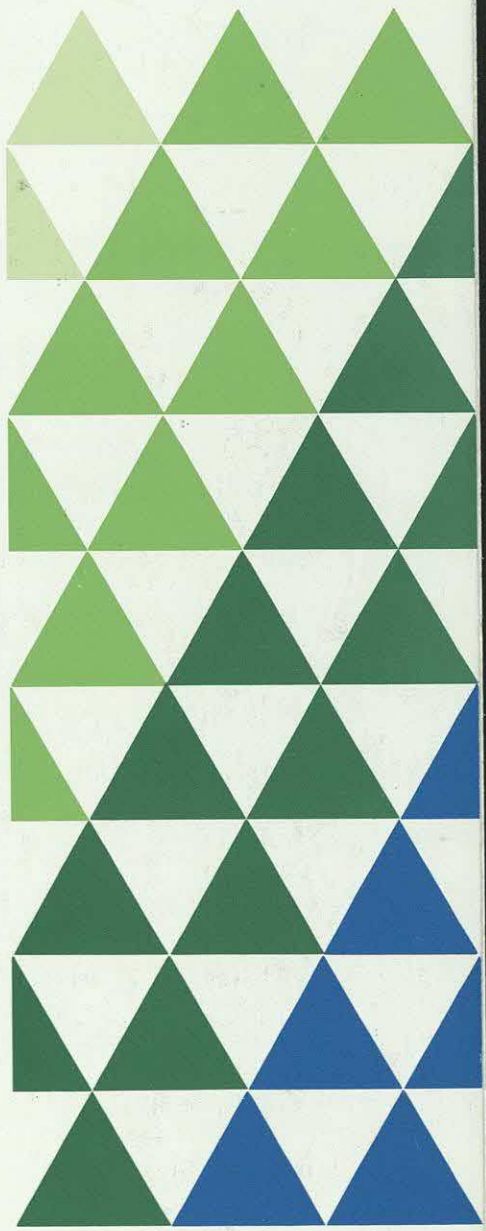
BUTLER COX FOUNDATION

Strategic Alignment



Management Summary

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Strategic Alignment

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Management Summary

Strategic Alignment

Foundation Report 86, Strategic Alignment, was published in April 1992. This document summarises the main business messages arising from our research. Strategic alignment describes the state when the goals of a business and the computer systems that support them are in harmony. Because those goals change significantly and continuously for most businesses, full strategic alignment is usually unattainable. However, striving for strategic alignment is clearly beneficial since it brings the computer systems closer to full support of the business goals – the closer the two are brought together, the greater the benefit. The full report considers the impact of information technology on supporting a business, and the practical issues, illustrated by case histories, that need to be addressed in order to achieve successful alignment. The full report is available only to sponsors of the Foundation.

Many senior business managers have a very real concern about the value – or lack of value – of their investment in information technology (IT). Like systems managers, they are seeking to close the gap between the potential of information systems to add value to the business and the reality of what is being achieved.

There is now abundant evidence that businesses can achieve much greater value from IT by changing the way it is used. Rather than merely exploiting the processing speed and storage capacity of computers to automate existing working procedures, the full range of IT capabilities should be applied to supporting business processes or even enabling them to be totally redesigned. However, aligning the application of IT with business goals in this way presents major difficulties for the business in general, and for the systems department in particular. The extent of these difficulties can be appreciated by comparing the activities that were critical to the application of IT in the past with those that we believe will become critical in the future.

The application of IT is evolving through four stages

The application of IT is evolving through four stages, described in detail in the full report and summarised below.

In Stage 1, information systems automate the existing workflows *within* individual business functions, whereas in Stage 2, the systems integrate the flow of work *across* several business functions, although the functional structure remains unchanged. The implications for systems at Stages 1 and 2 are similar, because IT is being used to automate 'business as usual'.

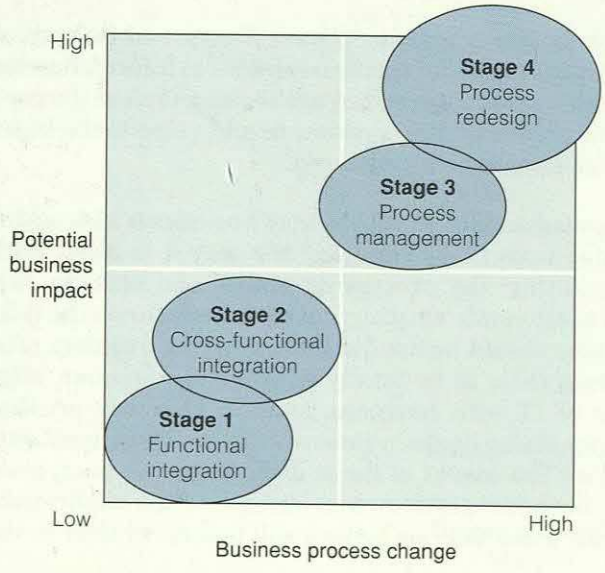
Information systems in Stage 3 enable the work of an *entire business process* to be carried out as a single entity. Traditionally, this work was carried out by several business functions, so Stage 3 will require radical changes in organisational structures, responsibilities and working practices. However, the benefits far exceed those arising from the incremental improvements of Stage 1 and 2 systems.

In Stage 4, information systems enable business processes to be *redesigned* (often called business re-engineering) and thereby conducted in ways that were previously impractical or impossible. Such systems underpin revolutionary changes in the way that business is conducted. They demand a totally different approach to design, even from Stage 3, and their implementation introduces far-reaching organisational changes.

The distinctions between these four stages are critical. Each successive stage raises the potential of IT to add value to the business and enables systems plans to be more closely aligned with business plans, as the figure below illustrates. It is only when Stage 4 is completed, however, that a state of strategic alignment can justifiably be claimed.

IT's potential impact on the business is related to the degree of business-process change

A business process is a set of logically related work activities that delivers a business result and is independent of the company's functional organisation.



The success factors for aligning change between stages

The activities in aligning are closely related to five strategic elements of a business, which also have to be harmonised before strategic alignment can be achieved. These five elements are strategy, technology, processes, structure, and individuals and their roles. These elements can be used as a means of contrasting the success factors for aligning that apply at the different stages. The figure on page 3 shows how the characteristics of, and success factors for, aligning within each of the five strategic elements change as the exploitation of IT progresses through the four stages.

The characteristics and aligning success factors for each strategic element contrast sharply at each stage

Strategic element	Stage 1	Stage 2	Stage 3	Stage 4
Strategy, planning and leadership	Stable environment → Volatile environment Conventional planning → Visionary planning Efficiency → Service			
	Clarifying plans → Sharing a vision, fostering change			
Structure and relationships	Functional, hierarchical → Process-based Systems function delineated, responsive → Systems function partnership			
	Preserving functional relationships → Removing barriers, integrating the systems function			
Individual and roles	Dependent users → Sophisticated users Systems staff narrow, specialised → Broad, business-familiar Adversarial → Cooperative			
	Relating to the hierarchy → Fitting into mixed teams			
Procedures and processes	Functional procedures → Business processes Isolated systems support → Integrated systems support			
	Automating functional work → Rethinking processes			
Information technology	Predetermined requirements → Modelled solutions Established, closed systems → Innovative, open systems Transactional, centralised → Cooperative, dispersed			
	Responding to fixed requirements → Building for uncertainty			

Success factors

The figure illustrates the extent of the change in the systems environment that occurs as systems evolve from Stages 1 and 2 to Stages 3 and 4. At Stage 1, strategic business planning, for example, is a rational, top-down activity that takes place in a relatively stable business environment. At Stage 4, by contrast, the environment is volatile, and planning is driven by a vision of the future that owes little to an analysis of the past. Consequently, the success factor for aligning changes, from clarifying business plans to sharing the vision and fostering change. There are similar fundamental changes in the success factors for the other strategic elements.

The systems department has to expand the scope of its activities

Developing applications at Stages 3 and 4 presents an opportunity for the systems director to add enormous value to the business. However, he will also be required to continue to manage conventional systems at Stages 1 and 2. As a consequence, the systems department will have to expand the scope of its activities, and develop the skills needed to manage activities at all four stages concurrently. The key to coping with the increased complexity that this entails is to recognise that the systems function has three distinct roles to fill – systems definition, technical planning and service supply.

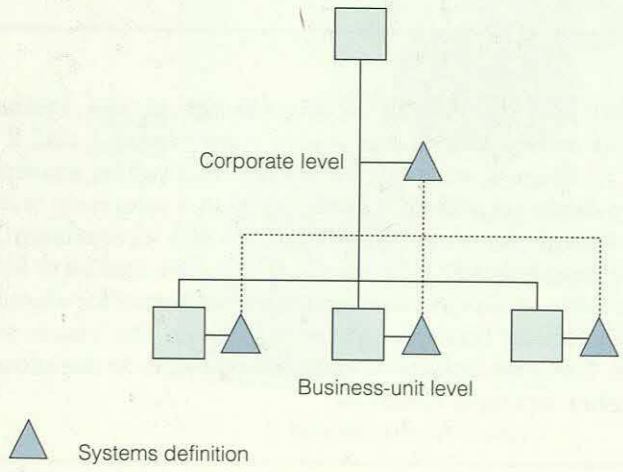
Systems definition is concerned with identifying the applications that need to be built, and technical planning is concerned with defining the technical architecture and building the resultant technical infrastructure. Service supply is concerned both with operating the infrastructure and with developing and maintaining the applications. Each role needs to be positioned differently within the organisation and each requires a different approach to investment, and different skills and techniques.

Systems definition

Deciding which systems should be built is a crucial responsibility at Stages 3 and 4 because of the major contribution that systems can make to business success at those stages. Since it is a highly specialised role, it is best undertaken by systems specialists working in the business units under the direction of senior business managers.

In many groups, however, business processes transcend the boundaries of business units, so some systems-definition activities have to be coordinated across the group as a whole by a corporate systems-strategy group, which should report to the chief executive officer. A key member of this group is the chief information officer, who should retain a responsibility for coordinating the activities of the systems specialists in the business units, as illustrated in the diagram below.

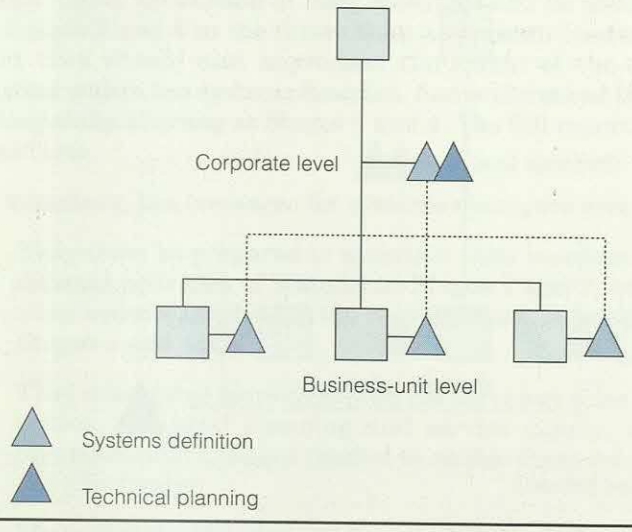
Systems-definition responsibilities should be positioned where business planning takes place, and be coordinated across the business units



Technical planning

The main purpose of the systems function's technical-planning role – which is a broad one – is to define a set of guidelines for a major, long-term group investment in the technical infrastructure. Without such an infrastructure, process management and redesign would be all but impossible. Technical planning is therefore a groupwide role. As the diagram on page 5 illustrates, it should be positioned at a level high enough in the organisation both to ensure the compatibility of systems that span business units, and to safeguard the future flexibility of the group as a whole.

Technical planning should be positioned to safeguard group flexibility



There are two further technical-planning responsibilities. One is to identify the techniques and methods that will be required – for example, process-modelling software, prototyping, CASE tools and object orientation. The other is to carry out research and development activities on behalf of the group as a whole – monitoring the emergence of new information technologies, determining their likely value to process-supporting systems, and predicting their impact on the industry sector over the forthcoming three- to five-year planning period.

Service supply

The service-supply role includes responsibility for data-centre operations, network installation and management, security and recovery from equipment failures. It also includes the development and maintenance both of conventional systems and of process-supporting systems. Service supply should be established with the emphasis on efficiency and value for money.

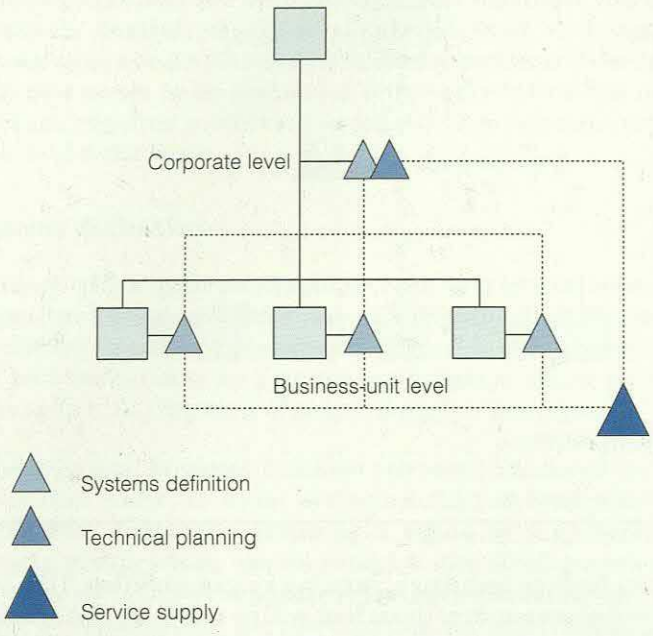
To take advantage of the inherent economies of scale, particularly in human skills, service supply should be positioned as a shared group resource. This generally works best on a commercial basis, with the resource pool charging for the services it provides, leaving control effectively in the hands of its customers in the business. The organisational arrangement is shown in the diagram overleaf.

Outsourcing the resource pool to a third party can be an attractive option, mainly because the very economies of scale that underpin the logic of an internal shared facility apply yet more strongly to an external facility.

Systems staff will require new skills

Systems staff engaged in Stages 3 and 4 systems-definition activities within the business units will require team-working skills, business skills and familiarity with process modelling and simulation.

Service supply should be positioned as a resource pool



The joint teams of business and systems specialists that carry out the systems-definition work need to model and redesign business processes, simulate new ways of working and demonstrate prototypes that lead to the development of process-supporting applications. Such joint-development teams work best when they consist of a small number of staff who are selected from the best available, and who are dedicated to the task until it is complete. The difficulty of finding staff with the right mix of business and systems skills may prove to be the ultimate constraint on a business's ability to implement process-supporting systems.

Strategic alignment has important implications for systems managers and the chief executive

Aligning is the means by which systems development effort can be directed to support the needs of the business as closely as possible. Much of the systems effort today is focused on Stage 1 and 2 systems to help automate the work within individual functions of the business, and to integrate the flow of work between them. Although they are rarely major contributors to business success, systems of this kind are necessary for normal operations. At Stages 1 and 2, the systems department responds to the needs of the business.

A totally different world lies beyond Stages 1 and 2, however. Systems at Stage 3 make possible the restructuring of the organisation so that entire business processes can be conducted by individuals or dedicated teams. Systems at Stage 4 go even further, enabling the work content of the processes to be radically redesigned and simplified in ways that would otherwise be impractical or impossible. Systems of this kind are a fundamental component of business success because they have the potential to deliver enormous benefits.

There is clear evidence from our research that systems managers are aware of this trend in the application of IT, and expect that a much higher proportion of their resources will be devoted to systems at Stages 3 and 4 in the future than at present. However, we believe that they should also appreciate the extent of the change that is needed within the systems function, and understand the activities for successfully aligning at Stages 3 and 4. The full report answers these questions.

In summary, the messages for systems managers are:

- They must be prepared to maintain their involvement in the traditional activities of systems at Stages 1 and 2, and at the same time, become involved in the very different activities of systems at Stages 3 and 4.
- They must focus more clearly on the three key roles of systems definition, technical planning and service supply, and make any organisational changes needed to enable these roles to be carried out effectively.
- They must develop their staff, especially those involved in systems definition, to ensure that they have the new skills needed to redesign and support business processes.

There are also important implications for the chief executive:

- For the business to stay competitive, and to exploit fully and gain maximum value from IT, the chief executive must be prepared to re-engineer the business. This implies using IT to enable business processes to be redesigned, and takes the systems function into the activities of Stages 3 and 4 that we have described.
- Achieving alignment between business goals and IT applications requires major changes, especially within the systems function. These will not be achieved without understanding and support from top management, and a move towards closer interdependence between the systems function and the rest of the business.

Striving for strategic alignment implies major upheavals for the systems department and the business. The cost and effort involved will undoubtedly be high – but the benefits are potentially enormous.

The Foundation

The Foundation is a service for senior managers responsible for information management in major enterprises. It provides insight and guidance to help them to manage information systems and technology more effectively for the benefit of their organisations.

The Foundation carries out a programme of syndicated research that focuses on the business implications of information systems, and on the management of the information systems function, rather than on the technology itself. It distributes a range of publications to its sponsors that includes research reports, management summaries, directors' briefings and position papers. It also arranges events at which sponsors can meet and exchange views, such as conferences, management briefings, research reviews and study tours.

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- The events combine access to the world's leading thinkers and practitioners with the opportunity to meet and exchange views with professional counterparts from different industries and countries.
- The Foundation represents a network of systems practitioners, with the power to connect individuals with common concerns.

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