expected benefits from day one and a further twenty per cent realised a year later, which together gave the thirty per cent expected reduction in running costs, as stated in the strategic vision.

Annual reviews of the strategy were planned, but an external review impinged on the programme part way through: a Prior Options review was put in train. This review endorsed the strategic direction and the expected benefits, irrespective of how the business might be conducted following the Prior Options review.

The majority of the projects were contained within the programme. The major projects (both IS and non-IS projects) were controlled using the CCTA PRINCE method, with an individual Project Board for each project.

No specific separate Programme Management Team was set up for this programme, although this option was considered. In effect, the Agency's Chief Executive was the Programme Director.

The Chief Executive had some background in IS, and was assisted in the driving role by the Deputy Chief Executive, who had long experience and intimate knowledge of the Agency's business.

The manager of the programme was the IS Director, who was recruited from industry.

Other members of the management board, who were required to participate in running the programme, were the Operational Director also experienced in the former department's business, a Personnel Director recruited from another public sector organisation and a Finance Director who also came from industry.

The technical Design Authority was, in effect, the IS manager who recommended that the new systems should be open, scalable and upgradable and assumed the responsibility to see that these aims were realised.

The consultancy supported this role by – in the case of infrastructure projects – taking the Senior Technical role on the PRINCE project boards. The BPR project was led by an external consultant project manager and a representative from the Agency.

A dedicated project support office was established to assist the PRINCE projects in the usual way – supplying project assurance teams and tracking project planning information.

The consultants met temporary requirements for specific skills. They also operated in an advisory role at the strategic level. They assisted with the formulation of the

IS Strategy, provided a temporary Director of IS until the Agency appointed its own director and, thereafter, provided continuity at the strategic level. In this capacity they encouraged more holistic thinking, viewing information needs across the organisation's re-engineered business processes and helping the Agency to maintain the 'vision' of the programme.

Other work packages in the programme were outsourced to alternative suppliers of services, with the assistance of the lead consultant, for example, constructing the Operational Requirement, and conducting the BPR study.

The consultants provided assistance when it became necessary to change the programme plans. They were able to do so because they had helped to stabilise the corporate vision. The closer the programme came to implementation, the clearer the *blueprint* became for realising the vision.

A solicitor was contracted to assist with drawing up the programme services contracts since the Agency's resources were already overstretched running all the market tests.

3.6 Problems encountered and tactics used

A culture change had to be encouraged throughout the organisation. The Chief Executive drove through the culture change with assistance from a facilitator well versed in change management techniques who organised and conducted change workshops.

The management team had to revise its approach, moving from managing in the vertical, functional axis to the horizontal, business needs axis.

Problems arose from the early rush to set up individual projects before a programme perspective was achieved. Projects plans were drawn up and expected dates of implementation put forward which bore no reference to the dependency of one project upon the products of another.

The justification given for business cases for the projects was not sensible outside of the context of the programme. In particular, the market testing projects had

interdependencies which could only be seen in the programme context and were easy to lose sight of once these projects were under way.

When the projects were pulled into the programme, and the programme plans defined in detail, the interdependencies between the projects could be grasped more readily. Projects were re-ordered within the programme plan to take account of these interdependencies. To the Agency, it now seemed as though some projects were running late since their end-dates had been moved back. Good communication had to ensure that these changes were explained and managers reassured.

Risk analysis had previously been carried out project by project. A sound business case for the programme was required to recognise the risks affecting more than one project and the programme as a whole.

Two significant risks were identified:

- obtaining sponsorship might be difficult and would need to be sought up front, since it was hard to estimate what delay might occur

- there was also the risk of non-delivery – market testing ensured that the contractors were tied in to delivering the benefits.

Project management was outsourced to contractors since the capability assessment had suggested that the Agency's expertise in this area was low.

A risk from the onset of the programme was that there was no direct control of the new technology, now to be provided by a single supplier instead of two.

There was no formal communications plan in place, but workshops were held for the senior management team to share the new vision of the programme.

A scheme of formal monthly reporting was introduced, based around the milestones in IT projects.

Although no formal review point was planned, the Agency was subject to a Prior Options Review which should have occurred three years after the establishment of Agency status, but was brought forward by a year to October 1994 to fit in with the planned award of contracts under market testing.

The 'model office' would be used to design the systems to be delivered by the programme. Each new functional area would be prototyped in the 'model office' workshop. The functional area manager would be responsible for issuing a concluding report defining how the processes would be carried out. The people processes would be prototyped and trials carried out. A dedicated support team would be on hand to assist any such trials.

3.7 Costs and resources

Costs of the programme included the cost of engaging the programme consultants; the external costs of running the market tests and project costs for consultancies, such as running the BPR study.

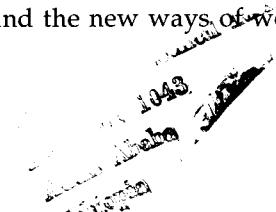
The Programme Support Office (PSO) costs were split between projects since it also carried out project support functions.

3.8 Benefits realised and lessons learnt

The culture changes necessary for the successful implementation of the new business processes required investment in both time and effort. This effort had to be centrally co-ordinated since individual initiatives in isolation were ineffective. It was important that changes being brought about were seen by all staff as part of an integrated whole.

The Agency learnt that 'human factors' should be included in the programme using BPR and change management techniques, as appropriate. This carried the organisation's staff – at all levels – along with the programme because of their involvement (with design of processes for instance).

Not everyone was comfortable with the changes introduced. One lesson learnt was to take the majority along with the vision (since the change to Agency status was a given) and provide for those who felt unable to share in the vision and the new ways of working that



emerged, by offering them early retirement or alternative employment.

The BPR study helped people to look at their roles in a broader context. Lessons from industry were brought in by those conducting the study. The result was a broader view at all levels of the organisation.

The consultants were confirmed in their belief that it is important to concentrate on defining the programme as a whole before writing project briefs. There was a period of seven months where the programme waned as people tended to relate to the individual projects they were working on, which led to a mistaken sense of independence – these projects had to be brought back within the programme plans and timescales.

The Agency learnt that the programme required active, rather than passive, management and that it was vital for the Programme Management Team to take a pro-active role.

It is hoped that when the programme is completed, the Agency will have only those systems that support its core business. Other functions will have been outsourced.

3.9 CCTA commentary

A programme management approach to large-scale change enabled this newly formed Executive Agency to keep its view on a wider horizon than just its information systems. The organisation was encouraged to take a critical view of its IS strategy, to develop a corporate plan and to accept the need for fundamentally re-engineering its business processes.

Its business aims were clarified through this:

- to reduce running costs
- to gain independence from hardware suppliers
- to be able to respond flexibly to changes in the business and political environment, and
- to deliver a better customer service.

The commitment and drive from top management is very apparent in this programme. Programme management roles were undertaken by those with relevant experience and authority. Staff were involved in redesign of processes and communications about the aims of the programme were strong.

This programme took control of the organisation's IS projects and their interdependencies through programme-level planning and progress reporting. This control enabled the organisation to have critical systems in place as early as possible and to receive the benefits expected from them. Less critical projects could be planned to start and deliver later when resources to implement them were available.

Gaining consensus from stakeholders in a programme

4 Gaining consensus from stakeholders in a programme

This case study was provided by

Cray Systems

4 Gaining consensus from stakeholders in a programme

4.1 Introduction

A programme of projects was set up to achieve the co-ordination of computerisation in a particular area of public sector policy and administration (the 'Initiative'). This case study describes what the Initiative was trying to achieve, what the current position is and how the programme got there.

The programme is due to continue until a network infrastructure is in place and implementation has been rolled out nationwide. This case study, therefore, represents a resumé of programme issues tackled so far, particularly the issue of how the programme is managed across a number of participating organisations.

The programme described here is being conducted within a multi-stakeholder environment, where there is no over-arching level of strategic management – there is genuine autonomy within each participating organisation. Decision-making takes longer because it must be based on consensus. This does, however, give each decision greater legitimacy since no affected individual or organisation can claim not to have been involved in its making.

The case study will examine to what extent the Initiative conformed to the definition of a programme in the CCTA guidance and explain the lessons that have been learnt along the way.

4.2 Aim of the Initiative

In August 1991, an article appeared in *Government Computing* in which the author introduced the work of the unit which is running this programme, of which he was Head. The Initiative was originally established in early 1989,

> *(arising) out of concern over the lack of co-ordination between the various independent elements of the policy and administration system with respect to the use of computers.*

A steering committee was set up to promote co-operative working and automatic information exchange between

the agencies involved in the system in order to improve the accuracy, timeliness and availability of information. The aim of the Initiative was then stated as being,

> *to increase the quality of service, effectiveness, and efficiency of the system by improving the flow of information between its constituent parts through the appropriate use of new technology.*

As a result of the work done since that time, the emphasis of the Initiative has shifted away from the technical issues, which are now perceived to be relatively straightforward, towards the underlying business issues which have emerged as being of much greater importance.

4.3 Background and history

A strategy statement was drawn up and approved in mid-1991, defining a work programme to bring about the introduction of automatic exchange of case handling information between agencies of the system on a national scale.

At that time, the projects and activities were described in a number of categories:

- development of an **infrastructure**, encompassing technical and data standards for common use, policies and procedures for interaction between agencies and a computer network to link computers from different agencies

- planning and carrying out a **series of pilots** demonstrating automatic information interchange by connecting examples of computers from a number of agencies in one local area, and including connections to national databases of agency records, other information and statistics

- nationwide **implementation**, replicating successful pilot interchanges around the country.

The strategy statement related to an *information systems (IS)* strategy, which concentrated on the availability and use of information and the overall systems to handle information. It was not an *information technology (IT)*

strategy, so did not address the technology through which systems would be delivered.

Each participating organisation is an independent agency in its own right, with autonomous control of its own budget and operations. It was assumed that each had its own IT strategy, and that the Initiative would link to each by defining a migration path to intercept the organisation's strategic IS/IT system(s).

In the same way, the strategy statement did not seek to replace the *business* strategy which each participating organisation was assumed to have. It was not the original purpose of the strategy statement to define or prioritise the business of the system. It quickly became evident, however, that questions raised in the context of the Initiative, in particular the Pilot Interface projects, required not an IT but a business/IS answer.

There was a clear and evident need to tie together the business, IS and IT aspects of the Initiative across all participating organisations. Until recently, however, there was no information policy governing shared information which would provide a link into each organisation's business strategy.

In April 1994 the first meeting was held of a System Information Committee with representatives from the three major stakeholder organisations. The Committee began by commissioning a study to investigate the feasibility and benefit of developing an information policy for information shared by system organisations. The conclusions of that study were positive, and further work is now to be carried out in developing such a policy. While this work is being carried out independently of the programme described here, it will help to set the 'computerisation' aspects of the programme in a business context.

4.4 Current position

Since its inception the Initiative has made considerable progress on a number of fronts.

The Standards Project. A Data Standards Manual has been produced, based on intensive drafting work by the Data Standards Team within the unit, and on extensive

consultation with a User Panel containing representatives of all stakeholder organisations. All stakeholder organisations are committed to the use of the agreed standard data formats within their own strategic IT systems, for data that is exchanged with another agency. In 1993 this work was streamlined and set up as a PRINCE project in order to clarify its organisation structure and its links to the steering committee. The steering committee has given its formal approval to the Manual, which is currently at version 2.1.

The Systems Analysis and Modelling Project. Set up in 1992 to examine and model the flows of data around the system, this project created an Information Flow Model – probably the most comprehensive and the most flexible ever produced for the area concerned. Over 600 information flows were identified and documented in terms of the data items flowing between sender and recipient. The project recommended the most appropriate flows for automation, based on volume of data traffic and therefore potential savings. This project is now in a low-activity, maintenance phase.

The Co-ordination and Infrastructure Project. Set up in 1993 to control those programme-level activities which are not contained within any single project, including maintenance of the Strategy and Business Case, awareness and communication of information about the Initiative and its projects and the Project Support Office function for general support.

The Data Protection and Security Project. Set up in 1993 to carry out a risk assessment for the programme and make proposals for a system-wide Data Protection and Security policy based on broad and careful consultation. The project is now in a low-activity phase – monitoring the Policy against an emerging Network solution (see below), and investigating options for authentication of data following transmission.

The Network Procurement Project. This project has produced a User Requirement documenting communication requirements for information interchange. An open procurement is being used to select a supplier for the necessary communications

framework and services, and the project is now at the contract negotiation stage. Network facilities are expected to be available by late 1995. Also within this project a Technical Standards Strategy document has been circulated and agreed, leading to a Technical Standards Policy. Policies and procedures for interaction between agencies have been developed and agreed in a number of areas.

The Pilots Project. The aim of this project is to enable the specification, build, test and documenting of software interfaces for strategic system applications. The interfaces are intended to facilitate the automatic exchanges of information between computer systems belonging to a number of different agencies initially in the same geographic area. Already, the project absorbs a greater proportion of the programme's resources than all the remaining areas together. Four pilot interfaces are at various stages of development, others are planned to follow when resources become available. Each pilot interface is set up and controlled as a PRINCE-style sub-project, with its own organisation structure, plans and controls. Figure 4.1 illustrates how the pilot interfaces make use of, and contribute to, the deliverables from each of the other projects within the programme.

Priorities for the selection of interfaces for automation are set by the recommendations of the Information Flow Model produced by the Systems Analysis and Modelling Project. The work of piloting each data flow will lead, in turn, to updates to the model.

Standards for the majority of data items to be exchanged have already been negotiated as part of the Standards Project, and appear in the *Data Standards Manual*. The Standards Project gives a high priority to the negotiation of any additional data items found to be needed in order to support a pilot interface.

In specifying and building an interface for exchange of data between two or more organisations, each pilot sub-project is constrained by the data protection and security policy agreed within the Data Protection and Security Project. The detailed interchange agreements

subsequently negotiated between organisations may, in turn, lead to a policy review and update.

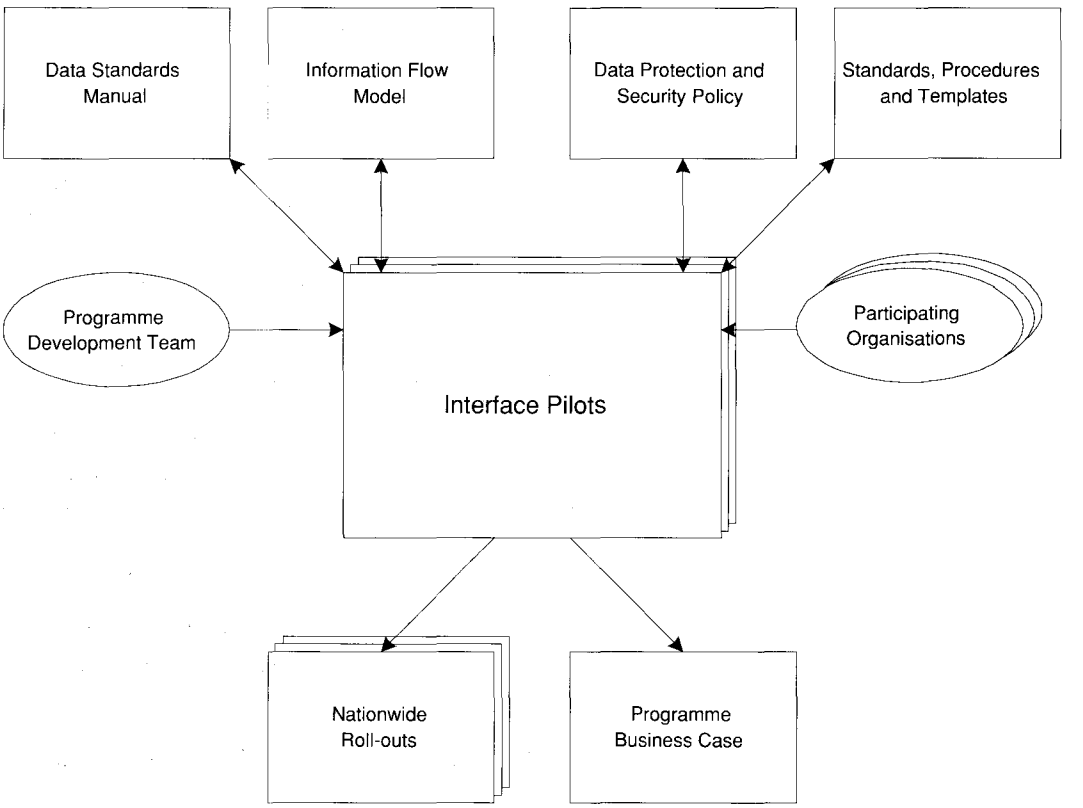


Figure 4.1: The interface pilots within the programme

Each pilot draws upon agreed **standards, procedures and templates** and may highlight the need for additions or amendments to them.

Finally, the **programme business case** should be re-appraised in the light of the development of each interface. The selection of each new interface to be piloted will be driven by its justification relative to others.

4.5 Conformance to CCTA guidance

The programme described here was set up in the context of a project management environment. Migration to a programme management approach followed naturally from the discipline and control already imposed by the

use of a structured project management method such as PRINCE.

The programme was initiated in 1989. Therefore, its structure and early planning predated the guidance available from CCTA. When written guidance became available, managers were able to compare the recommended best guidance with their own experience of the programme and how it had evolved. Although there has been no explicit migration of the programme to bring it into line with the best practice, nevertheless the similarities between the programme and the CCTA recommendations are striking.

The extent to which the Initiative now conforms to CCTA guidance in the area of programme management is described below under the headings of key roles, key stages in the establishment of the programme and key documents.

4.5.1 Key roles

Programme Director. The Initiative has no clear single candidate for the role of Programme Director. The steering committee acts as a Management Board for the programme, deciding on policy and providing overall direction and guidance. Given the nature of the Initiative, it would not be possible to find a single individual who could sponsor the whole of it, allocate all the necessary resources or ensure the realisation of all the benefits of the programme.

Programme Executive. A Programme Executive incorporates the roles of:

- Programme Manager
- Business Change Manager
- Design Authority
- Head of the Programme Support Office.

Programme Manager. Day to day management of the programme includes overall responsibility for ensuring that programme deliverables are produced on time and to budget – in line with the business case made for programme funding.

The responsibility for managing the programme and overseeing the day to day management of the projects within the programme, lies with a team comprising the Head of Unit which is running the programme, and three other people.

Business Change Manager. In CCTA guidance, this role includes responsibility also for 'management of change' activities – ensuring that line managers and staff in the business operation are taken along smoothly throughout the change programme and are fully prepared to exploit the new operational business environment once it is in place.

This role is shared between the four management team members. However, given the nature of this programme, there is little scope for the unit to influence the external business environment affecting the other organisations. Responsibility for benefits realisation lies outside the remit of the unit, in the hands of business managers within each agency participating in the programme.

Design Authority. This role is concerned with ensuring technical consistency between projects within a programme, and adherence to agreed policies and standards. In this programme it is performed jointly by the management team members.

Head of Programme Support Office. The role of a Programme Support Office is to co-ordinate activities across the projects within a programme, collecting and collating all plans, progress reports and control information. It offers a broad range of sophisticated support activities and produces the management information needed to support those in Programme Executive roles.

At present the Unit is supported in the management of this programme by a Project Support Office. The range of support functions that can be offered is limited by constraints of staff and other resources. Each of the programme's Project Managers therefore must take responsibility for the production of plans and reports. Although individual managers are able to call upon

administrative support, there is limited availability of programme-wide management information.

4.5.2 Key stages in the establishment of the programme

Programme Identification phase.
The programme described here did not go through a formal Programme Identification phase. It was conceived as a series of interlinked, but separate projects. From the beginning, however, the need for a wider framework was recognised, as evidenced by the co-ordination and infrastructure project and the terms of reference under which it was set up (see above).

Programme Definition (and re-definition).
During Programme Definition a *blueprint* for the future is developed, which sets out how the business will operate, and what it will look like when the programme is complete. It is the differences between the *blueprint* and the organisation's current mode of operation which define the benefits the programme has been set up to deliver. At the outset of a programme, it may not be possible to create a *blueprint* in fine detail – often uncertainties about technology or how business operations will work need to be addressed as execution proceeds.

The original *blueprint* for this programme was agreed as a portfolio of projects and the prioritisation and staging of projects was determined in the light of the very limited resources available at that time.

The programme is now undergoing re-definition, partly to put it into a more explicit Programme Management context, but primarily to reflect the increasing importance of the pilot interface developments. For the future, the core of the programme will be the initiation, management and roll-out of consecutive waves of automated interfaces for information exchange, and the programme-level organisation structure, planning and control mechanisms must reflect that.

The most visible evidence of this re-definition has been the creation of a PRINCE-style Project Board for each of the pilots, made up of representatives from the organisations involved in the relevant information exchange, with delegated authority from the Pilots

Project Board. In addition, a new version of the Programme Plan is now starting to emerge, beginning with a documented programme-level product breakdown structure (PBS), which ties together the various strands of development and highlights the dependencies between them. The Programme Plan needs to reflect the most logical transition from where we are now to where we want to go. And while both the *blueprint* (the destination) and the Programme Plan (the route to it) will need to be refined and re-appraised over time, they must continue to provide a base-line against which control can be maintained.

Programme Execution. A programme should be planned, and therefore monitored and controlled in manageable 'chunks' of work. CCTA guidance recommends managing the execution of 'chunks' of a programme or tranches one at a time, interspersing those tranches of activity with 'islands of stability' – planned points at which to review the programme's objectives, to take stock of how the programme is being run and to review the achievement of benefits. The beginning of each tranche should be triggered not by time as such, but by the successful completion of the previous one. This approach puts the Programme Executive ahead of the game, able to see the risks and opportunities early and to re-plan accordingly.

The programme described here has arrived naturally at a small number of review points which have been used to revisit the programme objectives and to re-group and re-deploy available resources. These reviews have been brief pauses rather than lengthy 'islands of stability' and have come about more by accident than by design.

A programme tranche should be seen in terms of the planning and work required to deliver and consolidate business change, rather than merely a unit of progress for the programme's projects. It will be evident from the nature of this programme that such tranching cannot yet be achieved – business change will not start to happen until the system is ready to learn from the pilot interfaces and when it does it will be controlled outside the programme in individual stakeholder organisations. The progress of the programme will continue, therefore,

to be measured in terms of the progress of its component projects.

Nevertheless, the Programme Management Team recognises the need to influence programme-level monitoring and control, with the result that two days have been spent off-site in re-planning and reviewing the programme, and a further series of reviews is to be scheduled.

Benefits realisation. Ownership of the programme is shared between the stakeholders represented on the steering committee, straddling different, independent and autonomous agencies. The ability to plan for and achieve benefits realisation is vested in those agencies, and not in the Programme Executive. There is a risk, given this separation of ownership and executive functions, that the programme will be perceived by stakeholders as *something that is being done for them,* rather than something they are doing themselves.

Organisations should be gearing up already for benefits realisation, carrying out business process design where necessary and planning what may be a radical restructuring of current modes of business operation which is where the benefits of the programme will be realised. There is evidence to suggest that this is not happening yet, and that stakeholder organisations are being reactive, not proactive as the ultimate success of the programme requires.

4.5.3 Key documents

Programme Definition Statement. The Programme Definition Statement is the agreed statement of objectives for the programme, and includes a sound business case as a basis for the approval of funding. It is maintained and updated throughout the life of the programme as the key monitoring and control document.

The programme described here started with a Programme Initiation Document (PrID), which included a specification of programme-level assumptions, risks and constraints. Each individual project within the programme was then initiated via a Project Initiation Document which referred back to the PrID. The original programme business case has been reviewed and

updated at regular intervals and continues to indicate that significant cost savings could be delivered.

During the early days of planing for the Initiative, a high-level plan was produced which brought together the different strands of work and showed the interdependencies between them. Effort was subsequently concentrated on individual projects, however, and the Programme Plan was not maintained. This has caused no major problems so far because of the ongoing close liaison between the three individuals who, between them, manage all of the projects. As time passes, however, and the size of the programme grows and the number of activities increases, the need for an updated plan becomes more urgent.

A new version of the Programme Plan is now emerging, starting with a documented programme-level product breakdown structure (PBS). The products of the programme are grouped under a number of categories, broadly summarised as *What to do* – identifying projects and the specific technical deliverables from each, *How to do it* – identifying methods, procedures, standards and templates and *Why to do it* – discussion and options papers leading to the emergence of policies in various areas. Once complete it will form the *blueprint* towards which the work of the programme is leading.

The benefits management plans. The benefits of the programme will accrue to the individual participating organisations via the national implementation of automated interfaces being developed by the Pilots Project for the exchange of information. A separate benefits management plan will have to be produced by each participant for each interface. It will be for each individual stakeholder organisation then to ensure the delivery of the potential benefits identified.

The risk management plan. A certain level of risk is inherent in the nature of the programme, and in the uncertainty surrounding any attempt to design systems which will continue to be relevant into the next century. Risks to the success of the Initiative arise from the broad range of stakeholders involved, and the considerable degree of autonomy which each organisation currently

enjoys in running its own affairs. Finding a consensus view can be a difficult task.

Technical risks arise from the need for the projects in the programme to make use of the latest technology, while at the same time maintaining a migration path towards eventual convergence for each individual organisation's own strategic system or systems.

The risk management plan for the programme is contained within the Risk Assessment section in each individual Project Initiation Document. Some risks will straddle two or more projects – for example the lack of willingness on the part of a participating organisation to continue to contribute financially.

Communications and awareness plan. The programme has made good progress in the area of establishing good communications about the programme's aims and progress. The channels of communication were defined within the relevant sections of the Project Initiation Document for the co-ordination and infrastructure project. For example, a number of seminars have been held and a regular newsletter is produced and widely distributed.

4.6 Issues in the programme

The issues that have arisen in the programme so far can be categorised under three headings:

- those which relate to the business environment, or in this case, environments within which the programme is to be taken forward (business issues)
- those which arise from the organisation structures set up to deliver the programme (organisational issues) and
- those concerned with how the programme is planned and controlled (Programme Management issues).

4.6.1 Business issues

A changing business environment

The programme has, throughout its lifetime, faced the problems associated with trying to hit a moving target.

The volume of legislation in this area each year since the Initiative started has given rise to the need to manage a highly volatile business environment, or in this case, several different business environments, since each participating organisation operates within its own. The organisation structure, standards and methods of the programme have had to be flexible and adaptable to keep abreast of changes in affected business areas.

Business aspects of the programme

The benefits of the programme will be **business** benefits, and realisation of those benefits will affect business operations within each participating organisation. There is a risk of concentrating on the delivery of projects and products, with insufficient thought given to benefits realisation. The programme has identified a need to involve different people within each organisation – not just the IT Department.

Ownership of the programme

Ownership of the programme is spread across a number of stakeholder organisations and agencies, each with its own individual problems, concerns and priorities. The arguments are irrefutable for standardisation, but it tends not to be the issue closest to the hearts of beleaguered managers. This has implications for the success of the programme.

In the first place, it raises the possibility that any one organisation might withdraw its support. Pressure is being applied across the whole of the public sector to monitor all expenditure against the benefits that expenditure brings. The introduction of agency status for parts of the system is likely to increase pressure in this direction. Some of the stakeholders making financial contributions to the funding of the programme will not see benefits in their own organisations for some considerable time to come, but the business case for one project is predicated on others. The success of the Initiative for each participant depends upon the involvement of all – any one withdrawing its support could endanger the success of the whole enterprise.

Secondly, the benefits of the programme will accrue in the long-term, while costs arise in the short-term. The Programme Management Team recognises the need to manipulate the programme to deliver some early

benefits, otherwise, individual organisations may lose impetus and commitment. There is also a recognisable need for a continuing re-appraisal of projected costs and benefits – partly to re-examine the justification for individual projects, to look for potential short-term benefits and to constantly re-enforce ownership of the programme by its stakeholders.

4.6.2 Organisational Issues

Composition of the steering committee

Representation on the steering committee was originally agreed at one business representative and one IS/IT representative per organisation or agency affected. The total size of the committee is 26 members, which makes it an unwieldy body to co-ordinate. Difficulties can arise, in a group of this size, in finding dates for meetings. Thorough discussion of any particular agenda point is difficult, since a proportion of those present will have little or nothing to contribute.

The work of the newly formed Information Committee should make it possible, in due course, to separate business decision-making from IS/IT, and at that time the steering committee may be re-structured accordingly.

Involvement of senior management

The programme has found that not just the commitment, but the **active involvement** of senior management within participating organisations is required to make it work. However, seniority means remoteness, and the programme must work around that since it cannot change it. This has caused difficulties in the past, when dealing with operational staff within participating organisations, in trying to enforce agreements made at steering committee level. This has been the case especially where the decision has implications which go beyond the boundary of a single organisation.

Private finance initiative

Public sector initiatives such as market testing and the private finance initiative (PFI) have had limited impact on the work of the Unit to date. Already the use of external resources is tightly controlled through the use of Framework Agreements with suppliers selected through open tender procedures, and the role of intelligent customer is one with which the Unit's staff is well familiar. The Programme Management Team will keep

this situation under review, but the benefits which would offer inducement to private sector funding will accrue at the level of individual participating organisations and agencies rather than within the programme itself.

4.6.3 Programme management issues

The strategic versus the interim view

The Programme Management Team has been aware throughout of the need to balance the strategic against the interim view. There are strong arguments for 'purity', that is planning for the infrastructure to be provided by the programme in a way which will intercept only the strategic systems of participating organisations. Those arguments need to be offset against the need to show some kind of return on investment in the short-term. The phasing of the work needs to maintain an equilibrium between the two.

Prioritising activities

The programme's budget is funded from the individual budgets of stakeholder organisations, and is determined in the light of the tight financial constraints within which all public sector organisations operate. The selection of priorities for using the programme's scarce resources is carried out based on a number of considerations, including:

- earliest return on investment. Which projects, and in particular which pilot interfaces show the earliest 'pay-back'
- political imperative. Some areas of the system are more in the political limelight than others
- chronological interdependencies, for example, the initiation of some pilot interfaces must await the availability of the network
- prevailing ethos within participating organisations. Some agencies within the system, and indeed some groups within each agency, have a greater capacity to absorb change. The involvement of key personalities within some agencies will go some way towards ensuring success

- sharing of costs and benefits across different projects, and therefore across different stakeholder organisations so that the burden is evenly spread.

Standards and procedures

The unit recognised early in the lifetime of the programme the need for standards and procedures to ensure consistency, continuity and compatibility between projects. The PRINCE method has been adopted throughout – suitably adapted to take account of the particular needs of the environment.

As the programme now moves into a phase of being dominated by the development of pilot interfaces, the need for agreed and documented policies and procedures becomes even greater. Each Pilot Interface sub-project conforms to a standard structure, and the existence of a template for project organisation, planning and control will save considerable time and effort.

4.7 Key lessons learnt

Flexibility

The programme organisation structure, standards and methods must be flexible and adaptable to stay abreast of changes in the business environment. This is particularly pertinent where the programme affects not one changing business environment but several.

Consensus

In a multi-stakeholder environment, where there is genuine autonomy within each participating organisation and no over-arching level of strategic management, decision-making takes longer because it must be based on consensus. But all affected individuals and organisations are thus involved in decision-making, which gives each decision greater legitimacy.

Timing of benefits

The benefits of a programme will usually be long-term, ie strategic benefits. There may be a need to balance the strategic perspective against a more tactical, short- to medium-term perspective in order to derive some benefits early. This is particularly the case where the programme is funded jointly between a number of stakeholders, and the costs and benefits accrue unevenly between them.

Share of costs and benefits

Organisations are increasingly constrained by the need to ensure that sufficient benefits are derived to balance any expenditure made to deliver them. This is particularly the case in the public sector. The programme described here will deliver shared benefits, across a number of beneficiaries, and some participants will have made a significant investment before deriving any benefit at all. In that situation, the Programme Director needs to be constantly alert to the risk that any participant could withdraw support, and thereby endanger the whole enterprise.

Migration to programme management

Migration from a project management environment (from which some programmes evolve) to a programme management approach – which includes the need to involve key people, the need to plan in a way which allows for ongoing monitoring and reappraisal, the need for clear and accurate documentation of both the management and technical aspects of the work to be performed – can follow naturally where discipline and control are already imposed by the use of a structured project management method such as PRINCE.

4.8 CCTA commentary

This case study recounts the migration to a programme management approach which has brought benefit to an inter-organisational initiative. The risks facing this programme were the difficulty of obtaining 'ownership' among autonomous participating organisations, the volatile nature of their business and organisational structures in the current climate of change, and not being able to have a driving force to carry out the role of Programme Director, as recommended in the CCTA guidance.

The programme management solution emerging to counter these risks has these strengths:

- good communications, with the most suitable channels of communication recognised for each project area

- a flexible approach by the programme management team that has recognised the need to re-define the programme's plans and *blueprint* in the light of experience in the interface pilots. The team have had

the courage to take time out to conduct a review of the programme's plans

- an emphasis on early delivery of some benefits to ensure the buy-in of participating organisations and to try and improve benefits management across the programme – where benefits management is the responsibility of organisations beyond the direct authority of the programme management team

- a strong emphasis on establishing standards across the programme from the outset

- an underlying controlled environment of project management, using PRINCE.

Programme management in a pan-European enterprise

5 Programme management in a pan-European enterprise

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5 Programme management in a pan-European enterprise

5.1 Introduction

This case study illustrates some aspects of introducing programme management into a pan-European, private sector environment. It describes how programme management was introduced into one of Europe's largest manufacturing organisations, as a way to manage radical change to one of its core business processes – customer order fulfilment.

The process begins with a customer ordering one of the manufacturer's range of products, through one of its agents, and ends with receipt of payment. It includes:

- sales forecasting
- customer order input, processing and tracking
- order fulfilment, from finished product stock, or by factory order
- storage, distribution and management of finished stocks
- preparation of delivery and invoice documentation.

For this organisation the stimulus for introducing programme management was a developing crisis. The business function in the organisation which was responsible for the customer order fulfilment process, had developed a business change strategy which comprised:

- a vision of the future business process which would be required to enable the organisation to maintain market dominance while operating more efficiently and supporting the organisation's future manufacturing strategy
- a 5-step strategy over three years for moving from the current process to the vision, including 'piloting' of each process step before implementing it across the whole of its operations

- a detailed plan for the first step towards the vision, including pilot projects in selected countries, and definition of the business process *blueprint* for the first step.

The same business function was also close to deploying a major new IT system which would rationalise and standardise its customer order handling processes. The system would be rolled out over a two-year period across the whole of its operations, spanning most of Europe. This infrastructure project had a marginal financial business case, although the benefits of enhanced data accuracy, consistency and security were recognised.

Project interdependency

Unfortunately the business change and infrastructure projects, both of which were well-founded and had full management approval, had been planned independently, with the interdependencies between them not being recognised. Inevitably, problems very quickly developed:

- local (country) operations staff were being approached by infrastructure and business process change projects separately – yet their plans were competing for the same local resources and calendar time; furthermore there was no evidence of a coherent 'big picture', and this unsettled local staff

- the rollout of the new IT infrastructure was meant to eliminate many old, local IT systems – yet the business process change 'pilot' projects sought to make use of these same local systems for extended periods

- the infrastructure project team staff gained the impression that the business processes they were automating were in the process of being changed; they had already experienced unstable business requirements and in the absence of joint planning were understandably sensitive on this issue.

Task force

In the event, these and other symptoms of the underlying problem gave 'early warning' before too much disruption occurred. Senior management assembled a task force with the objectives of:

- developing a workable, 'integrated plan' to allow both the infrastructure and business change projects to proceed
- recommending a management process to prevent any recurrence of the underlying problem.

The size and complexity of this task was considerable: there were between 80 and 100 projects spanning four pan-European functions across about twenty countries. About 60 per cent of the projects related to the IT infrastructure, the rest were driven by business change.

The task force numbered just five or six members in total and was made up of project managers of both the infrastructure and the business change projects together with a senior manager with a manufacturing function background and a consultant with project, programme and quality management skills. Two or three administrative support staff completed the team.

5.2 The current situation

The task force knew that any new integrated plan to be offered to senior management for approval, would have to be robust. They decided that a detailed survey was needed of all current and planned activities which might relate in any way to the customer order fulfilment business process. The survey covered:

- basic project data, eg title, sponsoring department, personnel
- objectives, deliverables
- business processes affected
- systems changed or replaced
- timing schedule and milestones
- resourcing
- targeted benefits, business case
- dependencies with other projects or organisations
- risks as currently assessed.

Additional support was brought in to the task force to carry out this survey, which took about two months to complete and document.

Even finding out the existence of all relevant projects presented difficulties, since the organisation allowed local operations a degree of organisational and budgetary autonomy which enabled them to initiate projects (even of significant size), without central approval.

Furthermore, senior management probably only had in mind at this time some enhanced change control procedures at project level, rather than adoption of programme management. Consequently, the task force's empowerment to tie up project managers' time responding to surveys, particularly in cross-functional areas, was untested.

In the event, a high degree of co-operation was obtained and the task force sensed that the organisation as a whole was keen to find a better way of doing things. The survey eventually covered over 80 separate projects, and the documented findings were welcomed by the organisation and enjoyed wide distribution.

Findings

The survey findings were analysed by the task force, and their analysis showed that the organisation's plans, as well as being unco-ordinated, were fundamentally unworkable:

- the infrastructure project's financial business case depended on its meeting strict deadlines, which required there to be no changes to business processes during most of the two year rollout period – but changes would be needed much sooner if the business process change project was to meet its three year timescale expectations

- a scale and rate of business change was implied which, in the opinion of most senior managers, simply could not be absorbed by the organisation

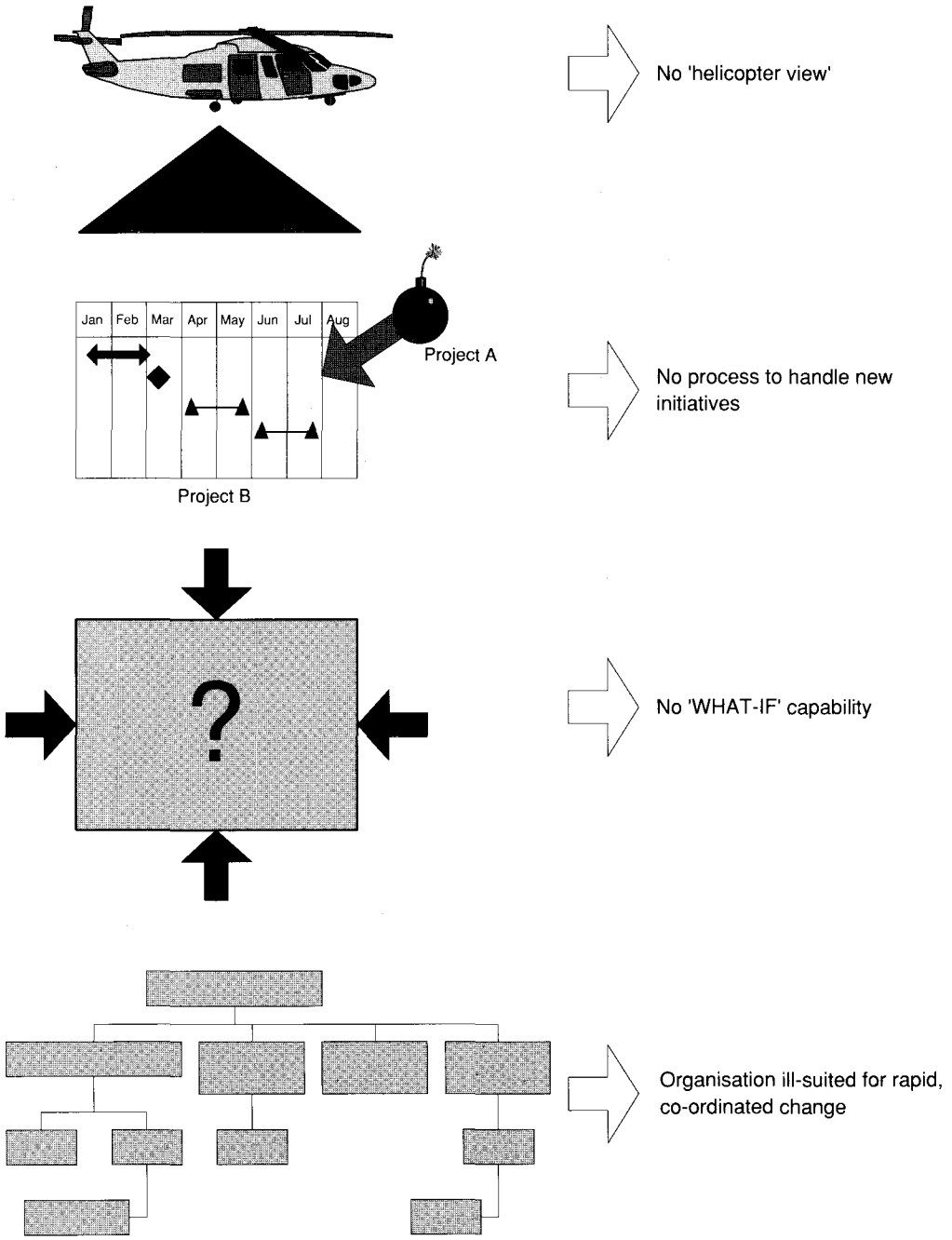

Figure 5.1: What was lacking

- projects were working to different assumptions and did not share a common vision for the core business process, with the result that incompatible changes were being made to the process; to a large degree this resulted from the lack of a published business strategy
- individual projects' business cases, while detailed and carefully constructed, were artificial in that they did not take account of impacts on other projects
- no account was being taken of what were severe resource limitations
- there were numerous timing conflicts.

The overall impression gained by the task force was that the organisation was lacking in a number of ways, shown in Figure 5.1.

5.3 Re-planning

The team set about developing a workable integrated plan. The options centred on the two key projects, and were:

1 Complete the infrastructure project on time, delaying the business change project.

2 Extend the infrastructure project's deadlines to allow windows of opportunity for changes to the business process.

Complete the infrastructure project

This option offered low risk, but delayed the achievement of massive efficiency cost savings, had the potential to seriously impact the organisation's competitive position and could demoralise the organisation.

Extend the infrastructure project deadline

The closer integration, or 'interweaving', of the two projects was obviously higher risk, but it met the substance of the organisation's needs and expectations in terms both of achieving a standard infrastructure across all of its European operations, reaping massive efficiency cost savings from an early date and maintaining competitive position. Crucially, it required senior management to recognise that the infrastructure project's business case was not purely financial – and that the key

benefit it now offered was that it would enable rapid business process change across the organisation's whole operations, which in turn would deliver very large financial benefits.

There were three variations on this second option which offered progressively faster delivery of benefits for a greater degree of integration between the two key projects.

Detailed timing schedules were first developed for all the options, taking account of interdependencies, timing and resource limitations and validated for their feasibility with the projects affected.

The costs and benefits associated with each option were then calculated, by quarter, for the whole 'extended enterprise' including the organisation's widespread network of retail agents. These were then verified with the organisation's finance function. (It is notable that before the task force carried out this exercise, the organisation was unaware of the scale of the costs and benefits associated with the customer order fulfilment business process.)

The different options were characterised on a *Risk versus speed of benefits delivery* chart for presentation to senior management, see Figure 5.2.

Recommendation

The task force recommended the variation on the second option which, in their view, offered the best compromise between risk and speed of benefits delivery.

5.4 Programme management recommendations

The organisation's existing project management practices were diverse and relatively unsophisticated. Projects were co-ordinated with each other on an *ad hoc* basis. This situation had been considered by many to be adequate in an environment where business processes were stable and where IT systems supported and reacted to the needs of purely local functions – although a recent decision to apply risk management practices extensively was probably an early warning of a need for change.

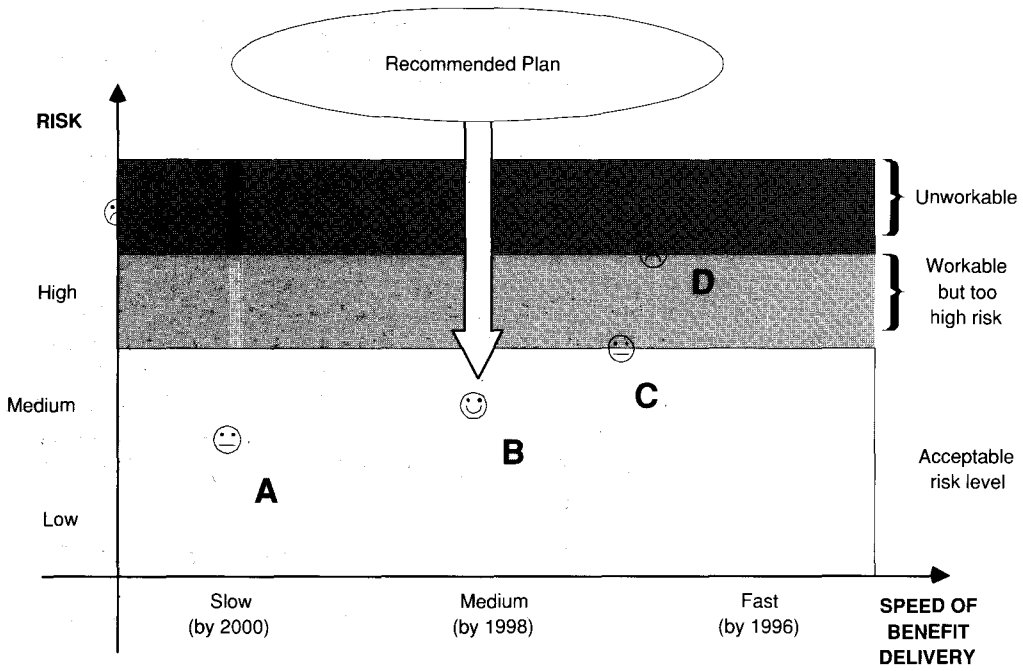

Figure 5.2: Risk versus speed of benefits delivery

The task force concluded that, whichever integrated plan option was selected, a different, more sophisticated management process was certainly necessary to cope with the environment which now presented itself:

- a large number of geographically diverse projects
- an increased pressure for accelerated delivery of business process change and the associated benefits
- business benefits depending on the integration of many projects' deliverables
- business process change involving more than one functional area, as well as other parts of the organisation's 'extended enterprise'
- projects sharing the same (scarce) skilled resources, in particular business process specialists

- a potential, and indeed probable, need to further adapt business processes in the future in response to changing competitive forces.

Specifically there would need to be central co-ordination of projects, a greater focus on the delivery of measurable business benefits, and management of risk in a wider context.

The CCTA programme management guidelines were published at about the time the task force was making its presentations to senior management, and a key practical benefit from the publication of these guidelines was that they could be used to provide authoritative support for the recommendations, in particular for the need for:

- co-ordinated selection and planning of projects
- a controlled environment in which to execute projects
- focus on benefits and risk management
- a senior level Programme Director to be appointed
- a Programme Executive
- a Programme Support Office.

The task force also recommended a programme steering committee, chaired by the Programme Director, as well as an organisation structure change to overcome the problem that the infrastructure project and the business change project reported, for historical reasons, to different parts of the business function.

Most of all, the CCTA guidelines provided confidence to senior management that the problem the organisation faced was not a unique one; and that programme management was a proven, and proportionate, response to the problem. Given the financial investment and, perhaps more significantly, the cultural change senior management was being asked to make, this was important.

Another very important reassurance which many in the organisation needed, was that programme management would not be a layer of bureaucracy which would stifle innovation, particularly ideas coming from local operations staff. In their presentations, the task force concluded the reality to be that, while there was a healthy tradition of bubbling up ideas, in practice bad ideas currently stood as much chance of being progressed as good ones – and that both had a tendency to de-stabilise existing projects. Programme management would actually improve the situation, by turning good ideas into projects more quickly, merging these new projects with existing ones in a *controlled* manner, and ensuring that bad ideas were killed off more quickly.

Finally the principle was proposed that programme management should 'interfere' with the internal business of individual projects to the minimum degree necessary, both to avoid imposing excessive additional workload on project managers, and for reasons of motivation. At the same time it was recognised that some projects were more critical to the programme than others, and it was proposed that each project should be assigned one of four categories which would determine its reporting obligations to the programme, and the degree of control to be exercised over the project by the programme:

- local control
- local control, central monitoring
- light central control
- full central control (used only exceptionally).

See Figure 5.3.

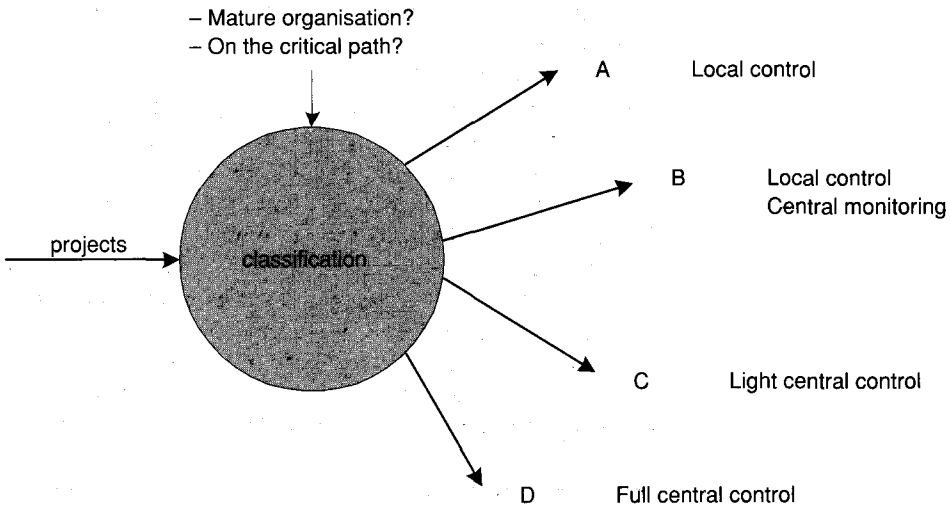

Figure 5.3: Balancing central versus local control

5.5 Introduction of programme management

Senior management approved the task force's recommendations, both for:

- a new integrated plan which delayed the infrastructure project, and
- the introduction of programme management.

The task force continued in existence to manage the introduction of programme management. It was clear that resourcing the senior programme management roles would take time, and this necessitated a modest timetable. However, senior management agreed to a four-month period of stability, during which no new projects would be brought forward.

The project managers of the infrastructure and business change projects agreed that, on an interim basis, they should jointly carry out the roles of the Programme Manager and Business Change Manager in addition to their respective project manager roles.

The first step taken was to set up a Programme Support Office, initially with the limited brief to collect monthly

status data from projects and to publish a monthly 'programme book' containing the latest programme plan compared with the approved baseline. This was achieved very quickly, using just two junior grade staff with advice from a consultant, and helped by what was again a high degree of co-operation from the projects. Only simple software tool support was used initially: e-mail (Lotus Notes) to collect data quickly, and relatively unsophisticated bar-charting packages to manipulate and present baseline and current plans and milestones.

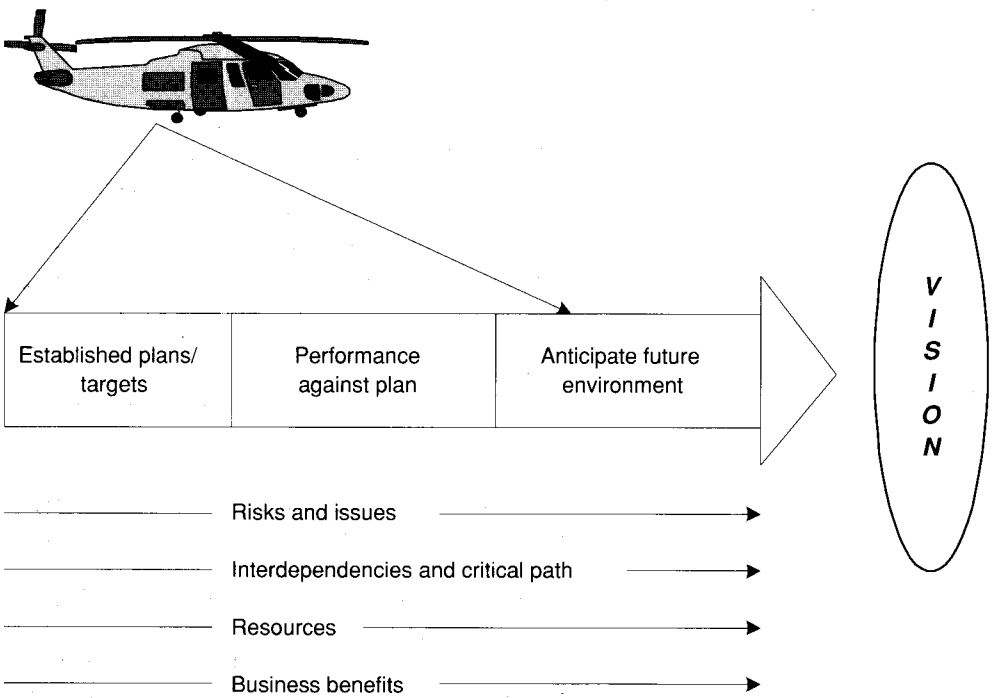

Figure 5.4: Benefits-driven 'big picture' management

The monthly programme book was immediately welcomed by projects and local operations staff; particularly because the programme book showed information from central, project and individual country viewpoints. Project and country managers commented that it was the first time they had had access to the 'big picture', see Figure 5.4. Selected views from the

programme book were also the primary reporting medium to senior management, supplemented by bespoke presentations.

If programme management were to be successful in the long-term, it was considered vital that the project and operations staff who were being asked to 'invest their time' by providing regular status reports, should understand the overall concept, and the benefits they themselves would see. A brochure was prepared and given wide distribution, explaining programme management, the reasons why it was being introduced and the benefits it would bring.

In the absence of 'real-time' management by a full-time programme executive, most programme issues were handled at a monthly 'programme issues meeting', with only urgent issues dealt with between these meetings. By using the Programme Support Office to consolidate and filter information for these meetings, best use was made of the interim programme executive's limited time. Tele- and video-conferencing, e-mail (Lotus Notes) and mobile voice communications were also indispensable 'productivity aids' given the Europe-wide nature of the programme.

The project status data collected by the Programme Support Office was progressively increased in scope, while still keeping to a minimum the additional workload and the degree of interference in projects. Particularly valuable was the decision to collect 'confidence factors' on projects' estimates of their completion dates – changes in these confidence factors have turned out to be invaluable early warnings of problems, which it has often been possible to manage pro-actively. At the same time, the information provided in the monthly programme book has been enhanced to provide a better service to projects and local operations – an objective being that the programme book should always save project managers much *more* time than the time they are asked to spend meeting programme reporting requirements.

A Programme Director was appointed six months after the task force's original presentations to senior

management. The CCTA guidelines were used to develop the terms of reference for this and other roles, but progress on the recommended organisation structure change, and on appointment of a full-time Programme Executive, continued to be slow. The main effect of the Programme Director's appointment was visibly to confirm senior management's commitment.

The current situation analysis had exposed the lack of a published business strategy, and work was initiated to address this. The formal existence of the programme provided a focus for this work, which included discussions with other business functions, including manufacturing and finance, and with the organisation's enterprise partners.

5.6 The situation today

At the time of writing, and nine months after the task force's original presentations to senior management, programme management is still developing, but has already had a significant positive impact on the organisation:

- more than 100 projects across Europe are contributing to, and have access to, up-to-date and consistent programme information
- the general standard of project management practice is improving
- better quality decisions are being taken across the organisation
- the first major project initiated as a result of the task force replanning is delivering on time
- programmes have been set up, with programme management resources assigned, in some of the larger individual country operations.

Consistent programming information

The vast majority of projects are working co-operatively to a common, cross-functional business strategy and to a common plan for achieving that strategy. This contrasts with the previous situation where many projects simply saw each other as risks.

Improved project management	Project management is improving, driven only by the requirements of disciplined, regular programme reporting. (In addition, the programme executive arranged for consultants to be seconded to some of the most critical projects, to coach these projects in best project management practice.)
Better quality decision making	Decision making is better, largely because better information is available, and because it is now very difficult to 'hide' bad news, but also partly because the organisation now has an enhanced vocabulary, and the associated concepts, with which to discuss its problems. The earlier introduction of risk management techniques to the organisation began this process of 'language enrichment' but programme management has introduced terms such as *project interdependency*, *benefits delivery* and, of course, *programme* into widespread use.
IT development on time	The first IT system development project initiated as a result of the task force's re-planning, to support an important business process change ahead of the infrastructure project's completion, is delivering on time within a planned 'window of opportunity'. The organisation is gaining confidence that the goal of agile IT system development, to support rapid business change, is attainable – in contrast to the situation previously where IT systems development was widely perceived as the bottleneck to business process change.
Programmes in individual countries	Programmes have been set up, with programme management resources assigned, in some of the large, individual country operations. These country programmes span projects and activities across all of the organisation's business processes, not just those relating to the customer order fulfilment process. The project categorisation system, recommended by the task force to determine control and reporting, also provides a natural mechanism for 'interlocking' central programmes with local programmes. The benefits from these local programmes are already clear, in terms of greater alignment between central and local objectives, and better quality decisions. In one country the current situation analysis which preceded the introduction of programme management resulted in a decision to defer

some projects in order to concentrate scarce resources on projects with the highest business priority.

Figure 5.5 illustrates the benefits that programme management has brought to the organisation.

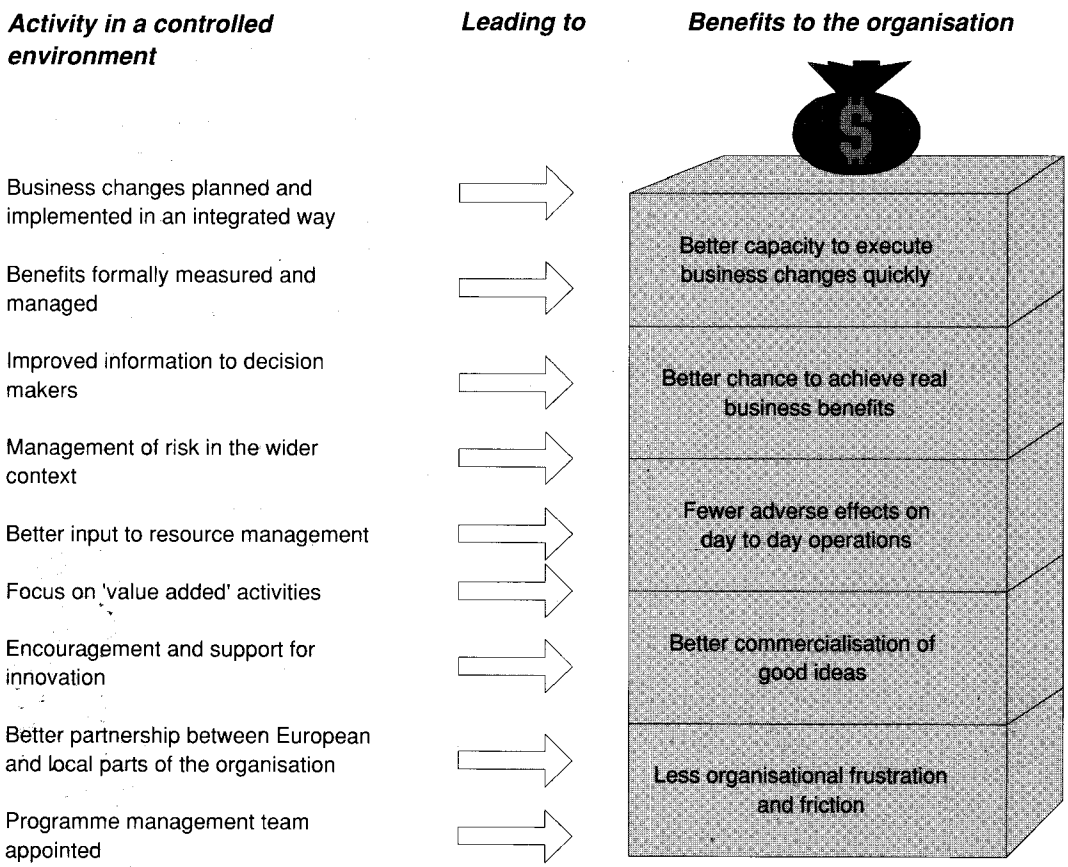

Figure 5.5: The benefits of programme management

The very real benefits listed above have been achieved *despite* the fact that the managers of the infrastructure and business change projects continue to perform their 'interim' Programme Executive role, and despite the fact that the organisation structure change has still not been actioned, although the ready acceptance of programme management at the working levels of the organisation

has meant that the disadvantages of the present organisation structure are having progressively less effect.

Some projects are still not on board, but these are not at the core of the programme, and this situation is as much as anything the result of resource limitations. Experience has shown that where the Programme Executive has time to *take* control of the situation, it is welcomed.

5.7 The future

Although considerable progress has been achieved, there is still a long way to go before the introduction of programme management into the organisation can be said to have been wholly successful. The organisation must introduce a fully effective organisation structure, full-time resourcing of a complete Programme Executive, more widespread adoption of best project management practice and an enhanced Programme Support Office capability to be discussed below.

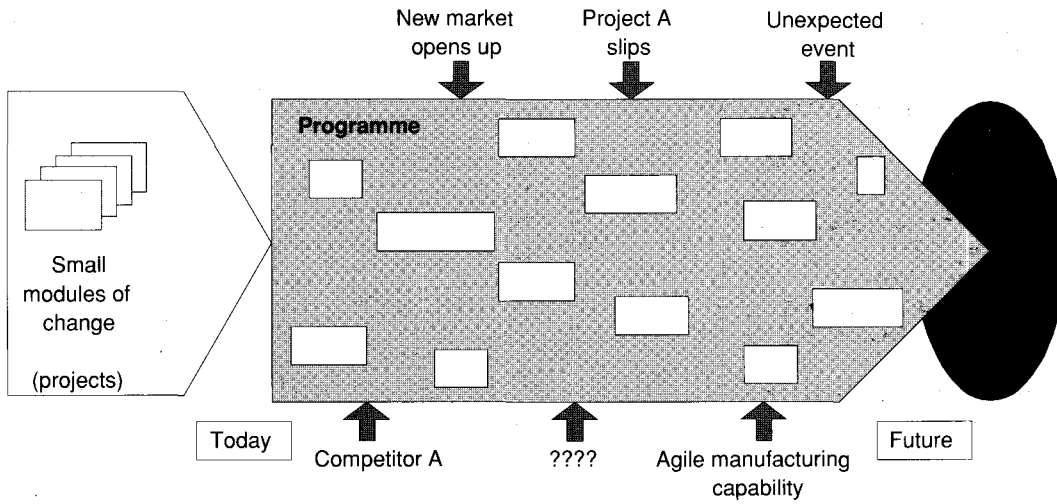

Figure 5.6: A fast, adaptive business change capability

The main benefit achieved to date has been a bringing of order to what was previously a disorganised situation, and the avoidance of sudden, unexpected crises. The objective for the *future* is to become fully 'agile' in terms of securing a reliable capability to make business process changes efficiently and rapidly, in response to business

and market needs – what has been termed by some business textbooks as the 'adaptive organisation' (see Figure 5.6). This will be against a continuing need for organisational 'leanness' in terms of headcount.

Growing pressure for change

Already pressure is growing to adapt the current customer order fulfilment programme, to meet the organisation's needs for 'globalisation' of its business processes, and for entry into new markets. The potential efficiency savings from globalisation, and the value of the new markets, certainly justify making the attempt to re-plan the programme in search of even greater benefits delivery (still at an acceptable level of risk) and this will be programme management's next test.

Major re-plan

A major re-plan of the programme is anticipated, to adapt it for globalisation and entry into new markets. To support this, the role of the Programme Support Office is being extended to provide a fast turnround 'What if' analysis capability, that is to be able to modify the current programme plan to the Programme Executive's instructions, and then predict the associated costs, benefits and resource requirements over the life of the programme. Different plans can then be compared. A full-time professional planner has been assigned to the Programme Support Office.

'What if'

Considerable work has gone into evaluating software planning tools to support 'What if' analysis, as well as the existing Programme Support Office services. The conclusion has been that at this time the right combination of functionality, report presentation standard and growth potential is not available in the preferred PC environment. For the next phase of the Programme Support Office's operations, an industry standard, low-end project planning and scheduling package will be used, with another package interfaced with it to provide high quality reporting. This is seen as a temporary, and 'throw-away', solution; the vision is still for a fully integrated solution based on a relational database of programme information – a planning tool would be one of several 'front-ends'. Close integration with e-mail is also seen as essential.

New IT development

New IT approaches such as rapid application development (RAD), data warehousing and object-based development will also be important contributors to agile business process change, and it is felt that programme management will provide a good framework within which to adopt these.

5.8 Conformance to CCTA guidance

This section discusses the degree to which the use of programme management conformed to CCTA guidance in some key areas.

1 The business process *blueprint* is a critical feature of the CCTA guidance, and certainly it was critical for guiding the programme in this case study. However, in this programme, new business practices are being 're-engineered' or in some cases 'invented' from scratch; these first need to be tested, then fine tuned or even perhaps radically altered, before being deployed across the organisation as a whole. For this reason the *blueprint* does not describe the new business processes. Instead, it defines the *characteristics* which they must exhibit (eg delivery reliability, customer lead time). The details of the future business process are filled in as the programme proceeds.

2 The CCTA guidance for breaking down the programme into successive 'tranches', or steps, is endorsed for many reasons – to make the programme manageable, to provide review points, to secure early benefits (and so maintain management commitment) and to demonstrate progress to the organisation. However, the 'islands of stability' metaphor used in the CCTA guidance was not well received. Firstly, it seemed to convey a sense of unnecessary delay. Secondly, at any time in the programme work would be taking place on more than one tranche so there simply *were* no stable points. That is, tranche 3 business practices would be being piloted while tranche 2 systems were being constructed and while tranche 1 systems were being deployed.

3 The CCTA model for the Programme Executive, the Programme Director and their terms of reference was found to be very appropriate and is being adopted. The importance of modest programme reporting obligations on projects is also endorsed.

4 The tension between projects to complete on time and budget, versus the wider goals of a programme, is specifically mentioned in the CCTA guidance with the comment that compromise is inevitable. The programme in this case study 'conformed' to this in that it was this very tension which gave rise to the crisis which was the stimulus for programme management.

5 The CCTA guidance describes a 4-phase approach comprising Programme Identification, Programme Definition, Programme Execution and Benefits realisation. These phases are recommended to be separate and sequential. In common with a previous case study, this programme initially comprised largely already running projects, and so the Identification and Definition phases were effectively conducted in parallel. Furthermore the need to adapt the programme, already proven less than one year after its start, means that the phases will be used to some extent iteratively.

5.9 Lessons to be learnt

The lessons itemised below have general relevance to enterprises in both public and private sectors.

- the amount of commitment and time needed to introduce programme management into the organisation is significant
- programme management can be started 'small' and then spread
- control information is a key benefit delivered by programme management.

Commitment to introduce programme management

There was no problem gaining acceptance from the working levels of the organisation – indeed a constant theme was their ready co-operation and appreciation of the benefits. Nor was there any reluctance on the part of senior management to approve funding for programme

management, and the support infrastructure required. However, managers were extremely reluctant to re-assign scarce skilled resources from current critical duties in order to provide a full-time programme executive. In other words, senior managers were committed to the idea of programme management, but did not assign priorities over other activities nor resolve conflicts on people's time.

Effectively, ideas like programme management have to compete with other ideas, and other calls on senior management's time including the organisation's day to day operations. The culture in the organisation is that if an idea is any good, it will attract the resources it needs to survive. This may have more general relevance in private sector applications.

Start small is an option

The experience in this organisation is that programme management, like many good ideas, is self-sustaining. For example, local country programmes were instigated by local managers because they saw the advantages. There was little or no help demanded of the task force, who did not have the time to push the idea anyway.

The lesson here is that it will generally be worth introducing programme management, even if the scope has to be limited by the resources available, provided success can be assured. Success will cause the concept to spread and will stimulate the release of the appropriate resources to meet the need because the benefits can be seen.

Information is a key benefit

The collection and processing of data from projects should always be a priority, particularly when programme management has to be initiated with limited resources. The raw data must be analysed and processed to elicit useful information such as:

- identification of risks and issues impacting several projects and therefore warranting programme-level action
- early warning of problems affecting projects on the programme's critical path, allowing a pre-emptive response

- opportunity to re-deploy resources or bring projects forward in time where progress is better than anticipated

- successes in delivering benefits and new capabilities coming on-stream at the operations level.

The information can then be fed back to:

- project managers, who need to spend less time finding out what is going on, and can spend more time managing their projects

- senior managers, who are able to make better quality decisions.

Where this information is seen by managers to originate from the programme management opportunity it promotes the importance of programme management, furthering its cause in the corporation through the benefits it is delivering and hence helping to free the resources needed to further extend its reach and value.

5.10 CCTA commentary

An interesting perspective is gained from this case study in how programme management was introduced into an enterprise. The benefits of the approach are clear:

- the bringing of IT projects into a wider business scope

- greater awareness of programme level issues such as project interdependency, benefits management and risk

- improved progress reporting at the appropriate level of granularity, filtering up from project level

- improved communications across the programme.

Although it is taking time to put a programme management organisation into place, it is not perceived as a layer of bureaucracy stifling innovation: it demonstrates senior management commitment, enhances communication and enables a 'vision' to be refined by an iterative programme identification and definition process.

Management control in a programme

6 Management control in a programme

This case study was provided by

PMIS Consulting Limited

6 Management control in a programme

6.1 Introduction

The programme discussed in this study represents a 'model' programme environment, based within a product-oriented industry.

The study provides an overview of how traditional programme management techniques were used, and successfully adapted, to provide a stable organisational structure within which two partner companies with common goals, but very different working practices, could function.

The initial development programme, creating five variants of the product was undertaken with £1 billion from government funds. A new order for 36 mission-specific units has recently been confirmed.

6.2 The change initiative

In the early 1980s, the UK government recognised the need to supersede an existing, long-established and well proven aerospace product with a more versatile and cost-effective alternative which would exceed the stringent requirements of the funding government requiring the replacement product.

To meet this need, two experienced aerospace manufacturers who had, separately, identified a wider business opportunity to design, develop and market such a replacement, decided to embark on a collaborative venture. This collaboration highlighted the need to enhance systems, procedures and organisational roles and responsibilities to ensure more effective control over the entire programme of work; effectively moving from a project perspective to a programme perspective. Inevitably, this change of perspective would introduce both organisational and cultural changes within the partner companies.

Adoption of programme management

To this end a programme management approach was adopted in the definition of strategies, initiatives and business objectives, which resulted in the development, in the early 1990s, of a replacement product.

To maintain their competitive edge, the manufacturing partners would make use of modern design and production techniques and apply the most advanced safety standards to produce a versatile, multi-variant product.

Product design would centre around a basic product frame and common systems. By installing additional systems and introducing modifications to the basic frame, it was envisioned that requirements for the multiple variants of the product could be met in a more cost-effective manner.

The design would be based on the concept of modules, with each partner sharing responsibility for the design and development of specific subsystems. As these could contain components supplied by either partner or by outside contractors, it was necessary for one of the partners to be the 'lead company' for that module, with a 50 per cent share of the modules falling to each. Which company was to take the 'lead' was determined by the identity of the customer. This led to a high level of interdependency between the partner companies.

It was anticipated that, employing this modular approach, minimal modifications would be necessary to meet the specific requirements of individual customers. The design and development of such a multi-variant product would immediately widen the market place.

A work programme to develop such a product was established. One objective had, so far, been defined – to design and develop the basic product frame and common systems, allowing for frame modifications and additional systems to meet market requirements.

It was intended to target both the commercial and defence markets and to focus on specific needs within those areas. Initially, a set of five variants was designed. It was anticipated that during the development life of the

project, further orders would be won. This proved to be the case and by the early 1990s, as the programme approached completion, a number of customers had placed orders. Some of these orders included funding for specific modifications and additional systems to meet individual customer needs.

For each customer a new project was established within the programme which, where possible, made full use of any common ground from previous projects.

6.3 Programme management organisation

The management of this programme was complicated by the nature of the interdependency between the two partner companies and it became obvious that a requirement existed for a central co-ordinating body to take ultimate responsibility for timely and successful completion of the projects within the programme – a **management company** was required.

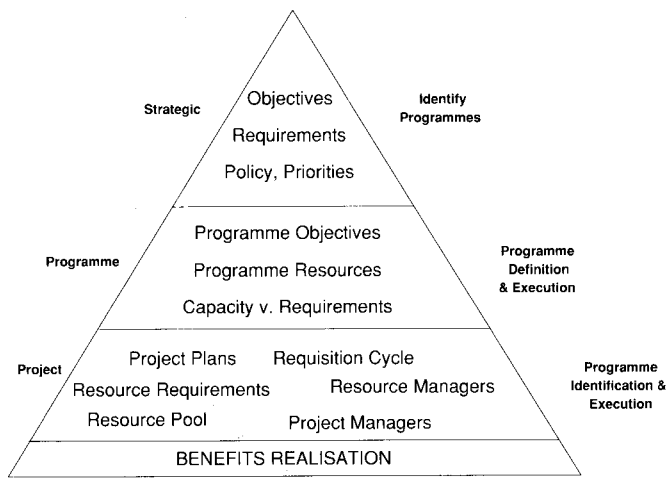

Figure 6.1: Programme management structure

Funded by the participating companies, resources for the management company consisted of staff seconded from the participating companies, and third-party project management and other specialists.

Both the management company and the partner companies adopted a programme management approach which was structured along similar lines.

Creation of such an additional tier of management control and adoption of a programme management structure across each company would, it was hoped, ensure harmonisation of business objectives and more effective control of product deliveries. In addition, the creation of a management company would provide a single point of contact for each customer.

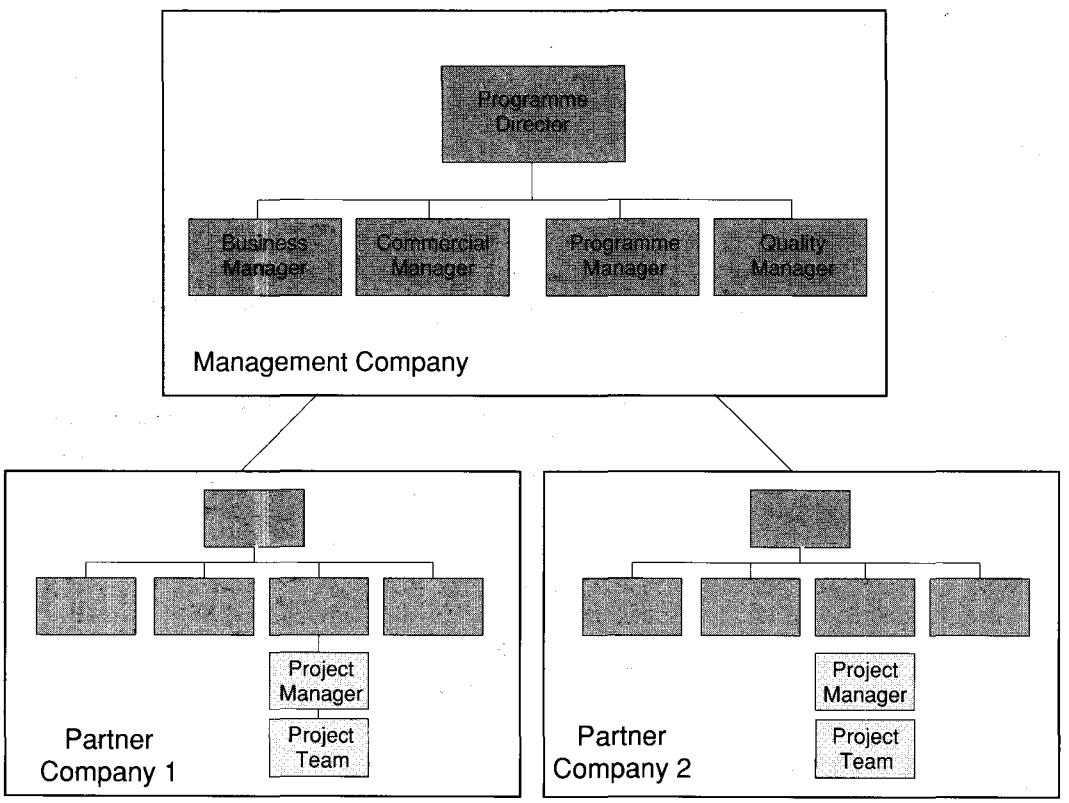

Figure 6.2: Programme management organisation for this programme

In partner companies a programme management approach would ensure consistent business objectives and strategies between the partners and the successful completion of the work elements pertinent to each project.

By extending the system into other projects the whole programme environment benefits through a better understanding of where we are going and what we can do about it.

Each company's programme was headed by a programme director with responsibility for ensuring that objectives were achieved, customer requirements were fulfilled, that the programme complied with established programme schedules, costs and quality standards and that market potential was realised.

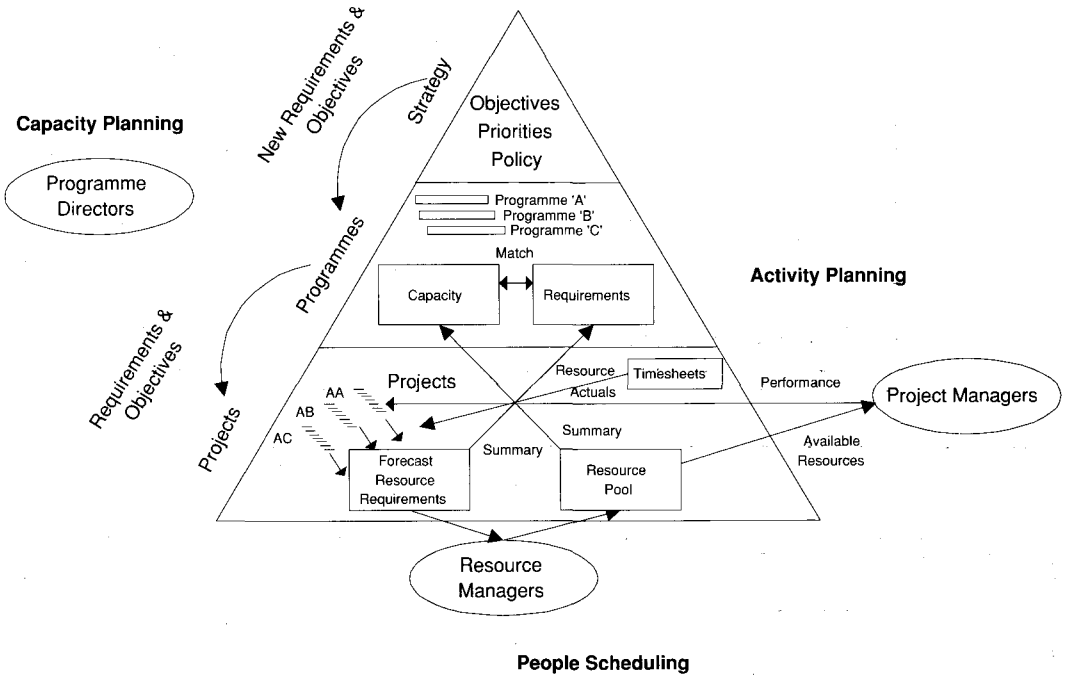

Figure 6.3: Programme management interfaces

A programme executive was created, drawn from senior managers, in support of each programme director. These comprised:

- a **business manager** responsible for all issues relating to business objectives and overall strategies; for establishing and maintaining a business plan and appropriate agreements between the three

companies to ensure proper business management of the programme

- a **commercial manager**, responsible for legal and commercial aspects including the management, pricing and submission of bids and proposals; negotiation, acceptance and management of contracts and agreements, ensuring compliance with contractual obligations and monitoring contract profitability

- a **programme manager** responsible for establishing and maintaining an integrated programme, for design and development co-ordination and technical control within specified parameters

- a **quality manager** responsible for ensuring contractual obligations for quality assurance were met, for creating and maintaining a quality system and for managing a formal audit programme.

Project management

A project manager was appointed for each project established within the programme, with responsibility for effective completion of the project within agreed time and cost parameters, and to the customer's satisfaction. They were called upon to chair project meetings, to liaise with project managers from other companies and to act as the control point for each project customer. Responsibility also lay with them for identifying and implementing corrective actions to overcome any project problems.

A project team supported the project manager, consisting of employees working directly for the project manager in project management roles and those working on module construction within other functional departments (such as engineering, design or avionics, for example).

Communication

Communication between the programme management structures of the three companies was seen to be of the utmost importance. Indeed, it could be said that the success of a programme of this size and scale depended more upon the existence and effective use of communications channels than on any other factor.

Healthy working relationships were established from the beginning through use of regular programme management, project management and working group meetings. Priority clashes and overburdening of resource pools were not uncommon and these management meetings were used to overcome some of these problems.

You may have the most efficient of systems, but if you can't communicate information accurately, you very quickly lose the ability to use it.

The programme manager for each company was called upon to help resolve any project conflicts insoluble at project level. Programme managers met regularly to discuss problems that impacted across more than one company.

6.4 The situation

In order to maintain control of the programme, it was important that each company followed a commonly agreed approach for programme management, project management, planning and reporting. To achieve this, a programme management plan, detailing the relevant organisational structures, management approaches and planning and reporting requirements was compiled. This plan would ensure that all three companies operated within common guidelines and to agreed standards.

The achievement of stated objectives required succinct, reliable and pertinent programme information. Two of the most important project concerns – cost and schedule – were initially met using sound and workable control techniques, but these were limited in their capacity to deal with programme-wide issues.

For each customer a bid (for price) and proposal (of detailed specification) were submitted in response to an invitation to tender. These were compiled by the management company using data supplied by the partner companies. They informed the potential customer of product delivery times and price and the effect on delivery and price of any further development work required to meet individual customer specifications.

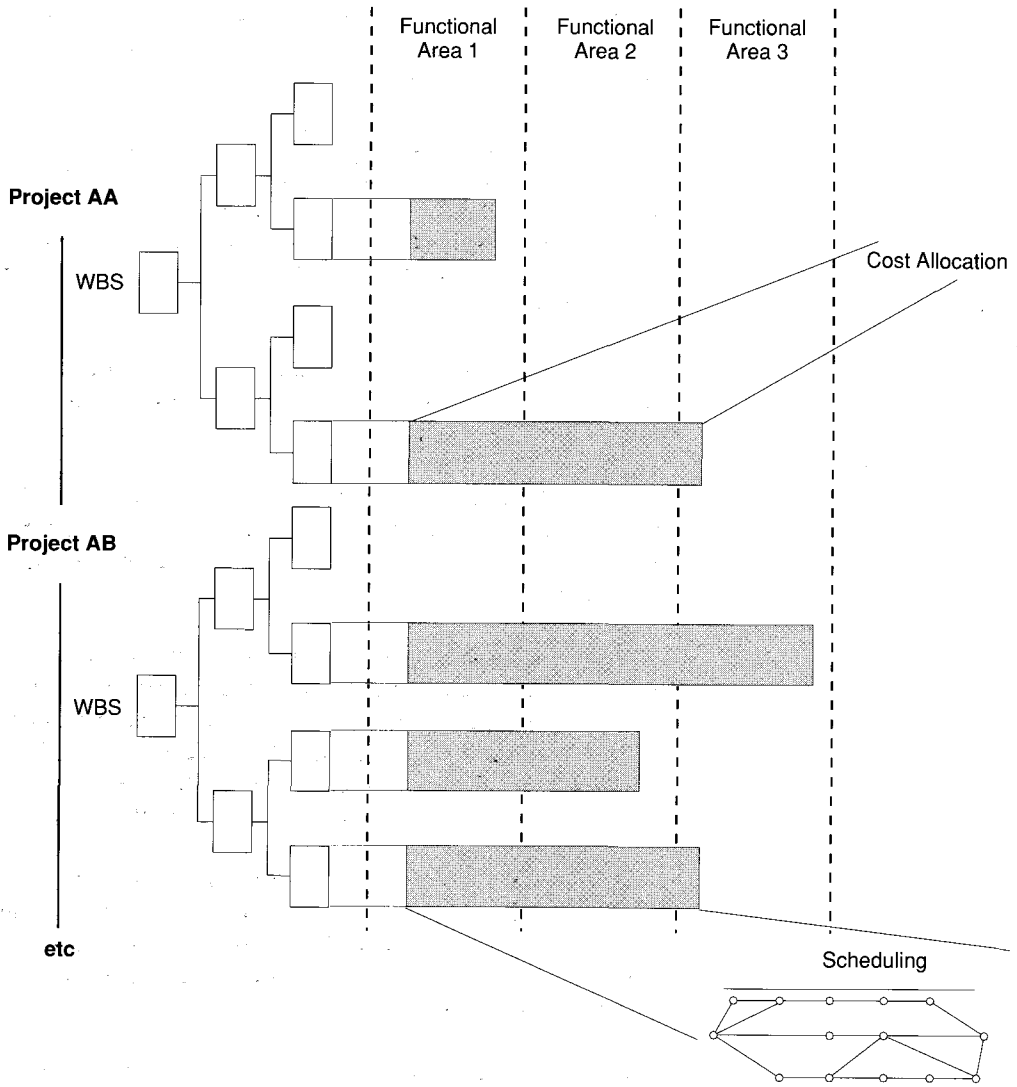

Figure 6.4: Work breakdown structure

Expected delivery dates for the basic frame product were established following an assessment of the production capability of each company at that time.

Price was established following a costing exercise by the partner companies. This exercise assessed the cost of design, development and manufacture of each component, including the costs of management and quality control, with a profit element added to reach the price figure.

The costing exercise was based on a product work breakdown structure addressing design, development and production elements.

Using such a work breakdown structure during bid preparation meant that budget data for a new project was immediately available to facilitate the budgeting of production costs.

Once a new project was established in support of a customer, project planning and costing could begin in earnest. The budget for the project was derived from the agreed contract price, less the allowance for profit. Both the profit margin and project costs might need to be reduced to meet the price agreed in negotiation.

As additional projects were created in support of new customers, the partner companies were able to make use of an expanding pool of historical data about costs and schedules of previous projects to make more accurate cost and delivery estimates.

Project planning incorporated elements of both 'top down' and 'bottom up' approaches. Delivery dates represented completion targets. All planning had to ensure completion and availability to the customer by these dates. To ensure they met these targets, the project team produced high-level management plans detailing activities and tasks for each work breakdown structure element at a particular level.

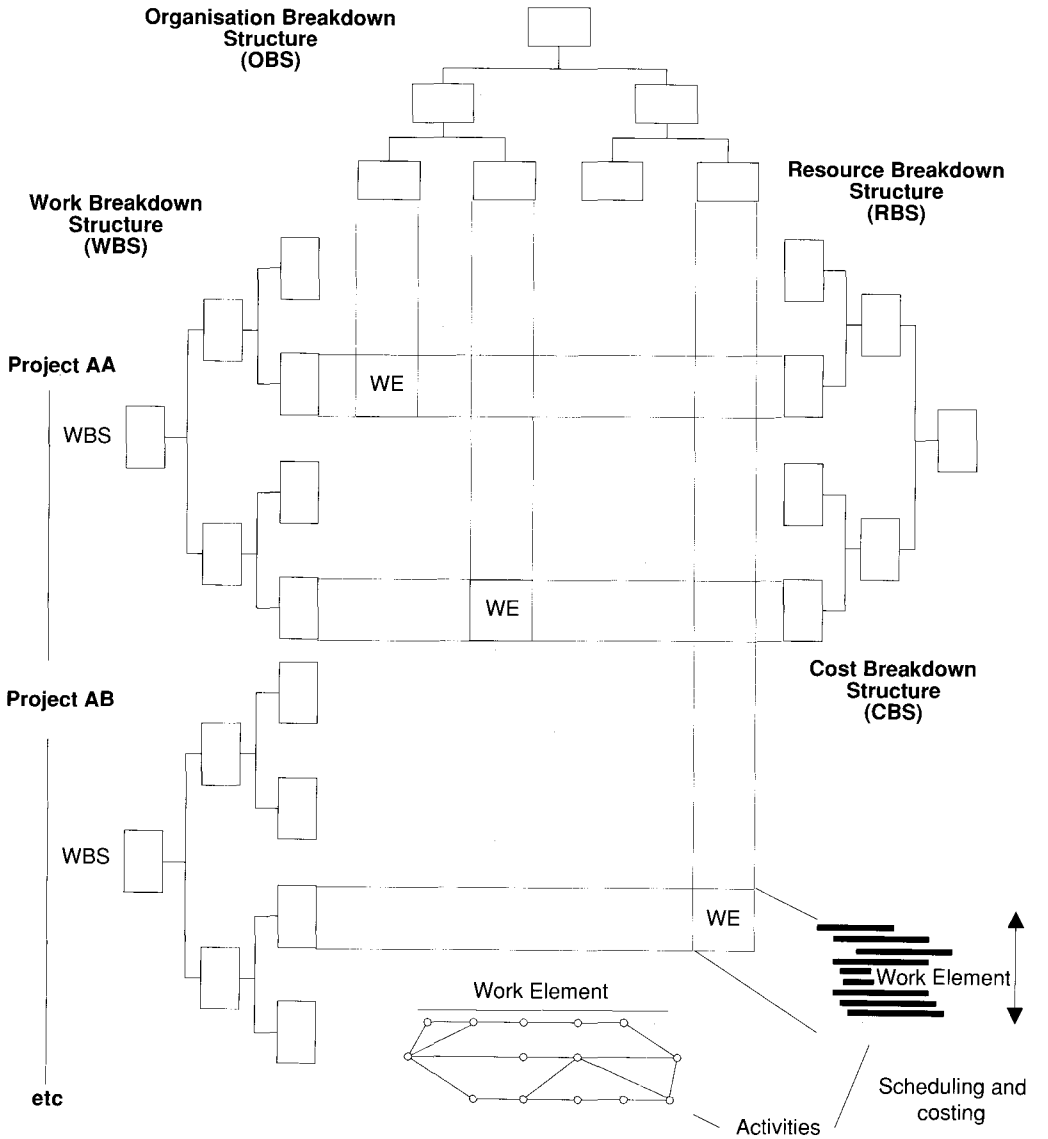

Figure 6.5: Scheduling and costing work elements

These were then supplemented by more detailed plans using data supplied by project teams and functional departments – was it a staff holiday period, were parts and/or tools available? In this way, more accurate budget and schedule baselines were established, see Figure 6.5.

In theory, this technique was logical and straightforward. Actual expenditure of material used and labour hours worked could be measured against the project plan using existing systems for material control and labour hours booking. Actual costs incurred could be recorded against project budgets for each work element to show more clearly any possible overspend or underspend.

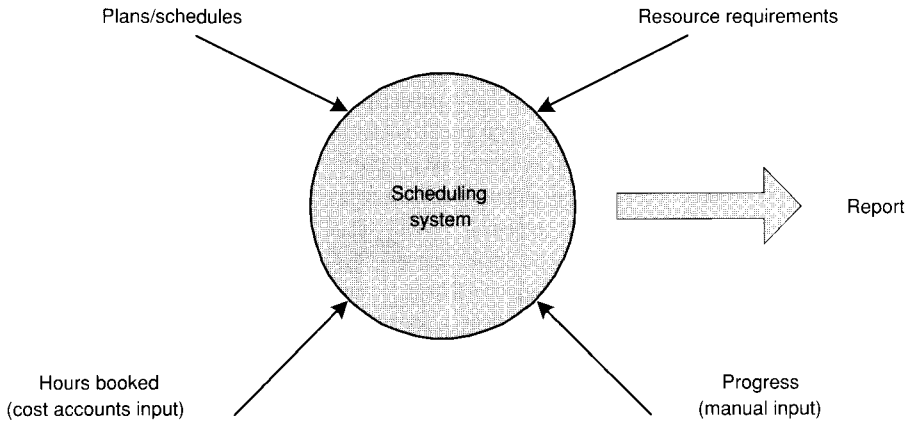

Figure 6.6: The scheduling system

The project teams had always made use of schedule reporting and cost reporting to assess the progress of any one project towards a successful conclusion, see Figure 6.6. The use of a work breakdown structure as a baseline for the definition of project information ensured that a common structure existed for project reporting.

Given the hierarchical nature of work breakdown structures, reports could be generated from aggregated information about progress on work breakdown

elements to show a progressively wider overview of the project.

Schedule reporting was provided in the form of gantt charts produced from the detailed schedule information. These were generated at three levels of hierarchy within the work breakdown structure. At the highest level, a schedule report depicting the project overview was generated on a single chart. This was useful for senior managers. The next level constituted a schedule report which included sufficient information to be useful to the project manager and his team members. This was useful for highlighting problems requiring investigation. At the lowest level, those project problems identified could be traced to their source. Corrective measures could then be taken to rectify any problems.

Cost reporting took the form of tables plotting actual expenditure against budget. These were recorded from data generated at the work element level and were aggregated to the level of hierarchy required. The cost report provided data at project level, at the key product element level within the work breakdown structure and at the work element level.

However, resource planning was arbitrary and high level and the ability to assess the requirements of resource loading was lacking. Initially, a high level of resources was required to plan and report on the costing and scheduling for each project.

6.5 Problems

The previous section has provided some insight into the initial organisation and work flow through the individual projects, costing, planning and reporting hierarchies and resourcing of individual projects.

What follows describes the growing awareness of the companies involved that real events were diverging significantly from their carefully laid programme and project plans.

As previously stated, the existing costing system seemed logical and straightforward. Progress of work elements could be assessed and reported against original project timescales.

Problems arose from an increasing lack of confidence concerning the reliability and accuracy of the data being provided. There was a feeling that, for example, material and labour bookings might not be as accurate as possible; that the true priorities of functional departments were remaining hidden; that the schedule reports might not accurately reflect the work forecasts in the functional departments.

At project initiation, the schedule baseline and the cost baseline seemed to be compatible. However, once a project was under way, it became obvious that there was a significant divergence between planned and reported costing and scheduling. Consequently, optimistic progress values began to mask the existence of progress problems, which did not surface until a particular work element missed its date. This was, quite obviously, too late.

The cost reports indicated a project overspend or underspend against specific work elements. It was not clear whether these problems arose from a work achievement problem requiring additional resources to overcome it or whether there were errors in the booking of actual expenditure. It was hard to tell what the final project cost would be and how it would compare to the original costing.

The length of the reporting cycle was also unhelpful to the project management process. Too much time was required, on a monthly basis, to collate all schedule progress information from functional departments and enter it on to the scheduling system – add to this the time taken to collect 'actual expenditure' booking forms and invoices and the time taken to transfer this information to the accounting system and consequently project managers were receiving data that was nearly four weeks old. Therefore, the schism between reporting and actual progress of the project grew.

The main difficulty with the management of resources was the high level of staffing needed to implement the planning and reporting for each project. During the life of the project the collating of progress data was protracted through an 'not invented here' attitude and

an ever-widening rift between plans and reality. Actual expenditure could be confused by incorrect booking and it seemed that resource planning was arbitrary, high level and insufficiently detailed to allow an accurate assessment of resource loading requirements.

6.6 Steps taken

The theory behind these arrangements was based on tried and trusted programme-oriented techniques. However, it soon became evident that working in a product-based programme environment posed additional problems that could not necessarily be solved using conventional programme management methods.

Control information

The solution to a number of these problems was found within a specific project. As a prerequisite to winning a prospective large defence order, it was necessary to conform to a set of long-established North American criteria for cost and schedule control. These criteria would provide a structured means of planning and reporting on cost and schedule performance, at the appropriate level of detail, to provide visibility into the performance of a programme when compared to the current plan. Progress data would be collected at the lowest level where the work was performed and would be summarised through specific reporting structures, ensuring consistency of information at all levels of management. Reporting structures would be based on the work breakdown structures required to deliver products and organisation breakdown structures defining lines of management responsibility.

An analysis of these standards showed that their implementation, while enabling them to win a large defence order, could also help to solve existing problems.

Systems already in place at the three companies met some of these criteria required. For example, the use of a work breakdown structure for planning and costing was an integral part of the requirement and had already been put in place.

The main difference that the North American criteria advocated was the nomination, within a functional department, of an individual as the manager of a

particular element of work in the work breakdown structure – a **work element manager**. Using this approach, project control was focused on particular managers within the organisation. If a particular work element crossed functional area boundaries, the work element manager would still be responsible for controlling the work.

The work elements managers reported directly to their line managers, within the functional areas, for personnel and technical issues, but reported directly to the project manager for project issues.

They were responsible for planning activities and tasks within their work element. It was also their responsibility to assess the progress of activities within the work element, to ensure the accuracy of the progress information and to identify and implement actions needed to overcome project problems created within their work element to ensure that each element was completed in time and to cost and specification.

Resource loading

Once this new system was in place, planning reflected the reality of how activities would be carried out more accurately. Resource loading for a particular work element was under the control of a manager better able to assess the requirements of the task.

Each work element was broken into its constituent activities and tasks. Tasks in the near term could be defined reasonably accurately, but if the completion date for the work element was a number of months in the future, the definition of activities was necessarily less accurate. In these instances, the definition of this far term work was kept at a deliberately high level until such time as an accurate definition was possible.

As a result of implementing these changes the accuracy of the reported information was improved. Those doing the work had participated in establishing the baseline information. A greater sense of 'ownership' of each work element meant that the 'not invented here' impasse ceased to be such a problem.

The booking of actual expenditure to a particular work element was now under the control of the work element manager who could ensure that logging errors were minimised. More importantly the assessment of the progress of a work element became more accurate since it was now the responsibility of the work element manager to ensure the accuracy of this information.

There now existed for each work element an accurate baseline of schedule and cost with improved accuracy in actual expenditure recording and in the assessment of work element progress. In addition to this, the definition of activities and tasks within the work element enabled the work element manager to allocate the cost and resource budgets to these activities and tasks.

In this way, resource planning and allocation were greatly improved and the budget profiles for each work element became more accurate. This meant that performance measurement or earned value reporting was now possible and, most importantly, was reliable.

The programme management team was totally reliant on the accuracy of the project information used by the project teams. Correct identification of the interdependencies between the projects, the interdependencies between the partner companies and the interfaces with each respective customer was also critical. With the responsibility for the generation of project control information now residing at the work element level, project control data, and in particular the interdependencies and interfaces of that work element, were more accurately defined.

Thus, the implementation of the North American approach improved the usefulness of project reporting, see Figure 6.7.

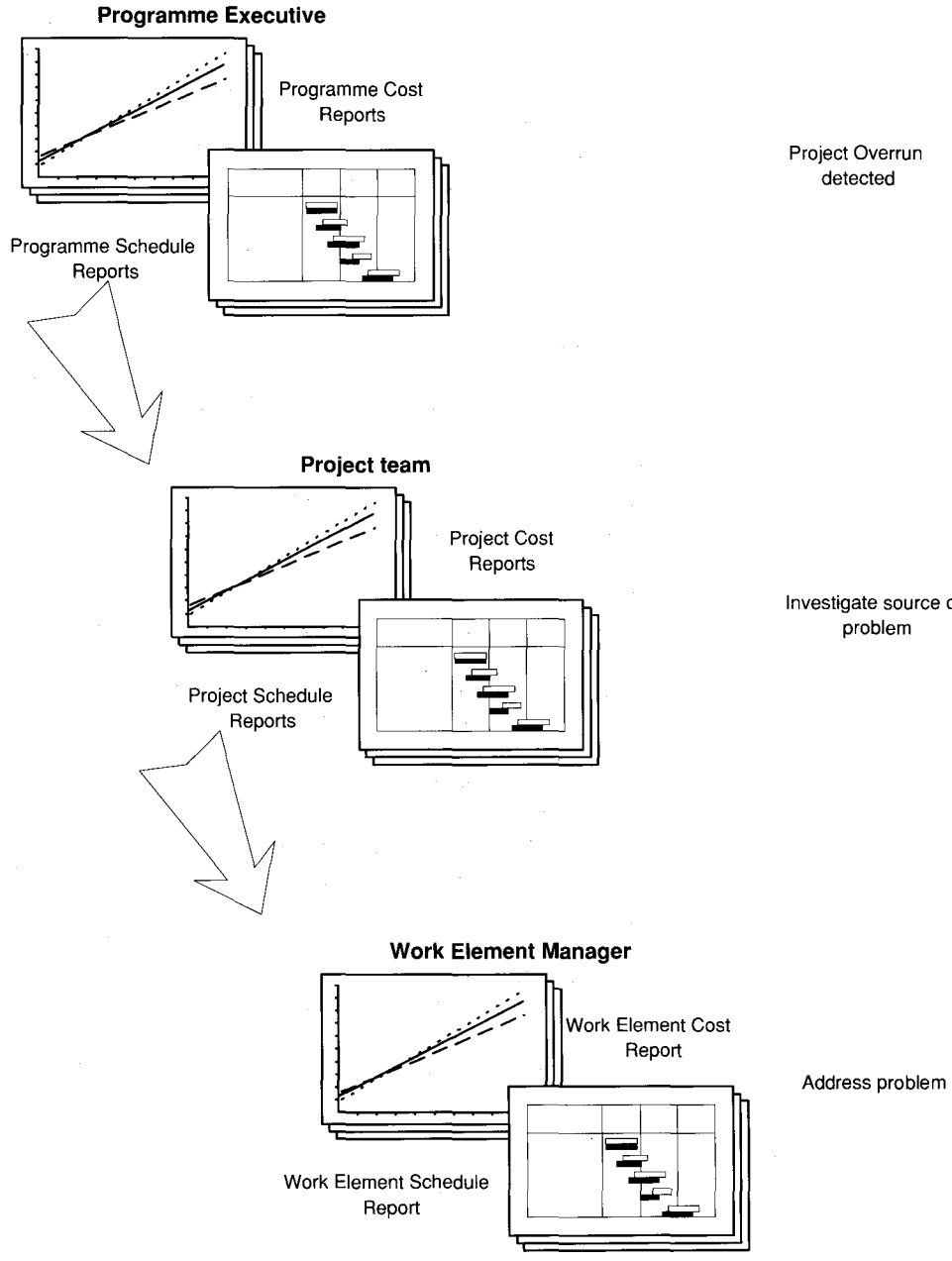

Figure 6.7: The hierarchy of reporting and control

The reporting cycle times were also improved. Schedule information was collected at source. Booking of actual expenditure was recorded more accurately. As a result the project teams were able to review progress with individual work element managers on a weekly basis and the project reports now contained data that was, at worst, two weeks old.

Once the North American standards criteria had been implemented the planning of individual work elements and the allocation of budget to activities within the work elements were delegated to the work element manager resulting in improved accuracy and validity of the data.

More efficient planning

The need for high levels of staff resource to plan and report on each project was reduced and the control of progress assessment and booking of actual expenditure was greatly improved. In this way, resource planning was assessed more accurately and a more accurate profile of potential resource deficiencies was drawn up. This resulted in greatly increased control of the projects and programme.

Educating the workforce

The transition to the new culture was achieved smoothly through the use of a number of different approaches – education, training and a more precise discipline of regular and structured reporting of costs and progress, more accurately focusing on the earned value achieved within each work element in each project.

A training programme was initiated to demonstrate the objectives, principles and, particularly, the benefits of the changes required. The training was addressed to all levels of management. The newly appointed work element managers were briefed about their place in the new hierarchy and in the requirements and responsibilities of their new roles. To assist in this education process and to ensure that the necessary disciplines were introduced and understood, guidelines were produced in support of the training programme.

6.7 Benefits realised

The implementation of a programme management approach in this case proved to be a success.

The use of conventional programme management methods provided a stable organisational structure with clearly defined roles and responsibilities. This allowed clear visibility and ensured success of business objectives by enabling the early identification of the limitations of the existing project control systems.

The implementation of a new set of standards and an extended programme management structure created a new 'openness' within the organisation which improved the accuracy and availability of project information. Communication of project and programme information flowed more freely, thus minimising the risk to the quality of the product and to the delivery timescales.

> *It enables the person with great (technical) knowledge to present his position (case) with more support and it enables the person with less (technical) knowledge (senior management) to understand the position and have confidence in his subsequent decisions.*

6.8 Lessons learnt

A fear of change means that not all functional departments within a company will readily 'sign up' to a change initiative. The use of a comprehensive training programme to communicate benefits realisation was essential to generate the commitment required from those involved in this programme so that programme management philosophies were fully understood and applied.

Clearly, the devolution of a new layer of responsibility to the work element managers introduced a greater sense of ownership of project information and an enhanced feeling of involvement in the programme as a whole.

6.9 Conformance to CCTA guidance

The programme management approach adopted in this case follows the concepts in the CCTA guidelines. While those guidelines focus on managing programmes of large-scale organisational change, this programme required slight differences of approach to suit a product-based environment. This programme in fact controlled the single largest product manufactured by the participating companies, in terms of both quantity and size.

The goal of programme management is to achieve a set of business objectives and realise their benefits to the organisation. The business objectives of this programme were to manufacture a product to the desired specification and within the required timescales, so that customer orders for the products could be continually generated and met.

In this case, the benefit gained from using a programme management approach was increased management efficiency which minimised the risks of failing the specification or missing delivery timescales.

The organisational structure applied to the three participating companies followed a very similar structure to that recommended in the guidelines (Programme Director and Programme Executive roles). There were additional responsibilities identified in this programme – for the quality of the product and the commercial management responsibility for proposal preparation, bidding for new customers and for contract and subcontract negotiation, award and management.

The CCTA guidelines for programme management encourage the free flow of information across projects and to the top of the programme management organisation. The guidelines also recommend that line managers should also take full responsibility for programmes of expenditure in their business areas.

In this case the responsibility was devolved further. Work element managers below the senior management level were required to take the responsibility for realising the benefits from their projects and the overall programme. Paramount here were product quality and delivery. This culture, created by the programme within the participating companies, enabled accurate and reliable information to flow from work element level upwards.

6.10 CCTA commentary

This case study provides some useful insight into collecting progress information across a programme, where a partnership of organisations is involved, and where the deliverable is a 'hard' product. The success of this programme demonstrates that programme

management can be applied to a product-based industry as well as in implementing organisational change.

Success in this programme was achieved by improving management information on progress and costs, adopting specific standards for cost/schedule control. What made it work well was putting a programme management régime in place, within and across the participating companies. The results of both these factors was that a significant improvement to the accuracy, efficiency and reliability of both project and programme progress information was achieved, at an appropriate level of detail for those receiving it to enable them to manage the programme and its projects.

Roles and responsibilities - managing third party suppliers

7 Roles and responsibilities – managing third party suppliers

This case study was provided by

Admiral Management Consultants Limited

7 Roles and responsibilities – managing third party suppliers

7.1 Introduction

This case study illustrates programme management applied to control four interrelated projects which were initiated to move a large Government department into a refurbished office in central London.

The base project was to carry out the complete refurbishment of an older style listed building which contained 50,000 square metres of potential office space. This refurbishment included the installation of a completely new 'state-of-the-art' IT infrastructure including local area networks and a central computer installation. Finally the staff were to be moved in under a phased relocation plan. Clearly the refurbishment and the installation of the equipment and systems had to be completed before the staff relocation could be undertaken.

This case study illustrates the problems that faced the programme management in attempting to control the programme risks and will show how the relationships within the programme environment and the authority, or lack of it, vested in the Programme Manager played a critical role in the successful delivery of the programme objectives.

7.2 The programme projects

During the programme definition phase the work necessary to complete the building refurbishment, set up the IT infrastructure and control the staff relocation was split into four major projects, each with its own project manager and project team, including centres of technical expertise. These all came under the control of the Building Refurbishment Programme. The Programme Management Team was set up to co-ordinate the activities of these projects and to liaise with the other facilities installation projects, such as telephone, access control and building management, to ensure that the staff move was completed to meet the budget constraints and the phased move timescale. The four major projects were:

- **Office refurbishment**. The complete refit to upgrade a building to provide modern office accommodation

for approximately 1,000 Government staff. This included 450 offices on six floors with five computer rooms in the basement. Special requirements included the provision of secure areas for restricted work

- **Network design and installation**. The design and installation of a new structured cabling system to run throughout the building

- **Installation of central computers**. The installation of the central computers and the distributed/ peripheral hardware together with the operating and application systems with appropriate levels of security

- **Office relocation**. The relocation of staff from three old offices into the refurbished building.

7.3 Early problems

The Programme Management Team was originally set up to resolve what was perceived to be an increasing lack of control over the refurbishment and relocation plans. The early problems largely stemmed from the fact that the Office Refurbishment and Central Computer Installation Projects had already been running for a number of years and had developed their own ingrained bad habits of poor management control and lack of a goal oriented approach. The Central Computer Installation Project was fighting a running battle with its main contractor over claims and counter claims for penalty payments totalling many millions of pounds.

The initial review of the Office Refurbishment project showed that the project management skills were very poor. There was no baseline of requirements and change control consisted of a large cupboard of ribbon tied folders! The project manager was clearly overloaded with 35 other projects to manage.

Project interdependence planning was found to be poorly defined and controlled, and tended to operate in response to problems as they arose – crisis management! This naturally led to progress blockages and resultant slippage of the overall programme.

7.4 The major tasks of the Management Team

Seven major tasks were identified:

- **programme planning**, covering all four projects including the identification of interdependencies and the subsequent control of implementation timescales
- introducing and operating a **rigorous change control** system procedure
- **monitoring progress** by chairing regular progress meetings with the constituent projects
- **controlling and co-ordinating** the activities within the constituent projects by working closely with the project managers
- **liaising** with other facilities installation projects to ensure clear interfaces
- **monitoring the financial health** of the programme and forecasting the cost of completion
- producing **progress** reports and recommendations for scheduling improvements for approval by the Programme Board.

7.5 The nature of the programme management task

The nature of the programme management task in this case study falls into the CCTA defined category of a large, single objective project, where the criteria for invoking the programme management control were as follows:

- **Complexity**. The complexity of this programme arose from a number of factors
  - the size of the building and wide range of user requirements
  - the LAN infrastructure and need for secure areas of operation
  - the installation and testing of the central computers
  - large number of staff to be relocated.
- **Risk reduction**. There was a need to minimise the likelihood of failure to meet deadlines due to uncoordinated management responsibilities across the four projects and potentially poor project management

- **Integrity of design**. There was a need for an integrated network cabling system that would meet the requirements of the LAN and central computer installations

- **Change control**. There was a need to manage change during the programme lifecycle as strategic and business demands caused changes in requirements for office space, distribution of system facilities, system operation, communications etc

- **Technical uncertainty**. When the projects were initiated there were a number of areas where the best technical solutions were still to be resolved, eg the structured cabling system using fibre optics.

7.6 Expected benefits

The expected benefit of implementing programme management was to achieve the refurbishment and staff move within the shortest possible timescale in a controlled fashion allowing for the solution of technical and logistic problems within the allocated budget plan.

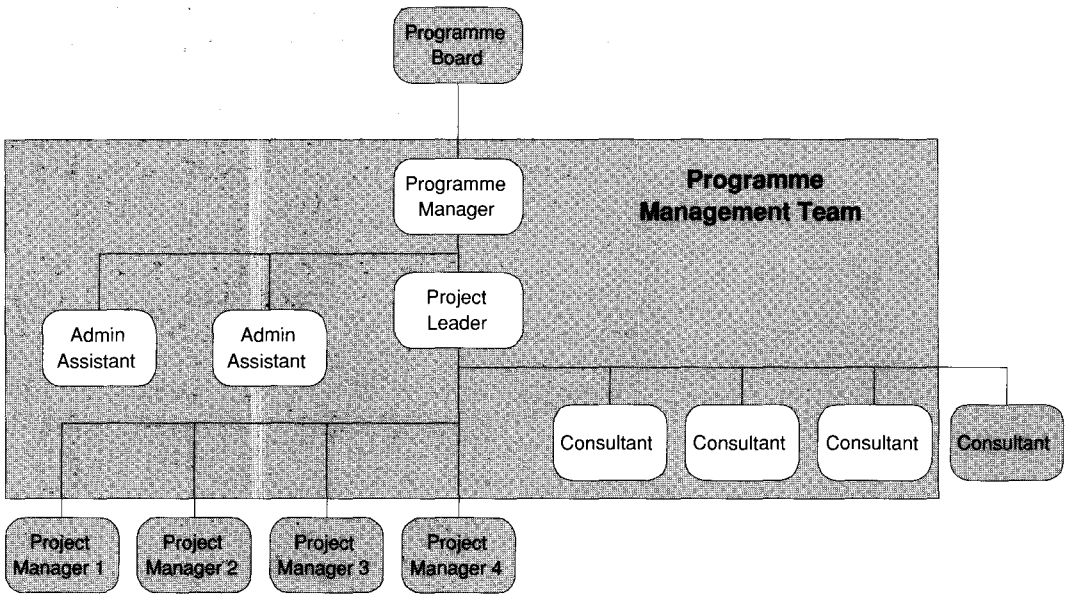

Figure 7.1: Organisation of the Programme Management Team

7.7 Organisation of the programme management control

Figure 7.1 shows the overall organisation of the Programme Management Team. The individual responsibilities of members of that team are described in more detail below, showing where and how those responsibilities compared to the given CCTA definitions.

7.7.1 Responsibilities

Programme Manager

This position equated to the CCTA definition of Programme Director. He had ultimate authority for the performance of the Programme Management Team and direct control of the programme implementation. He reported directly to the Programme Board and directly controlled the Programme Management Team. His main responsibilities were:

- to be responsible, on behalf of the board, for the senior level supervision of all project managers
- to give instruction and direction to project managers on behalf of the Board as required to meet the principal objectives of completing the programme on schedule and within set budgetary limits, or to meet such other objectives as decreed by the Board
- to establish and maintain an integrated plan of activities for the complete programme in such detail as is required to ensure that conflicts both within and between projects can be resolved
- to ensure that a system of regular and thorough monitoring is set up and that conflicts of priority are speedily resolved in the interests of the overall programme
- to exercise delegated authority on behalf of the Board
- to provide the Board with such reports and information as required to undertake its management role
- where deviations from or adjustments to the agreed plan are required and are within the contingency he will direct individual project managers to enact the requisite changes.

Project Leader

This position equated to the CCTA definition of Programme Manager, carrying out the day to day co-ordination of the individual projects and reporting directly to the Programme Manager. His responsibilities conformed very closely to those outlined by CCTA, namely:

- to ensure the delivery of outputs to time against the plan
- to monitor overall progress and initiate corrective action as appropriate
- to manage both the dependencies and the interface between individual projects
- to initiate new activities wherever gaps in the programme were identified
- to report progress of the programme to the Programme Manager (equivalent to Programme Director in the CCTA guidance).

The major responsibility of the Project Leader was to control the inter-project dependencies and to initiate contingency plans where potential blocks were identified. The project managers reported directly to the Project Leader to facilitate his co-ordination role.

The Programme Management Team

This team, identified in the organisation diagram, fulfils the function of the CCTA Programme Executive. The team's responsibilities were to provide support to the Programme Manager and to the project managers whenever necessary to assist in the identification and resolution of problems relating to the progress of each project and to the programme as a whole.

The team was responsible for the 'Programme Support Office' functions (as defined by CCTA) of collecting and organising management information that could be used as a basis for reporting 'up' to the Programme Manager and programme sponsor, and as a source of organised data for the project managers, eg building layouts printed from a CAD system.

Design Authority

The Design Authority function, as described by CCTA, of ensuring consistency of design and system interfaces across the individual projects, was embedded as an integral part of the Programme Manager and Project Leader roles. They ensured that the specifications from the individual project design teams were compatible and that, where appropriate, a common set of standards was adhered to, eg network cabling and distribution interfaces to the various systems and departments throughout the building.

7.8 Initial approach

The Programme Manager's first task was to produce a formal statement of the status of the individual projects. This was delivered in three parts:

- the perceived goals for an overall programme, including overall costs and desired timescale
- a statement of individual contributors, their contribution, management, contractual and financial arrangements. This had to include a full list of the interfaces between individual projects
- a full description of each programme component including all deliverables and significant milestones.

He then produced a report detailing a consolidated programme for all activities which was submitted to the Programme Board for approval. In this report were recommendations to the Board concerning practices and procedures which should be adopted by any or all of the projects. In arriving at this plan the Programme Manager had to maximise the return from current contractual commitments relating to the projects that had been running for some time.

7.9 Project interdependencies

To clarify the effect of project interdependencies on the staff relocation timescale a study was initiated to define these dependencies, highlighting critical activities. Procedures were set up to maintain this data as the project progressed. Typical examples of such inter-project constraints were preparing the computer rooms for the central computer systems, linking this installation with the cabling, agreeing the office layouts and computer requirements etc.

The main study areas were:

- defining the project dependencies: this involved defining the major dependencies between and within the constituent projects

- establishing the second level dependencies: to establish the related activities and logical sequences of events which had to occur if the major dependencies were to be achieved

- reviewing plans for the external projects: information relevant to the programme was collated with the external projects, such as the telephone systems, and the status of each project established

- establishing the dependency dates for the external projects: the dependencies between these external projects, the refurbishment and infrastructure projects were defined and agreed with the relevant authorities

- reviewing the organisation changes made for the relocated staff: the changes in the organisation of the staff to be relocated were examined to establish their implications to the programme

- establishing the demands on the refurbishment project from the other projects: the requirements of the infrastructure projects on the refurbishment project were already established

- establishing an agreed Programme Plan: the dependencies between the infrastructure projects and the refurbishment project were agreed, together with the dependencies between each project. An agreed Programme Plan was formulated.

This project interdependency analysis highlighted a number of problems eg the relocation plan required a more detailed statement of how the staff were to be moved while maintaining their day to day responsibilities, particularly with regard to the computer systems and communications.

The Programme Management Team resolved these problems by requesting that the project plans were improved to:

- provide sufficient detailed information of activities
- establish interdependent activities across projects, eg to allow the network cabling to be laid during the refurbishment schedule at such a time to achieve the lowest cost impact
- provide contingency plans where delays due to interdependency problems caused unacceptable delays in the staff move timetable.

7.10 Risk identification and management

The analysis and management of the risk elements in the programme were considered at three levels:

- strategic
- programme
- project.

The impact of the identified risks was revised as an ongoing task of the Programme Management Team throughout the programme life.

7.10.1 Strategic

The underlying risks at a strategic level were those relating to the organisational stability of the Government department during the three-year programme life, with many changes in project personnel and to the relocation plan which was inherently linked to the organisation structure in place at the time of the move.

7.10.2 Programme

At the programme level the major risks to completing the work on time and within budget were those associated with identifying and then controlling the project interdependencies. This required both detailed individual project plans and an equally detailed interdependency matrix. To meet these requirements the programme team assisted the project managers to develop their management skills, set up procedures to continually monitor the project activities and set up rigorous change control procedures.

7.10.3 Project

The risks to the overall programme from the individual projects stemmed from a lack of project management skills and on occasions a lack of a desire to be integrated into the programme. This was particularly relevant to the refurbishment project and caused the expenditure of a considerable amount of programme management effort to keep the project 'in line' with the other activities.

7.11 Relationship management

A consistent thread that ran through the whole programme over the three-year lifecycle was that of building a team identity which would actively seek to resolve all the problems of project management, with the added complexity of project interdependencies, through a shared responsibility to meet the programme objectives.

In this context the Programme Manager's task was to secure productive working relationships with his Programme Executive, the Programme Board and the four project managers. The fluid nature of the organisation meant that at an individual level there was a constant renewing of relationships and adjustments to management styles, all of which had to be continually focused by the Programme Manager on to the programme tasks currently in hand.

There were two particular aspects of this relationship management that proved extremely time consuming, one was that of educating the project managers with the basic project management skills and the other was the refusal of the Refurbishment Project, run by a Government agency, to work within the Programme Team. The educational role proved effective and in fact, due to the intimacy of the learning process and the acceptance of a common task commitment, created a very good team spirit in three of the projects.

The conflicts that arose with the Refurbishment Project coupled with their clear lack of management skills caused the Programme Manager to request that two of the project managers be removed from the project. This was in fact actioned. Over the three years two more project managers were appointed and then moved on. It was clear that the failure of the Project Board in creating a clear delegated authority through the Programme

Manager for this project caused considerable conflict and ineffective use of time in the management of the day to day team relationships.

7.12 Responsibilities and authority

During the three-year lifecycle of the Building Programme many changes were taking place within the Government, some of which had a profound impact on the effectiveness of the Programme Management Team as the responsibilities of the constituent projects and project managers underwent significant changes.

There were many changes of responsibility at senior levels in the Government departments as tours of duty continued. These changes led to many variations in emphasis and considerable confusion of lines of responsibility and authority.

Throughout the programme the refurbishment project refused to work as a team within the overall programme. This caused a continual fight to obtain facts and forecasts and to maintain discipline over change control. Support was obtained from the agency director but this did not translate into action on the project. Hard to believe but true! Disputes and prevarication over versions of the standard agreement, fee rates, reporting lines, access to consultants etc was the norm. This lack of authority over one of the major projects caused the programme Management Team to divert much of its effort away from a broad control function over all the projects into low level negotiations to ensure that this project maintained its alignment with the programme schedule.

The Programme Management Team eventually 'steered' the project to a successful completion very close to the target date but could not influence an overspend on the budget.

7.13 How the programme management control worked in practice

The control mechanisms set up by the Programme Management Team proved to be robust enough to guide the programme through to a successful conclusion. This was accomplished by a mixture of formal procedures and management control and informal activities concerned with teaching good management practice and negotiating effective lines of authority. Well-tested, developed methods of planning, reviewing,

implementing rigorous change control, tight budgetary control and so on, proved an effective framework against which the problems of building a cohesive team with the appropriate management skills were resolved. The programme progressed through the following tranches of work:

The 'Appraisal period'

Following the initial investigations a programme structure was put into place although many participants had difficulty in coming to terms with a traditional project hierarchy and with reporting to a 'contractor'. The beginning of the programme management activities was characterised by the initial fact finding exercise; getting to grips with the refurbishment project; tightening up the management of the central computer system contractor; initiating the Network and Office Relocation Projects; planning the programme as a whole; fighting to achieve proper authority; and culminating in an investment appraisal which requested over £100 million to complete the programme.

The 'Long march'

The next two years were characterised by continued fights to achieve central funding; continual effort to contain costs; successful containment of contractual milestones on the Central Computer Installation Project; much work to improve the quality of work done by the Central Computer Installation Project contractor; and culminating in handover of the building to the Government department with a slip of only four weeks in the 32 month period.

The 'Frenetic period'

The next three months were characterised by the final installation of the networks, the fitting out of the building, and the relocation of the staff from three London offices, all interacting in a complex, fluid set of dependencies that needed a very flexible yet disciplined effort from all involved. This culminated in the re-opening ceremony which was held on time in December 1992.

7.14 Lessons learnt

7.14.1 Overview of problems encountered

The overall impression that remained at the end of the programme was that considerably more effort had been expended in fighting 'the system' rather than

concentrating on clarifying the requirements and managing the contracts.

The 'system' is best described as a lack of authority to go with responsibility, together with a plethora of organisations which refused to work within a programme hierarchy and found it difficult to respond to the pressure of bringing in a programme to budget.

The quality of the project management in this programme environment was highly variable and project managers were inadequately trained in project management.

The implementations of actions and decisions taken at senior levels within the organisation, took an inordinate amount of time, as witnessed by the long timescales involved in obtaining Treasury approval and gaining formal acceptance of a single budget to replace the multi-project budgets.

7.14.2 Recommendations made

The following recommendations were made to the sponsor:

- to improve the speed with which decisions are made within senior levels of Government departments
- to give programme managers the authority that matches their responsibility. Support organisations should have terms of reference that oblige them to provide a service to programmes rather than act on their own initiative to their own slow timetable
- to improve the training of project managers.

7.15 CCTA commentary

The complexity of this relocation and refurbishment exercise was added to by the two risks of low project management skills within the programme's projects, and dependency on external contractors who were difficult to bring into line with the programme aims.

A programme management approach enabled the organisation to keep sight of the overall objectives of the programme. The need to reduce the risks of low project management skill and external dependencies drew the Programme Manager (the Programme Director) and the Project Manager (the Programme Manager) into lower levels of detailed attention than would be expected in a programme. However, the achievement of completion on time justified the effort.

Annex

Coopers and Lybrand

Profile in outline

With member firms in more than 133 countries, Coopers & Lybrand Management Consultancy Services (MCS) is one of the world's leading management consultancies. In the UK we currently have 34 offices and a total of 1,550 MCS staff. We combine industry expertise in individual sectors such as government, financial services, communications, utilities and manufacturing, with functional specialists in areas such as strategy, economics, business analysis, operations, administration and IT. Our specialist practitioners in programme, project and change management work with multi-disciplined teams to deliver programmes from strategy to implementation.

Our consultants understand the complexities and risks of both strategic business change and major capital programmes. After diagnosing the situation, we respond with a tailored approach at both business and programme levels. With a strong emphasis on strategic context, benefit realisation, implementation impact and risk, we help to assess priorities and balance competing resource demands. Using a goal-directed approach, we also ensure that the required changes in attitudes and behaviours are managed in an integrated way with the more tangible business changes.

Our programme management services include the provision of programme managers and other key staff; programme definition, organisation and planning; the introduction of methods and systems, the establishment and staffing of programme support offices; and support to client staff through coaching and skills transfer. We also use our approach as an integrating framework for major system implementations, corporate transformation, business effectiveness and post-acquisition integration work. Effective project management is an essential ingredient.

In the public sector we have supported many department and agency-wide strategic change programmes, including major IT implementations, organisational change and agency start-ups.

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Cray Systems Limited

Profile in outline

Cray Systems was established more than 10 years ago and is part of Cray Electronic Holdings plc, which is the largest UK-owned independent data communications and software company. In 1993 Cray Systems acquired P-E International and with it AIMS Systems – the structured methods specialists.

Cray Systems provides a wide range of services to clients in both the public and private sector. Our services include:

- programme management consultancy and support
- IT strategic planning
- project management consultancy and training
- feasibility studies, systems analysis, design and development.

Services we have provided in the public sector include support for an inter-organisational information system implementation, the introduction of programme management in a large government department and consultancy for a programme to establish IT infrastructure and business process change in a geographically dispersed organisation.

We have worked with each of the major government departments, as well as a number of local government organisations and several police forces. We have assisted all the major utilities in the UK and several at overseas locations.

The case study was provided by Cray Systems Consultancy.

Company name and address

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EDS

Profile in outline

Founded in 1962, EDS is one of the world's leading suppliers of information technology services. Today, EDS has more than 8,000 customers around the world, operates in 35 countries, has revenues of over $10 billion annually and employs almost 80,000 people. In the UK, EDS has over 5,400 employees at more than fifty sites. EDS is dedicated to helping its customers achieve their goals in the markets they serve through the application of information technology to business and organisational needs. The company provides business solutions to government bodies, public utilities, defence, manufacturing, communications and service industries and financial institutions and commerce.

The nature of our work for major national and international organisations means that we have been managing large change programmes for thirty years. In the public sector in the UK, EDS has been selected as the strategic partner for the provision of IT services to the Inland Revenue and to the Department of Transport. In addition, EDS has been a major supplier of computing services to ITSA, the IT services organisation supporting the Department of Social Security.

In addition to the development, integration and management of systems and the provision of value added services, we offer a full range of management and technical consultancy services through our subsidiary A T Kearney. As part of our consultancy services, we give specialist advice in corporate strategy, re-engineering of business processes and the management of change and business performance improvement programmes.

As well as the subject of our case study, recent examples of our work in the management of change programmes include:

- our consultants are undertaking the management of organisational changes and the redesign of business processes as part of the implementation of an integrated logistics system for the Royal Navy

- we are currently engaged in assisting the Inland Revenue with major business and technology change programmes associated with the introduction of Self Assessment for taxpayers

- we are providing consulting advice to a worldwide office equipment manufacturer on the introduction of programme management for its development projects

- we have specified and developed a programme planning, scheduling and cost control system for use by a major international oil company in its field operations.

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PMIS Consulting Limited

Profile in outline

PMIS specialises in the effective implementation of programme management and project-based management disciplines by applying its knowledge to ensure that implementations are *demonstrably* successful in the business sense and not just seemingly accomplished.

Programme management and project management have emerged as professional disciplines over the last forty years or so. Many people and firms operating in a project environment have done so without a full awareness of the richness and depth of the discipline and have, therefore, tended to fail to achieve the best from their projects.

Our primary objective is to successfully assist organisations to achieve measurable benefits by implementing project-based management as a modern *structured* discipline. Key staff within PMIS have substantial experience of developing and implementing project-based processes and information systems on behalf of blue-chip companies in a variety of industries, both in the public and private sector.

Examples of our public sector services include leading the system design team on a project to introduce a programme and project management system for a large Government department and in providing programme management support to introduce wide area networking within another Government department.
PMIS's core skills lie in developing efficient project-based management processes, based upon a systematic approach and understanding of the discipline of these processes and in the ability to impart a fundamental understanding of this discipline through staff development programmes and management seminars.

Company name and address

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Admiral Management Services Limited

Profile in outline

Admiral Management Services Limited is a wholly-owned subsidiary of Admiral plc and provides clients with impartial, objective advice based on independent technical, commercial and financial IT consultancy services.

Admiral's policy is to provide customers with cost-effective solutions of quality while continually striving to improve its own standards of quality and service. Keeping this policy to the fore, Admiral's aim is to build a fast-growing, highly professional international services company.

As a result, Admiral is one of the largest independently owned, publicly listed companies in the UK. It has overseas offices in Australia, Republic of Ireland and Singapore.

New markets, changing technology, tougher competition and the constant drive to improve, all challenges to today's businesses, in the public sector as much as in the commercial sector. In responding to these demands, the introduction of new technologies and systems can provide high rewards – but not without risk. It is essential that these challenges are managed effectively and sensitively – and this mandates the use of practical, proven programme management techniques.

Admiral provides assistance and confidence in the achievement of the benefits that can result from technology advances by successfully managing risk in programmes. Admiral's consultants have extensive experience of managing major programmes of complex, interdependent projects involving a high level of IT content. This collected experience is available through a range of appropriate approaches and techniques. The programmes often are associated with the delivery of benefits and Admiral's consultants provide support in Business Process Redesign, the Management of Change and Benefits Realisation.

Admiral has completed many programme management roles for public organisations where it has an understanding of the pressures affecting this market sector, be they technical, financial or organisational.

Company name and address

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Bibliography

A range of publications is available which gives guidance on programme management, illustrated by the case studies in this volume, and related topics:

Programme Management

A briefing pamphlet is available from the Library, CCTA, Rosebery Court, St Andrews Business Park, Norwich, NR7 0HS:

- Managing Programmes of Large-Scale Change

Volumes in the Programme and Project Management Library, which describe in detail the approach to programme management illustrated by these case studies, are available from HMSO through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT.

- An Introduction to Programme Management
  ISBN: 0 11 330611 3

- A Guide to Programme Management
  ISBN: 0 11 330600 8

PRINCE

For managing individual projects within a programme, the PRINCE method is recommended. **PRINCE**® is a registered trademark of CCTA, the Government Centre for Information Systems.

The PRINCE Reference Manuals (a boxed set of five Guides) is published by NCC Blackwell and is available from NCC Ltd, Sales Administration (Publications), Oxford Road, Manchester M1 7ED.

- PRINCE Reference Manuals
  ISBN: 1 85554 012 6

A volume from the CCTA Programme and Project Management Library gives an introduction to PRINCE and is published by HMSO and available through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT.

- PRINCE – An Outline
  ISBN: 0 11 330599 0

Management of Risk

Guidance on identifying and managing risks is available in the CCTA Management of Risk Library. Volumes in the library are available from HMSO through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT.

- An Introduction to the Management of Risk
  ISBN: 0 11 330648 2

- Management of Programme Risk
  ISBN: 0 11 330672 5

Other

A CCTA booklet discussing the role of IS/IT in Business Process Re-engineering, indicating how elements of BPR can be selected to match how far an organisation wishes to go in changing the way it does things. It is published by HMSO and available through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT:

- Business Process Re-engineering in the Public Sector
  ISBN: 0 11 330651 2

A booklet designed to help managers to obtain for their organisations the benefits expected from investment in information systems is also available. It is obtainable from HMSO through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT:

- Achieving Benefits from Business Change
  ISBN: 0 11 330481 8

Three related volumes listed above, *A Guide to Programme Management, Management of Programme Risk* and *Achieving Benefits from Business Change,* are available as a discounted set from HMSO and through its bookshops and agents or by mail order from HMSO Publications Centre, PO Box 276, London SW8 5DT:

- Achieving Business Change with Programme Management – Three Key Guides
  ISBN: 0 11 330689 X

Glossary

benefits

The enhanced efficiency, economy and effectiveness of future business operations to be delivered by a programme.

benefits management

A formal process within programme management for planning, managing, delivering and measuring the set of benefits which the programme is to provide.

benefits management plan

A component of the Programme Definition Statement, which specifies who is responsible for achieving the benefits set out in the benefits profiles and how achievement is to be managed, measured and monitored.

Benefits Realisation phase

The fourth phase of the programme management approach, occurring at the end of each tranche of a programme, and particularly at the end of the full programme. The objectives are to assess operational performance levels against targets in the benefits framework and blueprint; to compensate for any short-fall in achievement; to seek additional areas of benefit from the exploitation of the delivered facilities; to ensure lessons learnt are fed into the replanning of the next tranche; and finally, to close down a completed programme (or programme tranche), and ensure that the lessons learnt are fed back into strategy reviews and into future programmes.

blueprint

The section of the Programme Definition Statement which sets out the vision for the programme. The blueprint will include business models, operational performance measures, organisation, information systems and support service requirements.

business case

The section of the Programme Definition Statement which provides the justification for the commitment of resources to a programme. The business case should demonstrate that the most cost-effective combination of projects has been selected when compared with costed alternatives. It also provides the wider context and justification for infrastructure investment and the costs of implementing policies and standards.

Business Change Manager (BCM)

A role in the Programme Executive. The BCM is responsible for maximising the improvement to business operations through benefits management, for drawing up the programme's business case, for transition planning and the management of change, and for the management of risk.

business operations

Groupings of one or more business processes which combine to achieve a primary goal of the organisation (for example, assessment and payment of a type of social security benefit).

communications plan

The plan for how the objectives, plans and progress of the programme are to be communicated to staff, to promote a feeling of common ownership, to facilitate knowledge transfer and training, and to ensure that those involved and affected have a common set of expectations throughout the life of the programme.

Design Authority

A role within the Programme Executive, with the responsibility to manage the design of the business and information systems that are affected or created by the programme, ensuring that designs are consistent across all projects in the portfolio and with supporting services and infrastructure designs and plans, and that designs comply with the policies and standards of the organisation and the programme. The Design Authority is also responsible for change control to technical specifications and technical infrastructure.

feasibility study

During the Programme Definition phase, the programme feasibility study is conducted to develop in further detail the business requirements and benefits analysis contained in the Programme Brief – in order to draw up the *blueprint* of the future business operations – and to scope and structure implementation options.

infrastructure

Here, infrastructure is broadly defined to include both 'traditional' forms of infrastructure such as IS/IT, telecommunications and estates, as well as supporting services such as accountancy, staffing and personnel.

'Island of Stability'

A review point at the end of a tranche (and overlapping the next tranche) when the programme management team review progress and re-assess benefits, risk and

remaining uncertainty and plan the next tranche in detail.

phase — A part of the programme lifecycle, into which activities to manage the programme are grouped. The four phases of Programme Identification, Programme Definition, Programme Execution and Benefits Realisation are defined in this glossary. All four phases may be repeated for each tranche of a programme if necessary.

portfolio of projects — The constituent projects within a programme that will deliver the products needed to move the business forward from the current business operations to those described in the *blueprint*.

PRINCE — PRojects IN Controlled Environments, the standard method used for project management in government. **PRINCE**® is a registered trademark of CCTA, the Government Centre for Information Systems.

programme — A portfolio of projects selected and planned in a co-ordinated way so as to achieve a set of defined business objectives, giving effect to various (and often overlapping) initiatives and/or implementing a strategy. Alternatively, a single, large or very complex project, or a set of otherwise unrelated projects bounded by a business cycle. The programme includes the controlled environment of management responsibilities, activities, documentation and monitoring arrangements by which the portfolio of projects achieve their goals and the broader goals of the programme.

Programme Definition phase — The second phase of programme management. A feasibility study is carried out to explore options for realising the benefits framework described in the Programme Brief. The programme is fully defined, a benefits management régime established and funding approval for major projects is obtained. Initial Project Briefs are written, specifying project deliverables and outline project plans. The results of the phase are documented in a Programme Definition Statement.

Programme Definition Statement (PDS) — The agreed statement of objectives and plans between the target business operation, the Programme Director, and the senior management group (Management Board,

steering committee) to whom the Programme Director is reporting. The PDS forms the basis for funding the programme and is the key monitoring and control document. It is a dynamic document, maintained throughout the life of the programme.

Programme Director The senior manager with individual responsibility for the overall success of the programme, and drawn from the management of the target business area. The Programme Executive and the programme's Project Board chairmen formally report to and receive direction from the Programme Director.

Programme Execution phase The third phase of programme management, in which the project portfolio management and transition activities are undertaken. Compliance with the programme design, corporate and programme policies, standards and infrastructure plans is monitored and assured.

Programme Executive The Programme Executive is the group of individuals, supporting the Programme Director, who has day-to-day management responsibility for the whole programme. The Programme Executive consists of those responsible for the following roles: the Business Change Manager, the Programme Manager, the programme Design Authority. If a Programme Support Office has been established, its head may also attend regular meetings of the Programme Executive.

Programme Identification phase The first phase of programme management, in which all high-level change proposals from available strategies and initiatives are considered collectively and their objectives and directions translated into one or more achievable programmes of work. For each programme identified a Programme Brief is written and a Programme Director appointed.

programme management The selection and co-ordinated planning of a portfolio of projects so as to achieve a set of defined business objectives, and the efficient execution of these projects within a controlled environment such that they realise maximum benefit for the resulting business operations.

Programme Manager	The individual responsible for the day-to-day management of the programme on behalf of the Programme Director. The Programme Manager is a member of the Programme Executive.
programme plan	A collective term for the benefits management plan, risk management plan, transition plan, project portfolio plan and design management plan, which are components of the Programme Definition Statement.
Programme Support Office (PSO)	An organisation giving administrative assistance to the Programme Manager and the Programme Executive, particularly with management information reporting. The PSO may, where appropriate, serve both the programme and the individual projects.
Project Assurance Team (PAT)	The organisation which carries out technical and administrative roles on a PRINCE managed project, ensuring continuity of development, and technical integrity, of the project's products.
risk management plan	A component of the Programme Definition Statement, containing a record of all risks in the business environment and to the programme itself. It assesses possible impact and what is to be done (and when) to avoid, remove and control them. It includes the detailed processes for managing the risk.
tranche	A block of work within the programme, identified to facilitate the programme's management.

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CCTA is responsible for promoting the effective use of information systems (IS) in central government. CCTA's Information Systems Engineering Group is active in enabling CCTA's customers to improve current and future business effectiveness through the improvement of efficiency, effectiveness and economy across the lifecycle of information systems programmes and projects. It publishes a wide range of advice and guidance on these issues.

Programme management is an approach to effectively co-ordinating a portfolio of projects to deliver the full range of expected benefits for the business. It is complementary to CCTA's project management method, PRINCE, which gives its customers the means to deliver quality products on time and within budget, at the project level.

This second volume of case studies illustrates how the programme management approach was used in a practical way on five large programmes.

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