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Management challenges for survival in the 1990s

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The continuing growth of business activities in companies has been in parallel with the increased use of IT to support the basic business processes and assist in generating further commercial advantages for the organization. Business growth has been generated through a natural expansion of the core activities, acquisition of other companies which has often resulted in working practices of geographically separated organizations, divisions and subsidiaries maintained to preserve their successful business culture. The role of the central IT department as the most cost-effective organization to support the business led use of IT is now in question in many companies.

In this paper we present the argument that the key to corporate success is associated with the effective management of IT. In many cases, this will require a new style of management with vision and commitment from the CEO. But for those organizations who do not make this change, their corporate prosperity may be at stake.

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Threats and opportunities

Economic issues

> *"I do not understand technology and I certainly have no idea what they are doing. However, I do know that they are an expensive overhead. How can I get rid of them and improve the performance of the company?"*
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> *"Why do I need a central unit of 500 computer people? Would it not be possible to reduce the number of IT staff and have the residual members integrated into the business so that their tasks were related to the unit activities and costs? But remember, I know nothing of these computer gadgets. I am only interested in operating a slimline and efficient business organization. Tell me, what should I do?"*
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> *"IT has been the subject of a lot of hype, so our revenue producers used to demand the latest sexy gizmos that they'd heard about and wanted us to have, apparently just for the sake of it. But we just can't afford it. Can I be sure the business won't suffer?"*

These are typical comments that I receive from regular discussions with Chairmen, Chief Executives and Directors of major companies and organizations in the public and private sector. In every case, the executive is wrestling with a major business issue, or a cost cutting exercise which involves some aspect of the management of IT, a subject that he does not understand.

For too long IT has been portrayed as pure technology, with new computer systems proposed as the quick solution to the current problem. IT has been generally veiled in mystique, almost like a form of Freemasonary, where only those who know and understand the passwords can participate. This is a major error of judgement by the IT community.

In contrast, without being financial wizards, we have all learnt to challenge the accountants' report on the financial health of a company since they have at last realized the need to explain their results in everyday language. Indeed, this is essential for the continued health of our individual companies. But we have not yet reached this level of open discussion on technological and particularly, IT issues at board level.

At many company board meetings large expeditures on technology are still accepted with a 'nod and a wink' simply because no one is prepared to challenge the board member presenting the IT case or publicly admit that he or she does not understand. We cannot afford for this situation to continue.

I firmly believe that the successful management of technology is mandatory. Every business in every industry throughout the world is facing increasing and unrelenting competition. During the past decade, this growing competition has brought with it the associated threat of survival for so many enterprises. The causes of this significant increase in competition are many and involve the globalization of markets, deregulation and the ability to maintain business effectiveness through the exploitation of technology, in particular that created by IT.

In the past few years there have been some breathtaking changes in the state of corporate and national economies reflected in the swift, global responses of stock exchanges to such events as 'Black Monday' in November 1987, the Gulf War in 1991, 'Red Monday' in August 1991, when

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the Soviet crisis caused £250 billion to be wiped off share values in London alone. Situations of this type will continue to occur with global repercussions. But in 1992, the UK and indeed the world as a whole, is still in a major recession. In 1991 the UK GDP growth was −2.25 % while the best estimate for 1992 was originally a growth of 1 %. But by May 1992, it had been revised downward to 0 %, and this has still to be achieved! Add to this the further constraints, and largely unknown long term effects of the ERM on UK exporters. No wonder more than 28 000 UK businesses failed in 1990, and a further 47 000 in 1991, which is causing the banks to plan in 1992 for bad-dept provisions of £6.5 billion; a mere £125 million a week. The biggest growth appears to be in unemployment of middle management as companies take drastic measures to contain their costs. But are the management teams really in control of their businesses? Do they really know whether their massive cuts will really improve the focus and performance of the company or are they short term panic measures?

The public sector has not escaped either; there are major external pressures on their business too as they move to a more accountable and commercial method of operating. The implementation of the *Citizens Charter* is focusing the public sector organizations to develop a quality service to their customers, who in many cases have not really been thought to exist in any obvious manner. Many such organizations have never really developed a business plan before but just sought approval of a budget. This is simply a licence to spend money without any real examination of the quality of service they are providing and whether this expenditure is actually contributing to the 'corporate objectives'.

Some Government organizations have moved to an Executive Agency status where they operate in a commercial manner. Local Government is trying to provide its services under the constant legislative changes which are grossly affecting its cash flow, and its ability to maintain service levels for its community operations. But can these public sector organizations cope with this speed of culture change which has been forced upon them?

All of these factors point to some basic economic realities for the 1990s. This will be a period of margin erosion in every industrial sector, so that companies must learn to manage their organizations as if they are in a permanent recession. Whilst deregulation has increased opportunities it has also cut prices too. Globalization provides a market opportunity but it also adds further premiums of services, quality and costs which cannot simply be passed on to the customer. We are certainly seeing the generation of new business opportunities through the addition of technology and productivity, which can so easily produce a world over capacity. As for example is the case with the airlines and banking sectors. For all organizations, it is the 'bottom line' that counts, since it is the shareholders who must be satisfied. Have organizations yet realized that profit is not simply the 'bottom line' by-product of revenues which requires a more imaginative approach to their management, control and development of the business?

Management issues

Changes are affecting every business, and one fact is clear: management teams have been forced to sharpen their decision-making skills, take difficult and sometimes painful actions and broaden their approaches to competition effectively. This also means that to be successful and profitable in business, the organization must possess the most cost effective, user driven IT organization with a structure which is appropriate for the company culture.

The costs of IT can be large and certainly significant at a corporate level to be a factor in the CEO's mind as they try to fit the corporate objectives within the constraints imposed by finance, politics and the stockmarket. A major bank may spend as much as £1 billion over a five-year period. A company such as British Ariways, which depends on IT to support every aspect of its business, has seen its IT spend rise from 1.3 % of turnover five years ago, to 2.7 % (£130 million) now and project it to rise to 5 % of turnover in five years time. Therefore, for a company to be successful in this challenging and rapidly changing business world, it is required to operate with the appropriate IT structure for its culture, integrating together all the management, sales, support, customer services, manufacturing, accounting and personnel operations. The IT function must provide a good investment for the company.

A survey of IT Management in the 1990s carried out by IT Partners Ltd (1991) has provided further evidence of the changing attitudes, company culture and organizational structure of IT which have taken place in the past five years. While five years ago 47 % of the respondents thought IT was an expense, this has reduced now to 7 % and the prospect of falling further to 2 % in five years time. This shift in perception underpins the growing corporate need that an IT function must operate in an cost effective manner as a resource to the business rather than an overhead.

A Board will be faced with a number of potential solutions for creating a resource led, rather than cost, overhead IT function. For example:

(1) decentralize the IT department to the business units;
(2) outsource the IT department so that it is managed by a third party;
(3) move to a more open systems environment;
(4) develop software through external contracts rather than internal staff;

(5) make greater use of teleworking to reduce the need for central office space;
(6) introduction and exploitation of an information network to support all aspects of communications for the business, for example, e-mail, EDI, video conferencing, distance learning techniques, teleworking ...

While each approach has its merits, there are also problems which need to be fully understood. Whatever the 'best' solution may be for the organization of IT in a company, there must be managerial control, no wastage of staff or unnecessary duplication of effort. Certainly devolution achieves service goals. It puts IT more in touch with the businesses it serves, doing away with the familiar dreaded scenario 'I'm from Head Office. I'm here to help you'. There are many issues and cultural matters to be considered in planning the most suitable organizational structure for a particular company (see Hunt, 1991), control may be improved but the issue of standards and quality should not be overlooked. Amid all this turmoil is the issue of the future of the IT professional, who suddenly, as we move into the 1990s, finds the break-up of the formal IT department and career requiring a broader range of skills than those provided. Interestingly, the recent survey by James Martin and Applied Learning International (1992) indicated that only 12 % of companies surveyed had redeployed IT staff in other departments and 69 % had no plans to do so despite their claim that the IT departments were being more closely aligned with the business objectives.

Business needs, trends and barriers to success

A computer system is not a piece of magic that will immediately guarantee success when introduced into the company's operation. There must be a systematic approach to the implementation and operation of the computer based facilities for each business application. Any aspect of the system; hardware, software, maintenance, security, staffing management..., if not carefully planned and supported, can produce unexpected project costs and bring failure to an otherwise well planned system.

But are businesses sufficiently mature in their management skills to exploit these IT systems in order to maintain their competitive edge? A survey of 60 top organizations carried out by PA Consulting Group (1985) found that:

(1) 66 % of their projects were over time;
(2) 56 % had exceeded their budgets;
(3) 45 % indicated that the development tasks had unexpected difficulties

A survey of 50 Board Directors and 95 IT managers from the Times Top 500 companies carried out in 1990 reveals that matters have actually deteriorated as:

(1) 93 % of the Directors admitted their companies had projects which overran budget and time;
(2) while only 16 % of them believed IT represented value for money.

This is an appalling situation, especially in the current harsh economic climate. This situation cannot be allowed to continue. Cost containment is now seen as one of the top four IT issues in an organization.

The recent Management in the 1990s programme led by the sloan School of Management, Massachusetts Institute of Technology, (ICL, 1990; Scott Morton, 1991) which involved a consortium of international companies including ICL, explored the changes in the organizational structure, people, culture, strategy and management processes required by an organization to maintain its corporate growth amid turbulent economic forces and continued rapid IT growth. This programme, the results of which form one of the major services of IT Partners, stresses the changing role of IT and its alignment with the business strategy of the organization.

Any new investment in IT must be concerned with the benefits for the business rather than simply associated with the introduction of further items of technology. With the demand for user-led deployment of IT in an organization, it is important that the executive responsibility must lie with the business managers rather than with the IT/IS managers.

If we already have the technology, then why are companies not using their IT systems in an effective manner? This relatively simple question masks a multitude of problems which are the core issues facing UK plc and indeed companies throughout the world. It can however, be reduced to a number of basic issues which are the 'Barriers to corporate success'.

(1) Lack of business strategy for use of IT. For many organizations, the Board see IT issues as isolated software matters, responding to user demands and not integrated with the corporate business strategy and the supporting investment programme.
(2) Lack of commitment, vision and management from the top.
(3) Reluctance to change the culture.
(4) Inability to attract and retain appropriate skills.
(5) Lack of experience in developing and managing projects.

Clearly then the success or failure of an organization to make the most cost-effective use of IT depends on leadership and that starts at the top of the company.

The problem at the top – the cultural divide

"Why should I go around playing with spreadsheets? It would be a waste of time"
Roger Boyes, Finance Director, Leeds Permanent.

"IT can be seen just as a technological issue, but it isn't. It's a business issue."
Michael Winch, IT Director, Safeway.

"The problem with IT as a responsibility is the time and interest I'm able to invest in it. There is no way the BBC will judge my performance on the success of IT. But if we run out of cash I will be blamed. I'm an amateur really when it comes to IT."
Ian Phillips, Director of Finance, BBC.

"An awful lot of businesses don't give IT a high enough profile and a lot of companies still see the IT Director as an advisor or specialist. Here (at Sainsbury's), IT is represented on the board equal to everything else. The board understands its significance, not how it works."
Angus Clark, Distribution Director, Sainsbury plc.

These comments are typical of many I have heard and show the wide spread of views held by Board Directors of their use of IT and their role in its management. But for some, it is still an application of management by abdication.

In many cases the use of IT by the Finance Directors is a concern too. In a recent survey of their top 500 clients, Price Waterhouse (1992) found that the use of IT by Finance Directors was varied and limited, namely:

(1) EIS – 15%
(2) PC – 85%
(3) Laptop – 24%
(4) None – 7%

One FD actually responded by saying '... I do not make use of IT, but my secretary does EIS...'

There is no doubt there is a culture gap between the IT manager and Finance Director, who for many organizations is responsible, often reluctantly, for the management of the corporate IT function.

As we have seen only 16 % of Finance Directors from the Times top 500 companies recently surveyed thought that their IT departments give value for money. Just how wide the divide is becomes clear as the survey reveals that over 40 % of the directors polled thought their IT manager did not understand a business strategy, while 99 % of the IT managers claimed they did. Similarly, only 35 % of the IT managers thought the Directors understood IT while 97 % of the Directors thought they did. The only point of agreement between the two sides is that they can both do better!

The solution may not simply be to recognise the IT managers key role and place him on the board. Only 14 % of the companies surveyed had a board level Director while a mere 17 % of the remaining organizations would consider the creation of such a position. As Peter Morgan, Director General of the Institute of Directors, stated 'It's a vital job. But that's not a board position'.

The solution to this issue depends on the culture of the organization and its management process. The trend, which I strongly support, is away from Board Directors simply filling line management positions to one of a cabinet style of management in which the Directors are responsible for broader corporate roles. In this way all members of the board would have an understanding of the value of IT for the business since they would be exploiting this resource to achieve their financial targets. Specialized IT knowledge could then be called upon as required.

But the problem remains that Chief Executives are generally unskilled in computer applications. A recent survey in the US showed that only 21 % of the Chief Executive Officers of the top Fortune 500 companies used a computer in their daily work. While 59 % indicated that they improved their personal productivity and 35 % found they provided better access to information, 64 % still found computers difficult to use. Some 29 % complained that the technology continues to change too rapidly.

In the UK the picture is more worrying. In 1988, a survey showed that 64 % of top managers in financial institutions had received no training in IT and only 10 % of directors recognized the value of knowing anything about computers.

The costs of IT are certainly large enough to be significant at the corporate level and be a factor in the CEO's mind as he or she tries to fit the corporate objectives within the constraints imposed by finance, politics and the stock market. For many, the business benefits are not immediately apparent, so CEO's and Board Directors are frequently reluctant to simply accept the recommendations of their computer-literate managers. We recognize that the CEO has many demands on his or her time. Therefore, to suggest that he or she should now be responsible for the management of IT may at first seem inappropriate. However, an immediate consequence of the integration of IT in the company will be the opportunity to break down the traditional pyramid structure. Indeed we are now seeing dramatic reductions in middle management in organizations in all sectors throughout the world. This will enable the construction of more suitable management teams, where:

(1) leaders conceive change and focus the organization;
(2) managers have business responsibilities, understand the value of technology for their operation and make it happen;
(3) specialists, design and facilitate change, both with technology and people.

Getting the benefits from IT

The approach

The rising magnitude of the expenditures on IT as it becomes a central part of every business, requires a careful assessment of the value that is obtained by the business from IT. It is largely for this reason that Finance Directors have retained some of the control of the IT function in so many companies, but the accounting mentality does not fit too easily with the exploitation of technology for competitive advantage. More than 76 % of the top companies recently sampled by KPMG stated that they used financial criteria for measuring the success of IT, while 33 % used the parameter of earnings per share. As Paul Strassman (1990) has shown, this latter relationship is extremely unreliable. Oncemore, for a company to be able to gain any insight into its current performance, which is enabled by the use of IT, requires the use of EIS. But apparently only 15 % of Finance Directors interviewed by Price Waterhouse (1992) actually use this facility. Many companies must still be managed by grossly inefficient techniques so that preventing a major problem or even a potentially terminal one, is therefore very difficult, if not impossible, for those Directors without direct use of EIS monitoring the state of their businesses.

When seeking the benefits from IT, there are still some major misconceptions. There remains the persistent and in my opinion, incorrect belief that:

(1) IT is a major driver for change:
(2) IT will change the culture of the company;
(3) IT benefits will be realised if the functionality is correct.

The more correct approach, I believe, is that:

(1) strategy drives the business;
(2) people change the culture;
(3) IT benefits must be managed if they are to be realized.

The truly successful exploiters of IT have seized upon the opportunity to re-examine in their organization, where, when and by whom work is done. The focus is then on the information flow in the organization and the support provided by technology. This is the thesis of the Management in the 1990s programme (Scott Morton, 1991), with its juxtaposition of business, technology, organizational structure and people skills and their indirect connection through management process.

One way of developing a more cost effective approach to the operation of a business, is through the use of Process Management. In some articles and seminars it is described as Processes Innovation, or Process Re-design, but I personally feel that the suggestion of control should be in the title. Managers are anxious to focus on building flexible organizations capable of responding quickly to customer needs. Process Management is about recognizing the organization's core competence and seeking alliances and collaborations to remove the low value activities and re-focusing resources onto those activities which are the strength of the organization. To focus on cost alone is a mistake. The Value Process Modelling (VPM) approach, developed from the MIT90s activities (Scott Morton, 1991), has been shown to be a valuable management technique, which also examines the processes in a quantifiable manner.

The VPM must represent the processes that occur in an organization, through the operations group, administration and their supporting information. With the VPM it is then possible to examine how the organization works rather than how it is structured, which in so many cases is steeped in history. The VPM technique enables a quantitative examination of the problems of and the opportunities for coordination, integration and optimization within an organization, by investigating the linkage between process and the potential coordination across organizational boundaries. There is no doubt that this is a Top Management Tool for describing the business process on which the wealth and success of an organization depends. Organizations which have used the VRM have obtained such benefits as (see MacDonald, 1992);

(1) changes in organization structures and functional boundaries creating improvement in Time to Market activities;
(2) redesigned customer/client value chain;
(3) improved new product developments through greater understanding of competitors processes;
(4) improved procurement procedures.

while Morse and Mann (1992), provide some specific applications of the VRM approach used by IT Partners in the health sector.

There are some further significant examples of Process Innovation, in such organizations as British Airways, National and Provincial Building Society and Customer Service, ICL. Major developments are maturing in BP, whose new culture is underpinned by an information rather than IT strategy and a break down of the traditional hierarchical structure; and in new privatized companies such as National Power where IT was contributing to a slimmer and more entrepreneurial organization. In every case where improvements have been made, the increased productivity, reduced time to market new products and the subsequent financial benefits have been derived through a critical redesign of the business processes, thereby reducing the process chain. Slowly, but surely, major changes are taking place in all corporations, but there is still a great deal to be done.

Managing the benefits

For any company to successfully change its working procedures and culture as a consequence of using a VPM or similar technique, requires the introduction of a benefits management programme to be built into the working ethos of the company. This will firstly require clear accountabilities and ownership. Furthermore, the working framework will require the development, at the onset, of the schedule of benefits, method of tracking and monitoring and a reward system. As more and more organizations in both the public and private sectors move towards a 'payment by results' approach for salaries of all staff, this will stimulate some progress to ensuring benefits are actually achieved. Academic solutions however well articulated, will never work in the real world. Financial reward for the individual is still King.

A benefits management programme is a further major contributor to successfully achieving a culture of the organization. I believe this is an essential step if we are to arrest the continuing run away express of IT overspend which has darkened the corporate horizon for too long.

The way forward

As we move towards the new millennium there is no doubt of the constantly advancing technological capabilities in computing and communications are shrinking the information gap which exists between the information required by an organization in an ideal situation and the information easily and practically available. Costs have dramatically reduced while performance has continued to escalate. In 1980 a 4.5 mps machine would have cost about US $4.5 million and by 1990 the equivalent machine cost about US $200K. The predictions are that in the near future a desk top 'super computer' will cost a mere US $10K, equivalent to todays large machines costing millions of dollars.

This merely illustrates that technology will always be available. In future companies will have a more distributed structure with core business and satellite organizations providing the necessary support and value added services. Just consider the range of services of Marks and Spencer, which is now a major contributor in the financial services industry in addition to major activities in logistics, time to market business activities. The Automobile Association was originally an organization providing support and rescue, in their hour of need, for the growing number of private motorists. Now they are one of the largest insurance companies providing far more than motor related services; a publisher and cellular communications services as a basis of an expanding range of businesses. All these activities exploit the use of IT. In effect, every organization is seeking to climb the information ladder where:

step 1 = data = raw facts
step 2 = information = data + process
step 3 = knowledge = information + interpretation
step 4 = wisdom = knowledge + experience.

But as we observe now, to reach step 4 it is the management, organizational and staff issues and not the IT alone, that hold the keys to corporate success (Hunt, 1990). We must remember that IS will remain for some time the Achilles' heel in an organization, whose 'iceberg' costs create terror in the management accounts. We have already seen examples of the importance of ensuring there is accountability for the management of the benefits that may be obtained from the information investment. But in the end, it is the top management who have an increasingly important role to play in the creation and execution of the new visionary organization.

In spite of all that has been written on this topic and the wealth of consultancy advice that has been given to companies in every sector, we still hear such comments as;

> *"How on earth did IT become our biggest obstacle to change?"*

There is no simple solution. But there is some important advice which emerged from the Management in the 1990s programme suggesting that the four key enabling requirements that promote success are (MIT90s; see ICL, 1990; Scott Morton, 1991);

Vision – the provision of leadership with a shared vision of the way ahead.
Education – the willingness to invest in education and training throughout the organization to equip all members of the organization with the ability to accept change and utilize the new capabilities that are becoming available.
Flexibility – organization structures and processes which stimulate the pursuit of new opportunities and better methods of operation, and a culture of confidence in implementing these requires changes.
IT infrastructure – the existence of a readily available IT infrastructure covering both systems and knowledge.

Top management must aspire to what can be done through IT, using their understanding of the particular business issues in their company and their imagination when conceiving business strategies.

For companies to succeed in the 1990s and beyond, they must face the challenge of the 1990s – the effective marriage between business and IT. But above all, top management must be in charge, and that means being in charge of IT too.

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