1992: An Avoidable Crisis

BUTLER COX
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A Paper by David Butler
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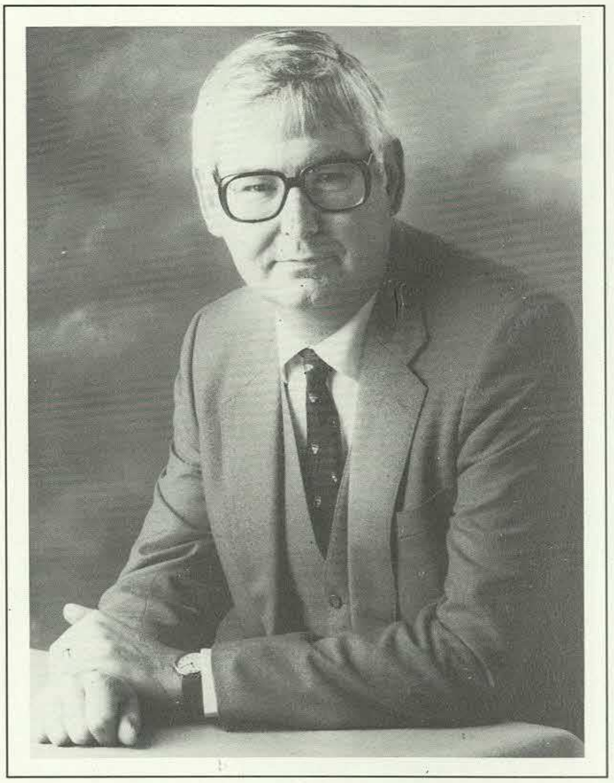

David Butler is Chairman of Butler Cox. He is well known for his work on information systems at board level and for his analyses of world IT markets. His publications include *The Convergence of Technologies*, *Trends in IT*, and *A Director's Guide to IT*, all published by the Butler Cox Foundation, and *Britain and the Information Society*, published by Heyden.

A huge amount has been written about 1992, but what may turn out to be the biggest problem of all — getting appropriate information systems in place — has scarcely been considered. Plans are being made in board rooms all over Europe to deal with the organisational, operational, and structural changes that will occur on a vast scale as the single unified market is implemented. These plans are being made without reference, however, to those who plan systems development.

Properly planned and managed, information systems can drive these processes of change. Without the support of good information systems, the upheaval caused by wide-ranging operational changes will be devastating. Systems planning must be part of a business's overall planning; working together, corporate and systems managers can be a formidable team in taking a company into the expanded market. The task is a daunting one, but the prizes are as great as the risks. It is up to individuals and companies to make the single unified market work. It would be tragic if we failed because our systems let us down.

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THE TICKING TIME BOMB

Enthusiasm for the single unified market in Europe — or SUM, for short — is increasing. Despite differences of opinion about the longer-term political implications, the business community and the general public are beginning to respond to the biggest opportunity for reconstruction seen in Europe for 40 years. One anxiety, however, surfaces wherever and whenever 1992 is debated — lack of preparedness. Will we be ready to exploit the opportunity? Will we be able to solve the problems that 1992 will pose?

In view of all the words that have been written about 1992 and the coming of the SUM, it might be doubted whether there is anything left to say, but there is. What may well turn out to be the most daunting problem of all — getting appropriate information systems in place — has scarcely been broached.

The twin themes of the SUM are industrial reconstruction in the interests of greater competition, and administrative harmonisation. Artificial barriers of taxation and regulation will be torn down to create a single, competitive market. The pursuit of both these goals will necessitate change on a vast scale — organisational, operational, and structural. How Europe works in the future may be quite different from what we see today. Manufacturing policies will change in favour of larger units. Government buying will be more open and competitive. Acquisitions and mergers are being discussed and rapidly effected. The trend towards international retailing and global markets will accelerate.

What of the systems that will be required to support these changes? Properly planned and managed, information systems can drive and fuel these processes of change. Without the support of good information systems, the upheaval caused by wide-ranging operational changes will be devastating. Most organisations have not even begun to contemplate the systems implications of 1992. The fiscal, structural, and economic consequences of the SUM are being considered in corporate development departments and in board rooms all over Europe, in isolation from those who plan systems development.

While these plans are being conceived, a time bomb is ticking. When all the corporate development plans are neatly printed and bound, when the board has given its approval and, at last, the systems department becomes involved, its response will often be to point out the current demands on its already stretched resources: "We are over-extended with existing commitments and the maintenance of current systems. We have a backlog of agreed systems development work to occupy the next two years. We have a mountain of statutory work imposed on us by changes in legislation. We cannot recruit new, experienced people because they do not exist. For new work, we are looking at delivery dates of 1993/4. How can we contemplate taking on any new commitments?" Instead of being an instrument to drive the SUM forward, information systems may become the Achilles heel of the whole process, the single bottleneck that thwarts the process of change.

The aim of this paper is not to describe the difficulties to be averted, but simply to indicate where the policies now being pursued will take us. Its warning to corporate planners and to merger and acquisition experts is blunt. Recognise the importance of information systems, and they will prove a priceless asset. Ignore them, and they will frustrate, or even destroy, your ambitions. Its warning to systems managers is equally blunt. Keep silence now, and you will be cast in the role of the wrecker.

If systems managers are to convince their boards of the need to take the implications for systems seriously, they will need to speak with authority. This requires an understanding of what form the SUM will take, how it will come about, and how it is likely to affect their organisations.

THE SHAPE OF THINGS TO COME

One of the most dangerous assumptions about the SUM, in the minds of many managers, is that knowledge about it is a binary quantity. Either you know all about it, or you know nothing about it. Since, by definition, it is impossible to know all about it, we might as well lapse into a state of comfortable and total ignorance. In fact, there is already a great deal that is worth knowing about the SUM, despite the admitted uncertainties.

In March 1985, the European Council of Ministers instructed the Commission to make proposals for "action to achieve a single large market by 1992 thereby creating a more favourable environment for stimulating enterprise, competition, and trade . . .". It directed the Commission to "draw up a detailed programme with a specific timetable before its (the Council's) next meeting". Part of the reason for this original initiative lies in the field of information technology. The Japanese ministries of industry and telecommunications have recently stepped up their funding for studies of European telecommunications markets by a factor of ten — their targeting of Western Europe is clear. Without the SUM, American and Japanese communications companies will have no competition in their efforts to dominate world markets; in a unified market, European companies will be in a strong position to compete.

Much of the most useful information about the SUM is contained in documents readily available from the Commission, such as the White Paper entitled *Completing the Internal Market* (Com (85) 310 final, 14 June 1985) — the paper known as the Cockfield proposals, and the March 1988 report entitled *The Economics of 1992* (ISSN 0379-0991), by Michael Emerson and his multinational team in the Directorate-General for Economic and Financial Affairs in Brussels. The White Paper contains outline proposals in over 300 specific areas. Some of them are very general in scope, others highly specific — dealing with such cosmic issues as the use of revolving cranes and the consumption of wild boar meat. Figure 1 gives an indication of the scope of the changes. The text of the main legislative instrument, The Single European Act, was published in 1986 (ISBN 92-824-0328-9) and has since been republished as a government paper by member nations. Of greatest interest to systems directors is, perhaps, the Community Green Paper on communications, published in 1987, that advocates the progressive opening of national telecommunications markets to other Community suppliers.

The first aim of the SUM is to remove all trade barriers within the territories of the Twelve. Barriers to the movement of people, goods, and money are to be dismantled. Educational and professional qualifications will be universally recognised — doctors, lawyers, or accountants qualified to practise in Paris or Rome can put up their name plates in London or Bonn without further qualification. Regulatory limits on the free exchange of services will also be dismantled, particularly in finance, communications, and transport. Legal and administrative barriers to trade will be eliminated. Border checks will be replaced (if the majority of the Twelve have their way) by other and less obtrusive controls.

It can be seen at once that these changes will have a major impact on business and on everyday life.

Figure 1 Topics covered by measures for completing the internal market

Removal of physical barriers

1. Control of goods
   - Miscellaneous controls (customs and border crossings; statistical harmonisation; elimination of national protective measures).
   - Veterinary and plant health controls.
2. Control of individuals (immigration and controls on movement of individuals).

Removal of technical barriers

1. Free movement of goods
   - Technical harmonisation of standards.
   - Harmonisation of laws governing specific sectors:
     - Motor vehicles.
     - Tractors and agricultural machines.
     - Food law.
     - Pharmaceuticals and high-technology medicines.
     - Chemical products.
     - Construction and construction products.
     - Other items (including measuring instruments; indication of prices).
2. Public procurement (improvement of existing directives; extension to telecommunications; procurement of services).
3. Free movement of labour and the professions.
4. Common market for services
   - Financial services:
     - Banks.
     - Insurance.
     - Transactions in securities.
   - Transport.
   - New technologies and services (including the market in information services).
5. Capital movements.
6. Creation of suitable conditions for industrial cooperation
   - Company law (publication of accounts; cross-border mergers; structure of groups; takeovers).
   - Intellectual and industrial property (including legal protection of microcircuits; computer programs; trademarks).
   - Taxation (taxation of parent companies and subsidiaries).
7. Application of community law
   - Transparency.
   - Competition policy and state aids.

Removal of fiscal barriers

1. VAT.
2. Excise duties.

Of course, the process of generating the 300 or more proposals for action, transmitting them to the member nations, getting them enacted by national parliaments and passed into law is lengthy, cumbersome, and prone to delay. In fact, the legislative programme is already far behind target; fewer than half the planned measures have been issued. 1992 can already be seen not as a make-or-break deadline, but rather as a checkpoint at which Europeans will have to review what remains to be done.

THE AGENDA FOR CHANGE

The manner in which the SUM is implemented and the speed with which it comes about will be determined largely by the attitudes of the business community. The deregulation of telecommunications in the United Kingdom illustrates the process. When the legislation that would abolish the exclusive privilege of the national carrier and create a competitive market was first envisaged, every knowledgeable observer agreed that it would (of course) take years for companies and individuals to respond to the new régime and start behaving as if they were in a competitive arena. What actually happened surprised nearly everyone. Once it became clear that the process of change was unstoppable, people began to behave as if the process were already completed. The competitive arena actually took shape ahead of the legislation, even if what people did was sometimes technically illegal. In the end, the deregulators were running after the market, not leading it reluctantly into the future. We believe that this pattern will become more common as deregulation progresses in Europe.

THE PROCESS MAY BE SLOW BUT THE EFFECTS WILL BE PROFOUND

While worthwhile advances have already been made, we predict with confidence that many people will be disappointed with the short-term results of the SUM, especially those who have inherited the visionary mantle of Jean Monnet. We predict with equal confidence that its long-term consequences will be underestimated. We shall all be disappointed with what can be achieved in any one year, and astonished by what can be achieved in a decade or two, for the process of change is cumulative in its effects.

For business, the most important consideration is the size and density of the SUM. Place the point of a pair of compasses in Rotterdam and draw a circle, radius 1,000 kilometres. Place the point in New York and draw the same size circle. Place the point in Tokyo and do it again. The first circle will contain 300 million consumers, the second 60 million, and the third 80 million. The SUM will be among the richest commercial honeypots in the world.

The quantitative benefits of the SUM are not, however, fixed or immutable. They depend on the economic policies pursued by the governments of the Twelve during and after the creation of the SUM. If restrictive economic policies are followed, the total benefit of creating the market will amount to around 2.5 per cent of GDP, over and above the growth achieved in other ways. This is equivalent to 70 billion ECUs per annum. (How many Foundation members know the exchange rate between ECUs and their national currency?) Such an increase is worthwhile but not the limit of Europe's ambition. Given national policies geared to growth and expansion, the benefits of the SUM could rise to 6.5 per cent of GDP (see Figure 2 overleaf). Two decades of such improvement would simply transform the economy of the Community. Up to now, the auspices are very good. The Commission's economic report published in the autumn of 1988 reported both high investment (7 per cent annual growth) and low overall inflation (3.5 per cent) — described by the Commission as the best possible run-up to the SUM. The impact of these trends is illustrated on page 5 in Figure 3.

THE COMMISSION WILL FOLLOW WHERE BUSINESS LEADS

No-one knows how far and how fast the changes will go, but it is important to note that the Commission has chosen its ground and its timing quite shrewdly. The trend towards liberalisation, deregulation, and competition is quite marked in most member nations. Most of the Commission's proposals confirm these existing trends.

Businesses making investments in the SUM will not, however, necessarily be bound by legislative laggards. Where profit beckons, business will go. Put very bluntly, the message from business to government is this: we are planning to invest very heavily in the SUM and will not see the return on that investment minimised just because you dare not embrace the policies needed to foster growth.

The response of business to the SUM is already taking shape. ICI of Britain and Du Pont de Nemours (Nederland) BV have merged their car paints divisions and will build a new technical centre for both. Two Belgian breweries, Artois NV and Brasserie Piedboeuf SA, have merged to form Europe's third-largest brewing business, the stimulus arising from the planned harmonisation of tax rates on beer. The French food company, BSN, has made eight acquisitions in the past year. Of course, the benefits of the SUM can also be exploited by companies outside the area of the

Figure 2 Potential consequences of completion of the internal market for the Community in the medium to long term

Method of analysis	Consequences for the SUM				
Based on microeconomic analysis	Welfare gains of 4¼ – 6½% of GDP				
Based on macroeconomic analysis	Changes in:				
	GDP (%)	Prices (%)	Employment (millions)	Public balance (percentage point(s) of GDP)	External balance (percentage point(s) of GDP)
Assuming expansionist economic policies	7	(4½)	5	½	(¼)
Assuming restrictive economic policies	4½	(6)	1¾	2¼	(1)
Difference	2½	1½	3¼	(1¾)	(1¼)

(Source: Based on data in *European Economy, The Economics of 1992,* Commission of the European Communities, March 1988)

Twelve. Swedish Alfa-Laval is reorganising its distribution network to be pan-European. Swiss Nestlé has acquired the British company, Rowntree.

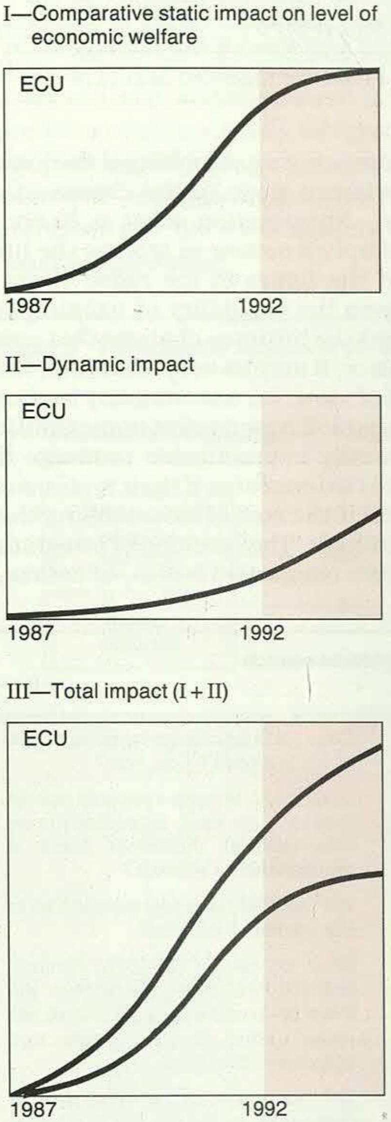
One of the next considerations to which business will need to turn its attention is the need for rationalisation in the expanded market. Consider the business of making batteries for motor cars. Kent Price, chief executive of the UK battery maker, Chloride Group plc, is quoted as saying that there are five or six battery firms in the US; in Japan, four. In Europe, there are 40. The diseconomies of small scale are preserved in fragmented markets with idiosyncratic local tax régimes created from decades of protectionism. Manufacturing companies will urgently need to create a European production plan, rather than a series of national plans. Retailers may find themselves attracted to the model of Benetton, a company whose expertise lies in product design, merchandising, computer systems for management control, and franchising — rather than in the classical model of bricks-and-mortar asset management.

On the Commission's side, some of the most important actions in the SUM programme will be in the field of standardisation, with the eventual aim of having any product that is licensed in any one country available in all the others. Legislators will have a very difficult task in this area. On every harmonisation issue, they will be confronted with a choice between the lowest common denominator and the highest common factor of national policies within the Twelve. Let us look at the effects of standardisation measures on three different business sectors — financial services, telecommunications, and transportation — and on the government sector.

The financial services industry is a critical area for reform. The Second Banking Coordination Directive sets out the Commission's objectives for this area. Any bank licensed to operate in a member country will be free to do so in any other country, without the necessity to obtain a local licence. The supervision of the bank's branch operations will rest in the hands of its country of origin — thus, a British bank operating in Paris or Bonn will be supervised in London. Community-wide schemes to guarantee capital adequacy will also be established. This proposal, and others in the directive, will be fraught with problems. An international branch might break all the rules and regulations of its host country. Any query or protest will be referred to its home country. What the Commission is after is obvious. It wants international branches to set the pace of liberalisation, so that any restrictive régime will serve to shackle only its own banks, while competitors remain free. We are already witnessing important consolidation in the financial services industry, such as the acquisition by Crédit Lyonnais of the UK brokers, Alexanders Laing & Cruickshank. More of this will happen in the future.

The Commission sees the gradual extension of standards as a big opportunity to create a single, liberalised market for telecommunications. If a Frankfurt-based company wants to buy a communication service from a Rome-based supplier, so be it. The PTTs of Europe will therefore be faced with new problems and new opportunities. They will gradually become more competitive and more international in scope. In some of the Twelve countries, protection of the PTT is a major policy aim. In some, high local pricing is a way of supporting the export efforts of the indigenous telecommunication suppliers. The Emerson study provides many interesting price comparisons. It takes the average price paid for certain goods and services in the Twelve as 100 per cent, and lists the relative price by country. One example concerns three competing companies based in France,

Figure 3 Illustration of the static and dynamic impacts of completing the internal market on the growth path of the European economy



Static impact. Comparative static effects represent a once-and-for-all increase in the level of economic welfare. These effects are, of course, achieved only over a period of years. It is possible that a rapid completion of the internal market could see a large part of the gains achieved by around 1992, although actual knowledge about such time-paths is quite limited.

Dynamic impact. The likely positive effects of increased competition and market size on innovation and technical progress are 'dynamic' in the sense that they raise the permanent, potential growth rate of the economy. Such effects are likely to build up only very gradually, but, once established, yield continuing and cumulative economic gains.

Total impact. These static and dynamic effects would both be developing at the same time in the years ahead. The static effects would be more important to begin with, but as these become exhausted, the dynamic effects would take over and sustain a continuing, buoyant growth performance.

(Source: *European Economy, The Economics of 1992,* Commission of the European Communities, March 1988)

Germany, and the United Kingdom. The relative prices they pay for data processing goods and services are:

— Britain	107.95.
— France	107.35.
— Germany	86.99.

Both the British and the French companies are at a severe disadvantage in relation to their German competitor. The actual cost difference may be significant where budgets amount to several tens of millions of ECUs. Most significantly, the cost/benefit equations done by the firms will be artificially biased, which will directly influence which computer applications are developed.

The relative prices paid by the same companies for telecommunications are:

— Britain	91.36.
— France	110.22.
— Germany	93.93.

In this case, the French company faces higher charges, perhaps because France's infrastructure investments are more recent.

PTTs will face competition in some of their traditionally monopolistic areas, such as subscriber apparatus and value-added services. They will, however, also find new opportunities for diversification, becoming (if they wish and can) operators of important value-added services themselves. In countries where the post and telecommunications are still managed by a single entity, separation is likely. Whether many countries will choose to follow the British line of privatising the PTT remains to be seen.

Transportation is another major area for attention. It accounts for 7 per cent of total GDP in the territory of the Twelve. Deregulation is planned both for passenger and freight transport, whether by road, rail, air, or inland waterway. The removal of border controls will have a major impact on road and rail transport. Standardisation will reduce the costs of operating many transport businesses — although the final hurdle of making the British drive on the 'correct' side of the road is unlikely ever to be tackled. Airline pricing policies, both on internal and international routes, will come under the closest scrutiny.

Nor will government itself be immune to the changes. Public procurement in the Twelve nations amounts to between 10 and 15 per cent of the total GDP. The aim of the Commission is to encourage competitive tendering in an open market. Current directives on public procurement are more honoured in the breach than the observance. Fewer than a quarter of all invitations to tender covered by existing directives on government purchasing are published in the correct manner. The Commission will tighten the enforcement of existing directives and extend them to cover energy, transport, water, telecommunications, and other services. In addition, of course, the proposed harmonisation of value-added taxes and corporate taxes will create a series of important changes, for all businesses as well as government.

THE IMPLICATIONS FOR SYSTEMS

What can the systems department do to prepare for the SUM? Leaving consideration of the systems implications until everything else is settled is a recipe for disaster. It is like checking, before you jump out of the aeroplane, that you have the compass, the emergency rations, the map, the radio, and the medical kit . . . but no parachute. The experience of the two bank chairmen who agreed to the reciprocal use of cards in their cash-dispensing machines is a case in point. It was not until the basis of the arrangement had been debated and decided at a very high level within the banks that the systems directors were informed. From a systems point of view, it proved impossible to implement the scheme and it had to be abandoned. Systems planning must be part of a business's overall planning for dealing with the SUM. The urgency of the situation can be highlighted by referring to the checklist of complex and interrelated questions listed in Figure 4. In every organisation, the systems manager and the relevant business managers should, between them, be able to answer them all. The task of managing the changes that these questions imply is a daunting one, and one that will stretch the management of any enterprise, however talented and experienced it may be.

Figure 5 illustrates one way of looking at the logical relationships between some of the changes that may take place. Appreciating what is likely to happen is not simply a matter of tracing the lines from the left of the figure to the right. There is feedback between the capability of existing and new systems, and the business changes that could occur. For instance, it may be very desirable, from a business point of view, for one company to merge with another to exploit new market opportunities, but it may be totally impracticable to merge the operations of the two concerns if their systems are incompatible and if the cost of rationalising them would be unacceptable. This question of integrating the systems of two companies is also, of course, a

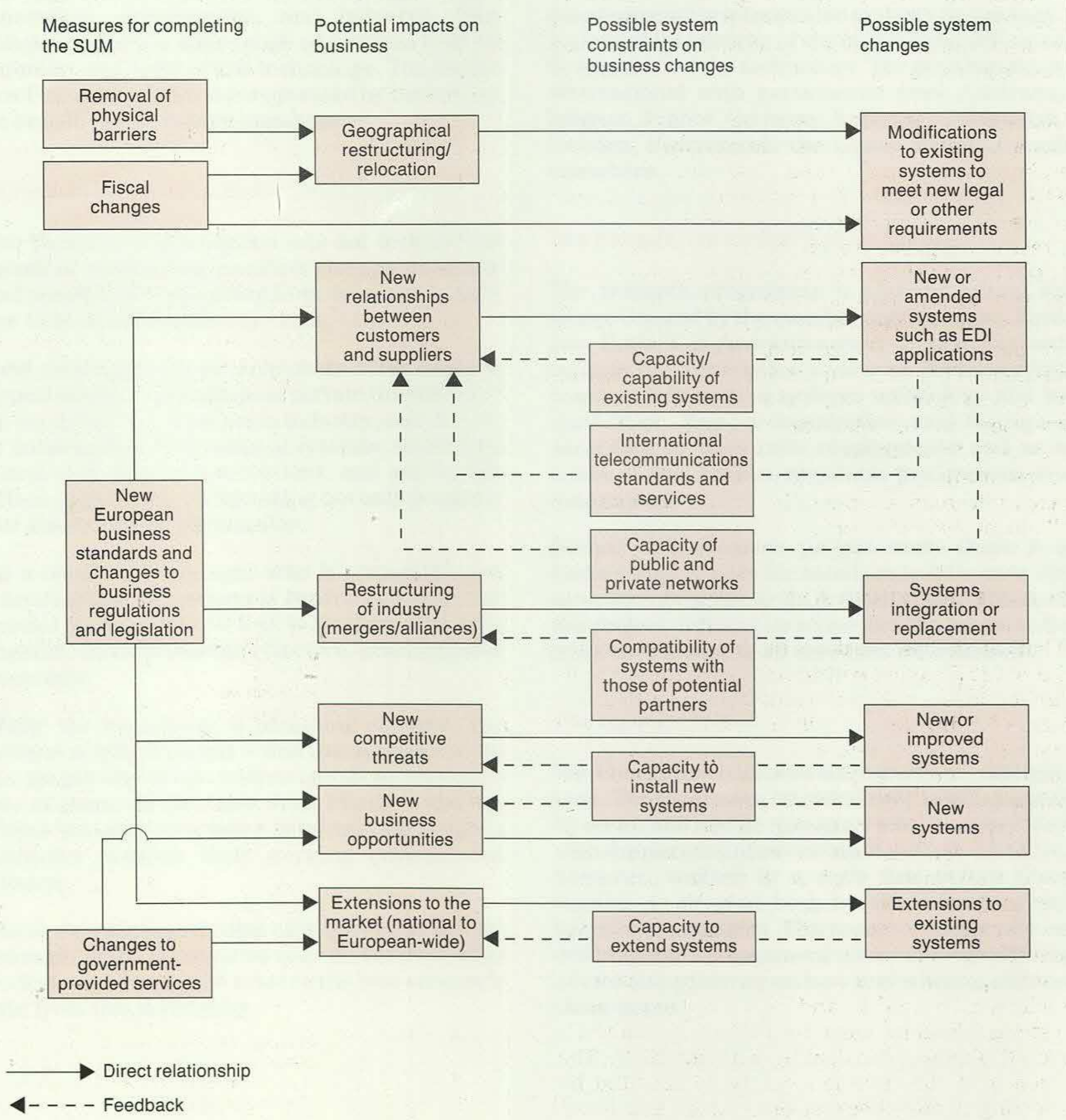
Figure 4 1992 systems agenda

Business planning	Does the SUM change the basic nature of our business? If so, how?
	Does the SUM make a national market presence, by itself, untenable? Is an international customer base a prerequisite for survival?
	Will the SUM bring new competitors to our market? If so, who?
	What will be the impact of rationalisation? How many contenders will there be in our market in five or ten years? What is our merger and acquisition strategy?
	Will our business be enhanced or diminished by the spin-off of internal government services to contractors or agencies?
	How can we exploit the emergence of European standards? Do they open new markets? Do they reduce costs substantially?
Systems planning	What demands for new computer applications and communications networks will these changes generate? Can they be met? Within what timescale? Will systems prove to be our biggest obstacle? If so, how can we surmount it?
	What capacity, capabilities and knowledge will we need to have in order to meet demand for new applications? For example, what expertise do we need to have in international networking, distributed systems and databases, electronic data interchange, electronic funds transfer, videotex, or smart cards?

major preoccupation of predators. After a firm is acquired, its products, its managers, and its image can all be changed quickly, but its systems may haunt the new owners for years. Perhaps companies intent on retaining their independence should so design and implement their systems that a predator could not easily integrate them with his own; perhaps information systems are the ultimate 'poison pill'. Systems implications, like these, must be foreseen and taken into account at an early stage in business planning.

Systems directors have two roles to play in the run-up to the SUM. On the one hand, they must play a leading role, demanding the attention that they deserve. Once the demands on their departments have been clarified, they will be urgent and non-negotiable, and systems directors must therefore insist that they be consulted before immutable decisions are taken. They must, however, do this without alienating corporate management; if they shout too loudly, they may be bypassed by design, rather than by default. Because systems directors

Figure 5 The potential impacts of the SUM on businesses and their systems



cannot, in isolation, assess the implications of the SUM on the whole business, they also need to play a support role, responding to corporate management and being an authoritative source of guidance on what is to happen and what the statutory obligations are.

Working together, corporate and systems managers can be a formidable team in taking a company into the SUM. The tasks confronting them are daunting but the prizes are as great as the risks. The new Europe can be the third great trading force in the world, alongside the United States and Japan. It is up to individuals and companies to make the SUM work. In the next decade, we shall determine the kind of Europe our successors inherit for many generations to come. It would be both tragic and absurd if we failed because our systems were too complex and cumbersome to allow us to succeed. Then, indeed, we would resemble dinosaurs, and deserve no better fate.

BUTLER COX FOUNDATION

Butler Cox

Butler Cox is an independent management consultancy and research organisation, specialising in the application of information technology within commerce, government, and industry. The company offers a wide range of services both to suppliers and users of this technology. The Butler Cox Foundation is a service operated by Butler Cox on behalf of subscribing members.

Objectives of the Foundation

The Butler Cox Foundation sets out to study on behalf of subscribing members the opportunities and possible threats arising from developments in the field of information systems.

New developments in technology offer exciting opportunities — and also pose certain threats — for all organisations, whether in industry, commerce, or government. New types of systems, combining computers, telecommunications, and automated office equipment, are becoming not only possible, but also economically feasible.

As a result, any manager who is responsible for introducing new systems is confronted with the crucial question of how best to fit these elements together in ways that are effective, practical, and economic.

While the equipment is becoming cheaper, the reverse is true of people — and this applies both to the people who design systems and those who make use of them. At the same time, human considerations become even more important as people's attitudes towards their working environment change.

These developments raise new questions for the manager of the information systems function as he seeks to determine and achieve the best economic mix from this technology.

Membership of the Foundation

The majority of organisations participating in the Butler Cox Foundation are large organisations seeking to exploit to the full the most recent developments in information systems technology. An important minority of the membership is formed by suppliers of the technology. The membership is international with participants from Australia, Belgium, France, Germany, Italy, the Netherlands, Sweden, Switzerland, the United Kingdom, and elsewhere.

The Foundation research programme

The research programme is planned jointly by Butler Cox and by the member organisations. Each year Butler Cox draws up a short-list of topics that reflects the Foundation's view of the important issues in information systems technology and its application. Member organisations rank the topics according to their own requirements and as a result of this process members' preferences are determined.

Before each research project starts there is a further opportunity for members to influence the direction of the research. A detailed description of the project defining its scope and the issues to be addressed is sent to all members for comment.

The report series

The Foundation publishes six research reports each year. The reports are intended to be read primarily by senior and middle managers who are concerned with the planning of information systems. They are, however, written in a style that makes them suitable to be read both by line managers and functional managers. The reports concentrate on defining key management issues and on offering advice and guidance on how and when to address those issues.

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