Aspects of the future

The e-business revolution (2000)

E-business is hot – it's fast, furious and fashionable – often a deadly combination in enthusiastic hands. A global market at the click of a mouse with few, if any, legislative restrictions – it is happening quickly and the commercial opportunities and risks are awesome.

Early adopters leading the charge are in the retail Business to Consumer (B2C) area with new sourcing and supply channels and rapid response driving greater customer value. The growth of online shopping (some would say browsing) will continue to be exponential with 'e-tailers' dominating the e-business arena. Volume, growth and 'traffic capture' represent the new business paradigm for these market makers, but they still have a long way to go to build profitability, with a potentially disastrous impact on market capitalisation. A series of high-profile business failures has raised doubts about the long-term sustainability of some businesses, and radical change to this business model will be necessary to avoid further difficulties.

Government change

' If you're not exploiting the opportunities of e-commerce, you could go bankrupt'. (PM Tony Blair, Cambridge, 14.9.99)

The Government has wholeheartedly endorsed the concept of e-business and has warned that organisations that fail to embrace the 'e' culture are unlikely to prosper in an increasingly competitive market place. Its vision is to make the UK the best place in the world for e-commerce. To this end, the Government has created the post of e-Envoy and set up its own website: http://www.e-envoy.gov.uk.

Getting the right framework to achieve the vision will require a blend of legislative and regulatory change. The Electronic Communication Act became law in May 2000, giving digital signatures the same legal status as written ones – a significant step forward for e-commerce.

The EU is not far behind – e-Europe is Europe's blueprint for taking the lead in the new economy. The Lisbon Summit of Ministers instructed the Commission to present an e-Europe action plan, which was finalised on 24 May 2000. This is the 'road map' of where Europe should be by 2002 and has three major themes:

- a cheaper, faster more secure Internet
- stimulating the use of the Internet and e-business
- investing in appropriate people skills.

Wider change

The brave new world of e-business, however, is not simply a focus for speed of transactions. It raises new challenges, especially in terms of knowledge management and information flow. As intranet use continues to grow employees are becoming more demanding, expecting tools to be provided to facilitate their working environment and career development.

Empowering the employee via 'self service' solutions provides them with access to information and training whenever and however they need it, fuelling the growth in business to employee (B2E) communication.

Beyond the hype surrounding e-business, significant commercial benefits are possible for those organisations able to exploit the potential of the Internet to obtain enhanced value from the supply chain.

Business to Business (B2B) is expected to represent 75% of the dynamic growth in e-commerce during the period covered by **Vision 2010**. Even by 2004, e-commerce revenues are predicted to be worth $500billion in Europe and $2000billion worldwide [IDC'99, OECD].

Impact on the supply chain

Internet purchasing is already being implemented in many sectors as organisations appreciate the profit maximisation benefit of electronic business procedures.

The first focus will almost inevitably continue to be on indirect expenditure – Maintenance, Repair and Operational (MRO) supplies. It is estimated that $250billion per annum is spent on MRO supplies and 30% is spent outside corporate purchasing agreements [META Group]. Significant cost savings are possible and the quick wins produce the return on investment (RoI) requirement to justify e-projects.

Implementation of e-procurement will fundamentally change the nature of trading and the relationship between buyers and sellers.

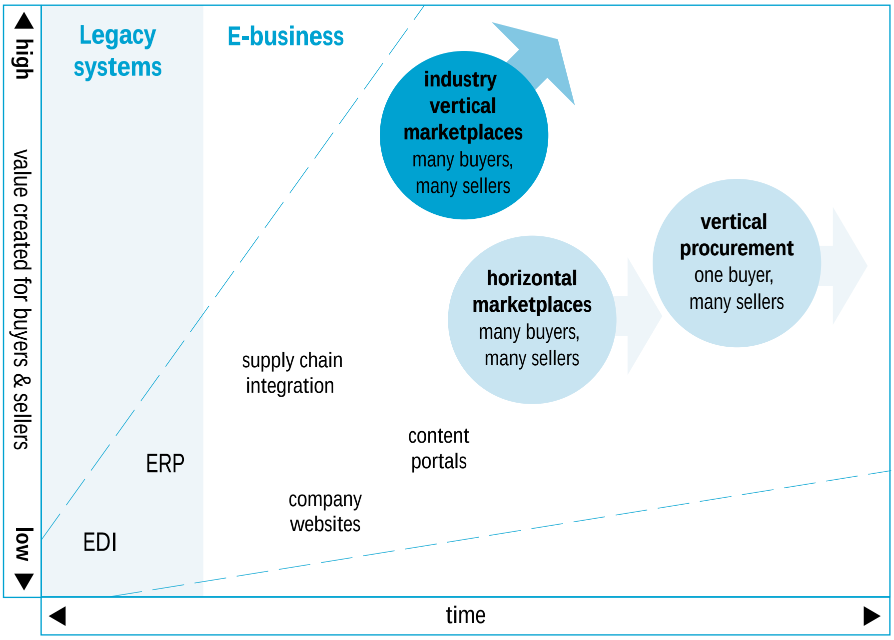
Buyers will demand a far wider range of value propositions from their suppliers, including electronic cataloguing, access to line pricing and inventory management.

New ways

Most e-procurement service providers and legacy Enterprise Resource Planning (ERP) vendors are broadening their approach and offering direct links to trading portals such as Ariba. Commerce One, Tradex etc. as well as a range of dynamic pricing tools, Requests for Information (RFI) and bid systems to facilitate on-line purchases. Additional support and related services will become available, covering catalogues and content management, online credit references and access to vertical marketplaces.

Accelerating the change are the new 'e-entrants' or new market makers (NMM), who are shifting the emphasis from physical to virtual trading entities. The primary value driver of NMM businesses is to drive out cost and inefficiencies in the supply chain, addressing client needs and maximising return (see Figure 10). The NMM trading model is evolving rapidly, leading to dynamic online trading, auto replenishment and supplier 'clearing houses' with auction and exchange capability.

Figure 1: **Adding value by making new kinds of markets**



Driven by e-business, the traditional supply chains will change from a chain into a network covering the entire e-extended enterprise. The new trading nets will differ by industry and market sector for unique customer segments.

E-business and beyond

Most business drivers and enabling technologies are now in place for e-business to achieve its predicted growth. Real business, the traditional 'bricks and mortar' organisations, are moving into the e-world and well-proven business concepts of profitability, cashflow and customer service are being deployed to underpin e-concepts.

Vision 2010 considered with remarkable clarity many of the issues and impacts of emerging e-business. The pressure on organisations and purchasing departments to participate in the B2B revolution will intensify and additional topics for consideration will emerge.

Trust and validation

Traditional business is based on face-to-face negotiations with relationships built up over a period of time. E-business will increasingly involve previously unknown trading partners, who may be geographically remote and who operate under foreign legal and commercial jurisdictions. The technology to deliver effective validation now exists and digital certificates, i.e. digital identities based on public key encryption, can in principle provide:

- authentication (proof that someone is who we think they are)
- message integrity (genuine, untampered with)
- non-repudiation (validation of identity even if later denied)
- confidentiality.

Digital identities can only be trusted if the issuing organisation is trusted, so a global Public Key Infrastructure (PKI), providing a 'hierarchy of trust' is required. Banks are ideally placed to provide this service and a number of consortia are working to provide a trusted digital identity backed by the local bank, offering recourse if things go wrong. It is anticipated that effective PKIs will be available from the third quarter of 2000 [APACS 2000].

Security

' In God we trust, everybody else is suspect.' (Kevin Mitnick, Ex hacker)

The Internet is inherently insecure and high profile security breaches, including the theft of thousands of credit card details and denial of service attacks, have reinforced security concerns. The real problem for B2B is the exposure of sensitive business information to potential scrutiny. Measures can be taken to minimise the risk, by restricting access to the data and using encryption to prevent unauthorised reading. Strong encryption methods such as the RSA standard will increasingly be used to prevent access without a decrypting key.

Digital certificates (see above) will routinely be used for verification and authentication, and secure lines of communication can be established instead of using the open Internet. These will include controlled pathways established between remote locations with restricted access, supplemented by virtual private networks (VPNs) using encryption and packet wrapping techniques to boost security.

Organisations will increasingly need to carry out regular risk assessments to ensure they maintain the appropriate balance between security and risk. The threat can never be eliminated, but people and processes – not the technology – are the weakest security links and the question is not if, but when, the e-business will be targeted.

Impact on IT/datacentre

In the emerging world of e-business the ability to plug in and link new business partners, suppliers, customers, employees and business processes will become increasingly critical to global competitiveness.

IT departments and data centre managers will experience severe pressure to extend the data centre domain to include server farms and security processes. Mainframe-centric IT departments may have particular problems, as tried and tested techniques that have worked successfully in centralised operations are not always appropriate in a distributed server environment.

Within the time frame of Vision 2010 it is expected that:

- 70% of new application investment and 50% of new IT infrastructure investment will be e-business related, and storage requirements will increase by 100% per annum.
- Organisations will be reluctant to invest in projects that do not deliver within 6 to 12 months, as the risk of the solution failing to meet the changing market need becomes unacceptably high.
- Up to 30% of e-products are likely to be terminated due to anticipated cultural problems or lack of available key resource.
- Data centre operations on a 24/7 basis will become the norm [Gartner].

Public procurement

The advent of e-procurement and the wide range of e-commerce tools available have set a number of challenges to those organisations that, as members of government or public bodies, are subject to the regulation imposed by the EU Public Procurement Regulations.

The original regulations sought to ensure fair and equal treatment for all suppliers and potential suppliers when tendering for business to public bodies. This required all participants to adhere to strict procedures, each designed to ensure equal access to contracts for all potential suppliers, irrespective of nationality.

The emergence of e-procurement has had, and is likely to continue to have, major and profound effects on the speed of operation that business is required to offer. The legislative process has found it difficult to maintain momentum in modifications to the legislation. Consequently many of the activities such as auctions and other more innovative processes are so far not available to public bodies. As this monograph is written the EU legislators are considering how the process might be modified without any return to the restrictive practices that existed prior to the ratification of the Treaty of Rome. New and innovative processes will be approved. This is likely to have the effect of increasing their competitiveness, although without a completely robust approach and the adoption of modern technology it is unlikely that public bodies will enjoy the same level of freedom of choice open to those operating in the private sector.

Electronic billing

UK companies are failing to adopt online billing, a technology that could streamline invoicing and settlement, largely because of the success of direct debit and BACS, low Internet usage and security concerns.

A detailed list of payment mechanisms is available on: http:/gangaes.cs.ted.i.e/mepeirce/project/oninternet.html)

Electronic bill presentment and payment (EBPP) is expected to become a major element of e-business by 2005 [Ovum 2000] but even so, the UK is expected to lag behind the US, Germany and Japan.

E-marketplaces

E-marketplaces bring together multiple buyers and suppliers in trading communities. They will be key to the development of B2B e-commerce because they allow the real time exchange of information, goods and money.

Although there are many variations, two main types of e-marketplaces are evolving:

- Vertical marketplaces are typically formed between industries and their primary suppliers, e.g. automotive parts, oil and gas, healthcare and science;
- Horizontal marketplaces band together different organisations with specific common requirements e.g. finance, software etc.

Market places provide single interfaces for both buyers and sellers to carry out business transactions without having to configure specific trading relationships or support data protocol interchanges. The protocols supported include:

- XML
- Open buying on the Internet (OBI)
- EDI/EDIFACT
- NTML
- SMTP

- HTTP

The growth of e-marketplaces will inevitably attract the interest of regulators, as there are legitimate concerns as to how they are set up (especially verticals), who owns them, how they are run, and how they are funded.

SMEs will increasingly use e-marketplaces primarily to build purchasing leverage. Their support for 'many to many' trading relationships using open architectural standards forms a simple, cost-effective entry to e-business for even the smallest organisation.

Impact on purchasing

E-procurement will become a key element in future business strategy and will have a profound impact on the structure and positioning of purchasing within the organisation. It provides a coherent approach to corporate procurement and a most effective tool for deploying best practice, resulting in:

- shorter order processing and fulfilment cycles
- lower purchase and administrative costs for goods and services
- improved control over ad hoc purchases
- improved inventory management
- wider choice of suppliers, and improved discounts with existing suppliers
- immediate financial savings in the procurement of MRO goods
- informed strategic decision making about preferred suppliers
- new ways of trading, such as reverse auctions and aggregate buying.

E-procurement is divided into two main areas – 'buy-side' functions enabling existing processes to be more effective, and 'marketplace' functions enabling access to new suppliers and new methods of trading.

Most importantly, it releases buyers for more added value functions by enabling distributed direct ordering by user departments, from corporate contracts. The buyer is no longer the 'corporate policeman' but the relationship manager for those functions the organisation has chosen to obtain from outside.

As e-business matures, the future will be no less challenging than the past. Entering e-commerce is expensive and may lead to extensive business reorganisation, new collaborations with suppliers – and even with potential competitors. Future challenges will include emerging tax and legislative issues, catalogue and content management, web-hosting, outsourcing and the selection of ESPs, international standards, and the substantial risk of choosing the wrong option.

Major competitors are in talks to combine their e-trade directories E-Speak (HP) and UDDI (IBM, Microsoft ARIBA), and Microsoft has unveiled Microsoft.NET – its vision of realising the next generation Internet. To complete the picture, there is the possibility of integrating the Internet and Customer Relationship Management (e-CRM) that offers exciting (and frightening) possibilities for customer attraction and retention.

Despite the hype and the attraction of working in a highly innovative new medium, the reality remains that sustained success will be based on the traditional business values of integrity, reliability and exceptional customer service, not on the technology deployed.

Abbreviations

B2B Business-to-Business

B2C Business-to-Consumer

B2E Business-to-Employee

CSS Customer Service and Support

e-ESP E-business External Services Provider

ESP External Services Provider

HTTP HyperText Transfer Protocol

NMM New Market Makers

OECD Organisation for Economic Cooperation and Development

PKI Public Key Infrastructure

RFI Request For Information

RFP Request For Proposal

RSA Rivest-Shamir-Adlemen

SME Small and Medium sized Enterprises

SMTP Simple Mail Transport Protocol

UDDI Universal Description Discovery and Integration

VPNs Virtual Private Networks

XML eXtensible Markup Language

Acknowledgements

We would like to acknowledge the useful contributions made at the Partnership Sourcing Network Members Day.

The new global marketplace (2000)

During the formulation of **Vision 2010** the issue of globalisation was identified as a key consideration for supply chains going into the new millennium. Clearly, the concept of global trading is not a new one. Expanding trade across the world has been a significant driver for thousands of years.

In more recent times market globalisation has largely been the domain of the multinationals – either to exploit the benefits of local resources or to establish local market positions from geographically positioned production bases.

New dimensions

The improvements in travel and communications and now Internet technology have introduced new dimensions. The world market has effectively been reduced to a single trading zone.

At the same time it has been opened up to organisations of every size. For supply chain management this new freedom of exchange raises challenges.

- Global companies now have instant visibility of economic and political trends.
- Virtual organisations are emerging that can expand and contract to fill a market need.
- A single market that circumvents the traditional value chain now (theoretically) exists.
- Virtual organisations can respond to fiscal pressures more readily than those with traditional investment programmes
- Existing supply infrastructures are threatened by ready access to low cost competition.
- The historical value chain of SMEs' creativity, which has underpinned existing economic models, is at risk.
- The rapid deployment of E-commerce without legislative networks opens the way for 'Electronic Trading Havens': who are you really dealing with?
- The emerging voice of 'Fair Trade' and 'Economic Responsibility' creates new considerations for corporate strategy.

Virtual suppliers: concrete risks

Traditionally the major players supported their global programmes with significant investment. Therefore, whilst some may suggest local markets were being exploited; in fact these expansions into new regions depended upon long-term investment and stability to achieve Return on Investment (ROI).

The increasing trend is now to seek flexible supply chains that can be more responsive to economic and political change. Both drivers can now be more readily identified and reacted to.

The resultant unstable supply chain, while providing short term gain, can destabilise long term development and growth – both locally and globally.

Organisations no longer have to undertake major local investment. The leaders in exploiting Web technology have already demonstrated the value of virtual organisations, which can expand and contract to meet fluctuations in the market.

In a growing market that is redefining itself they promote growth potential, and their ability to change shape and direction is not constrained by geographic boundaries.

However, any supply chain programme seeking advantage by using virtual organisations is exposed to risks not previously considered.

Value chain management

The 'Global Village' is a hackneyed term. It is, however, perhaps more relevant today than ever before. The technology gurus pronounce daily on the unlimited marketplace that now exists. Certainly with over 45 million Web sites choice seems abundant.

The reality may be different – and expectations should be more pragmatic. Few businesses have the resources or risk culture fully to exploit this potential fully. A stable, reliable supply chain remains the foundation of a customer-focused business.

As the single global market evolves so must the value chain management culture within organisations. Recognising also that while physical boundaries may have been removed, cultural and political risks have not.

Faster cycles

Financial pressures are not new to the business world. Most organisations have at some time been hit by economic trends across the globe. Now more than ever these pressures can strike home with alarming speed. Such is the influence of these trends that leading military nations see economic war as a more potent threat than 'hot war'. The virtual organisation can move more readily to react to such trends and leave behind an aftermath of 'fiscal market surfing'.

As the global market develops and inhibitions subside there will be a progressive move towards flexible sourcing. This may be the future economic model but the implications are difficult to evaluate at present.

There goes the neighbourhood?

Traditionally, major production organisations have been the focus of regional and national development, drawing around them an infrastructure that is often economically more significant than the core organisation. As low-cost supply chains emerge on a global basis the original industrial springboard becomes weaker and possibly unsustainable.

The established supply chain built upon small specialist suppliers has seen a market challenge to its future. These SMEs have provided both a resource training ground and innovation for industrial development

The concept of open sourcing will seriously impact many current economic models. Future stability should always be a feature of supply chains. Major organisations may, in the future, look to utilisation of their global presence to 'pull through' these SMEs rather than simply disregarding them.

They will take their expertise into new markets to create globalisation with the second and third tier suppliers – thus providing new business opportunities and longer term benefits.

Regulation

There is no doubt that the new technology will open up rapid opportunities. The risk in the short/medium term is that stable regulatory structures will not keep pace. Already there are signs of host countries promoting less stringent controls. The nature and flexibility of Web technology means that a 'front office' can be instantly relocated.

The supply chain may itself then become vulnerable to 'electronic trading havens' where traditional rules are less onerous. Establishing who and where your contracting supplier is may become a serious business issue.

Opinion

Inherent in this new fast-moving globalisation is the ability to move the supply chain from region to region. Corporate strategy will need to reflect the increasing voice of global opinion. Recent events have seen the G8, IMF, and WTO[1] faced with protests over third world exploitation.

Communication is improving at a dramatic rate. As a result, rapid mobilisation of special interest groups can be achieved across the globe. Therefore, the speed of globalisation must be tempered with consideration for the 'opinion hot spots', which may flare at any time.

The traditional risks of global development are well understood. Advances in technology have created greater potential but there must be recognition that the technology may create new challenges, risks and strategic questions. We cannot slow the speed of change. We must be prepared to manage business and the supply chain in this new, virtual and borderless market,

1. Group of 8 industrialised countries, International Monetary Fund, World Trade Organisation

Ethical procurement (2000)

Business ethics are concerned with the way in which decisions are made and how much consideration is given to the consequences for employees, shareholders, suppliers, the local community and the wider environment. Extremely bad, or extremely good, behaviour is easy to identify and is punished or rewarded accordingly. However most of us and our organisations work closer to the middle of the spectrum where we can choose to seek a more responsible value set or allow existing values to be eroded without necessarily experiencing immediate commercial consequences. There are no right or wrong positions in this middle ground.

Individual and corporate ethics

This monograph seeks to lay out clearly some of the main issues and thus provide a decision and action framework for those associated with procurement strategy who want to review their ethical policy. It does not deal with individual ethics; this is already covered by procurement's professional body, CIPS, which provides a carefully considered ethical code. It does address the role of procurement in responding to ethical challenges in the context of an organisation's overall position on business-to-business ethics and its wider social responsibility.

Ethics and business sense

Organisations, almost regardless of size and marketplace, can no longer neglect their impact on the business and wider communities within which they operate. Brand value, the ability to increase market share and successful tendering for contracts (in both private and public sectors) are all affected by the extent to which an organisation can show that it has positive policies on issues like the protection of the environment, fair employment practices and community projects. Ethical policy is not just a matter of 'doing it right', it is good business sense.

Setting ethical direction`

Not so long ago this might have featured somewhere on the corporate agenda but would probably have been entirely a matter for the Public or Corporate Affairs Department working with their PR people. New organisational structures are less hierarchical and the Board and senior executives are expected to take a strategic approach to the development and delivery of company policy. Consequently an issue as pervasive as corporate ethics has to be embraced by all key business functions. The result is that Procurement can no longer leave it to others but has to get actively engaged in defining and delivering policy.

Measuring performance

This can create tension. In most organisations Procurement's performance continues to be measured primarily by cost savings achieved.

The Chairman may make forceful statements about the company's new social accounting but the odds are that at the coalface a different value set gets rewarded.

Bonus and appraisal systems are the first things that have to be rethought if behaviours are really to be changed.

Even then how far is it actually ethical to impose your own value set on your supply chain? Insisting on minimum standards for safety in a supplier's manufacturing processes may seem reasonable, but if you insisted on a minimum percentage of their recruits being from the long-term unemployed or disabled, is that ethics or interference? Even on seemingly safe ground, such as child labour, a failure to understand the culture and economic realities of a third world country from which you draw supplies can lead to consequences much less desirable than those originally envisaged in the Board Room. Ethical colonialism is dangerous territory.

Balancing objectives

Finally there is the simple question of how you balance the need to operate profitably in the direct interests of your employees, their dependants, the other smaller businesses that depend on yours and so on, with the desire to weigh up non-financial values in your potential suppliers' proposals against their bottom line price. It is therefore important that thought is given to defining the framework.

Defining a framework

The company values need to be defined. You must agree those values that are imperatives, such as operating within the law; those that are only to be set aside where there is a strong business case to do so, such as buying components from the home market (unless the cost seriously undermines the organisation's competitive position); and those that are 'nice to have' but only when everything else is equal.

Key questions

- To what extent are these standards to be required of the supply chain? Will the company provide support in any form to aid compliance?
- If decisions are to be primarily based on price, what are the other variables available to suppliers to be competitive? Is it acceptable that, for example, a supplier's terms of employment are worsened where the cost of labour is the only significant variable? Should this be addressed by specifying and then policing minimum standards?
- Where values are being imposed in a different cultural or economic environment are they still appropriate?
- In cases of lengthy or complex supply chains, or where the deal is entirely electronic, is it possible to know what practices exist far from your own company? How much effort should be expended in trying to find out?
- Should transactions be conducted under Terms of Business that are heavily weighted in favour of the purchaser – where suppliers have little leverage to insist on variations or lack appreciation of the potential liabilities? If so, what responsibility will the company accept when the supplier gets into serious difficulties?
- Where services are contracted out should the company's own standards be transferred to the contractor or will lower standards be accepted as one important

source of savings – for example lower standards of maintenance and safety checks on a transport fleet?

The challenge

The challenge is not that there is a right or wrong way to conduct procurement ethically, but that Procurement secures clear guidance from their Board of the required position on the spectrum.

Making it happen

Once the framework is established, communication and implementation are as important as the headline policies.

Do all staff in Procurement and all internal customers understand the policies? Have they been clearly set out for both suppliers and other relevant business partners – including customers? Are outcomes measured against predetermined objectives and are these outcomes, good or bad, widely published? Websites and intranet are powerful tools in achieving this.

In arriving at procurement decisions, is there a structured approach along the lines of a balanced business scorecard to ensure consistency and the ability to share the detail of the decision with unsuccessful suppliers?

Procurement partnership

Procurement is one of the functions that can have real influence in taking the organisation's values into the wider community, encouraging change while reinforcing the organisation’s reputation. It is no longer just a means to buy cheaper pencils, it is a full partner with functions like sales and marketing in building competitive edge through positive perceptions of the organisation's social contribution.

Sustainable development (2000)

One definition of sustainable development is…

…ensuring that the finite resources of the planet are not consumed at a speed that exceeds their rate of natural replenishment. Associated with this idea is the often-claimed notion that no one nation, sector or segment of society should consume a disproportionate and unreasonable amount of any scarce resources.

Within the period of **Vision 2010**, there is likely to be an increasingly vocal portion of society that seeks to emphasise the obligation of companies and organisations to ensure that every effort is made to redress what are perceived to be the mistakes of the past: from reversing the effects of global warming, to resolving local and regional historical environmental issues.

Changing climate of opinion

A groundswell of opinion is likely to be drawn into action with the agenda of:

- survival on a global scale; and, as they would have society see it,
- creating a fairer and more equitable distribution of the benefits of industrialisation throughout the world.

This includes a vocal and increasingly disruptive group of individuals who seek to convince the majority not to support the various manifestations of industrial globalisation.

Companies are increasingly likely to come to the belief that their actions as well as their declared aims in this important area are vitally important to their ability to continue to trade in substantial areas of the world.

Demands of host nations

Nations may become increasingly unwilling to allow foreign multinational companies to exploit their natural resources without accepting a clear commitment to operate in a sustainable way in the area where the trade is being carried out.

Some requirements will increase the traditional established cost of trading in these areas.

A multinational mining conglomerate was recently prevented from expanding its mine workings in a Central African state, until and unless there was in place

- a program to recover the site that was the subject of the expansion plan, and
- a recovery program to correct earlier omissions.

Clearly this will increase overall costs. These increases should not be seen simply as increases in manufacturing expense (in this case, cost of extraction), but as associated with the environmental investment cost of being a socially responsible organisation.

The playing field remains level for as long as all organisations in a particular business area are required to trade in the same sustainable manner.

Sustaining people

Exploitation is not simply a matter of resources. One of the most insidious forms of exploitation relates to people.

Increasingly companies and governmental organisations will need to be aware of any and all instances where labour is being exploited, whether this exploitation takes the form of slavery, bonded workers, misuse of agreed child labour practices or some other form of abuse.

However, in making these judgements, care should be exercised to ensure that cultural diversity is taken into account. Any organisation seeking to impose its own values on overseas partners may be felt to be acting unreasonably. If this is the case then other more supportive approaches may need to be considered.

Clearly these approaches only apply where employers acknowledge and operate within some recognised international framework, such as the UN Convention on Human Rights.

Triple bottom line

The British environmental expert and author John Elkington coined the phrase 'the triple bottom line' in an attempt to express what he believed the future will require of business. He asserted that, in addition to the 'normal' financial results, companies must be willing to give an account of the impact that their activities have on the social as well as the biological and physical environment.

Traditional accounting practices provide excellent historical information related to profitability and the company's use of its assets. They do not, however, offer anything other than a limited ability to predict future performance or development potential.

Therefore it may become increasingly important to offer a more holistic and future-facing view of the company's abilities to exploit its social and intellectual capital alongside its physical assets.

Global sustainability

Coupled with this approach is the whole question of globalisation. The idea that finite resources can legitimately be used to move goods and services around the world, when a more local production environment might conserve fuel and other scarce resources, is a concept that has been, and continues to be, questioned.

It is unlikely that arguments that rely heavily upon the concept of economy of scale will continue to be acceptable and therefore they may be rejected by the very people they seek to benefit.

Social responsibility

Companies, intermediaries and non-governmental organisations (NGOs) are becoming increasingly aware of the power that consumers, would-be consumers and local pressure groups wield, as more people become prepared to support organisations committed to the concept of sustainability as a key element of their commercial offering.

Corporate Social Responsibility is the phrase used by *Norsk Hydro AS* in their work to develop a world class response to the challenges resulting from the drive to make their business live the values which they expound. *Norsk Hydro* uses the following definition of Corporate Social Responsibility:

' The concept that a corporation is accountable for its impact on all relevant stakeholders. The continuing commitment by business to behave fairly and responsibly and contribute to economic development while improving the quality of life of the work force and their families as well as the local community and society at large.' (Odd Henrik Robberstad *Invitation to a dialogue – Corporate Social Responsibility*, p10)

This company is advanced in its acceptance of its wider responsibilities – wider, that is, than the responsibility to deliver shareholder value in financial terms.

Odd Henrik Robberstad, Senior Vice-President Corporate Social Responsibility at *Norsk Hydro*, said:

' The role and social responsibility of the business world is a recurrent, controversial, and multi-faceted issue. However, during the past few years the problems associated with the business world's social responsibility have been given more holistic and focused attention in international debate under the collective term Corporate Social Responsibility.'

These statements encapsulate one company's approach to CSR. Over the period covered by **Vision 2010** it is likely that increasing pressure will be brought to bear on all levels of business, firstly to make their position clear to their stakeholders and to the community at large, and then to demonstrate through their actions their commitment to creating a sustainable environment.

Growing pressure for change

At the time of writing this commentary, the Centre for Economic & Social Studies on the Environment at the University Libre du Bruxelles recorded some 3900 NGOs active in Europe alone, with many more outside Europe and others being added to the list almost daily.

This is in addition to the independent organisations committed to monitoring the effects that business has on the environment and the various governmental commitments made in support of world trade and its approach to sustainable development.

It is difficult to imagine any aspect of business that either is not, or will not soon, be monitored by a highly articulate, well-briefed group intent upon making business accountable. Clearly the general message is to be aware of the increasing groundswell of public opinion that seeks to influence corporate behaviour.

The World Wide Web provides a rich and increasing source of information on all aspects of sustainable development. For example http://www.ulb.ac.be/ceese/meta/sustvl records some 158 web sites dedicated to sustainable development issues ranging from 'Address of SD organisations' through to 'Yellow Mountain Institute for sustainable living'. New and well-informed sites are opening almost daily. It may be helpful to maintain a watch on the various pages as they relate to your company.

Integrating Procurement into the Mainstream of Business Strategy (2001)

Procurement – tactics or strategy?

The procurement process is a microcosm of the company overall. The evidence is that a significant improvement in its effectiveness not only achieves direct cost reductions but more powerfully benefits the culture and performance of the business overall.
Dr. Richard Russill

Focusing on the tactical significance of the procurement function, operating in isolation within organisations, much academic and consultancy research currently tends to concentrate on the achievement of optimum supply market decisions within an established arena -

- Reducing costs
- Building power in supply chains
- Collaborating and partnering
- Achieve business benefits from e-procurement.

Procurement will stay a tactical activity, aimed at achieving specific tasks or results-orientated goals, if the primary question remains one of how to apply specific tools and if senior and middle management fail to understand value chain dynamics. This may contribute to the delivery of business results but it will not release the full potential to be gained by integrating procurement into mainstream business strategy development and decision logic, nor will it lead to the creation of effective demand management. Put simply, the integrated business model is "we buy, we transform, we sell", or in value terms, "we acquire value, add value, achieve or realise value".

In the future, a clear distinction will be made between procurement as a largely tactical activity and the multi-functional acquisition process itself, within the business strategy environment. In organisations where the process is be well understood and integrated, procurement will provide the umbilical cord between internal supply chain demand and external supply response. It will have a major role in creating the right climate for profit generation.

Redefining procurement in the value chain

In today's global marketplace, constant product price reduction, reduced life-cycle and innovation make time-to-market and first-to- market significant competitive advantage. To respond to the demands of this new environment, companies are looking for new development processes to reduce time-to-market and development costs, and new purchasing organisations to co-ordinate and consolidate needs to obtain volume effects in order to reduce the acquisition price.
Bernard Garcia

To progress and optimise the role of procurement within the value chain, it is necessary to accept that the function is only one of many involved in the total acquisition process. Often too narrow a definition of procurement activity is accepted.

Value chains, and the processes by which they are driven, will require a mix of cross-functional skills covering purchasing, operations, logistics, engineering and finance. Unless these skills are fully integrated and aligned to create a true value acquisition process, overall business performance will be undermined. In many organisations, the primary driver to obtain competitive advantage will be the value chain. The most successful businesses will have the most efficient, lowest cost and responsive supply model for their markets, attracting innovation and preferential treatment from key suppliers.

Global competition is driving down prices. Product life cycle and time to achieve development payback are shortening. Innovation will make time-to-market and being first-to-market significant competitive advantages. Suppliers who generate optimum speed and penetration to market, and those that innovate will continue to command a premium for their products. This may make price reduction less important to buyers in optimising lifetime cost. Delivering supply developments on time will become crucial, as it will extend the customer's window of opportunity to sell at high margins.

Responding to the demands of this new environment, companies must acquire new development processes to reduce time-to-market and development costs. They must also develop new procurement organisations, co-ordinating and consolidating requirements to obtain volume effects and optimising acquisition costs and value. Purchasing can represent from 20 per cent to 80 per cent of company turnover, so these are significant challenges.

In this environment procurement as a stand-alone function will become a luxury, eventually to be dispensed with, unless the focus has been switched to value added demand management and the effective manipulation of the total value chain, both internal and external.

Development is expensive so decisions will be made as to whether it should be undertaken in-house or achieved through outsourcing and partnership, or even shared with competitors. Whatever strategies are followed, the presence of sound and integrated procurement acquisition structures will be crucial to success.

Changing supply market dependency

To achieve significant improvements in value generation through practising lean supply, it is argued it is necessary to share sensitive information on a justified and selective basis, in both directions. This means that the customer must balance the risk taken by the supplier, by sharing information on its own commercial, technical and operating processes, in order to expect the same in return. Without such balanced risk, the supplier will be forced to apply risk premia, possibly making the relationship inefficient.
Professor Richard Lamming

Operating in increasingly competitive markets, stringent internal cost management will become critical. It will be necessary to identify and protect core competencies, while seeking to outsource non-core activity that can be bought in more economically, or to engage specialist expertise or resources not available in-house. This will lead to the development of innovative trading relationships with critical and preferred suppliers that have specific expertise and operate to world class standards and performance indicators.

These relationships will range from simple partnerships to complex multi-source alliances and consortia. Risk / reward models will be applied to link payment to the achievement of core organisational objectives. The very concept of core activity will be revisited and refined to ensure that all exportable costs are taken outside the business.

With the ever increasing pressure of competition and the need for effective cost management, some organisations may be unable to fund development for all their core activity and will look for development partners. The historical boundaries between the supplier and the client, and the internal relationships between procurement, finance, R&D, inventory management and sales will be redefined to create a co-ordinated and commercially aware team pursuing common business goals.

However, relying too heavily on bought-in skills, to the extent that core capability is undermined, may present a real threat to business stability and long term viability. Therefore complex supply market relationships must remain anchored within sound commercial arrangements underpinned by highly operative procurement. Appropriate indicators and management information systems will be essential to control the scope of the dependency.

Transactional, often resource-intensive, purchasing activity will continue to meet *ad hoc* needs, but its strategic impact and resource implications will be managed largely by using e-procurement tools and outsourcing. Integrating procurement into the broader arena of demand management will ensure that it retains a strategic role in regulating supply market dynamics, so that the overall value chain strategy continues to meet core business objectives and business strategy benefits from supply perspectives.

The cost-saving millstone

The 'we can save you costs" story is a powerful one for catching the top-management eye, and is necessary to obtain initial buy-in to a change programme. The challenge though is to move perceptions beyond the cost saving milestone, otherwise it becomes a millstone. I have therefore found it more effective and relevant to talk in terms of the fundamental business equation 'we buy, we transform, we sell", which places the procurement process, or better the Value Acquisition Process, properly at the heart of what is happening.
Dr. Richard Russill

The basis for decisions on investment and spending is fundamental to the successful performance of businesses. Implementation of effective supply market strategies will lead to optimum performance of the acquisition process itself. Spend decisions that rely solely on financial ratios without referring to other sources of information - such as the current positioning of the specific supply market - will be fundamentally flawed, since they will have failed to access key sources of intelligence.

Procurement, operating within an integrated decision-making environment, can proactively engage in the analysis process by reporting on the opportunities within the competitive supply environment and advising on the most appropriate buy strategy. Of equal importance, it will act as the conduit by which critical and preferred suppliers, already engaged in long-term trading relationships, will participate directly in the investment process. Their inputs may range from advice on simplification of specifications to innovative technical recommendations and contractual modelling in relation to funding and joint risk and reward arrangements.

It will be necessary for Procurement to evaluate suppliers in terms of innovation and development capabilities. Such external expertise will not centre solely on the production process - real value will only be achieved by improving the whole development cycle. In this environment, the role of the supplier will change from that of an arm's length provider of goods and services to that of a true partner. The supplier will proactively advise on the optimum investment strategy for the customer, and maintain a keen interest in ensuring that the customer makes the proper decisions to underpin the long-term business stability of both parties.

Behavioural relationships – adversaries or partners?

The thorniest problem with outsourcing is not the exaggerated promises and underwhelming returns, but the typical customer's shocking disregard for prudent oversight and management control.
Institute of Management

Those organisations that successfully create an integrated culture of value demand management will have had to overhaul behavioural relationships radically. Not only inside the company and those governing the interface with key supply markets, but also those pertaining in the supply market itself.

Internally, the role of procurement as a transactional function and a reactive service provider will change to that of a proactive partner in the management of the total value chain, from upstream investment appraisal to the point of delivery. At the same time, the concept of the internal customer will be largely discarded. Even the business unit / profit centre approach may give way to an alignment of business goals and focused corporate direction, recognising that this is the foundation for extracting optimum business value.

Traditional procurement skills will be seen as inadequate for driving forward cultural change. A new breed of supply market specialist will emerge, with the technical ability to operate authoritatively in those business areas traditionally regarded as the domain of finance, sales, and engineering. Relationship management skills must be developed to persuade both peer groups and the Board of the merit of value demand management, and to deliver convincing evidence that the new integrated approach to the acquisition process is a sound business proposition.

Externally, traditional adversarial relationships with the primary supply markets will give way largely to long term trading arrangements that, particularly in the areas of partnering and alliancing, place a heavy emphasis on behavioural alignment and the pursuit of common goals and objectives.

It is unlikely that such alignment will be achieved quickly. The journey from adversary to partner will require a large degree of trust and developing openness on both sides. On the way it will need assessment of each other's cultural compatibility, joint benchmarking of performance, the use of a scorecard to monitor behavioural progression and exposure of joint business plans where the interdependency is significant.

In the future, the role of procurement will develop from pure negotiation to facilitation and relationship management. Terms of trading will be developed and applied that reflect joint objectives and an equitable balance of risk and reward, rather than those that promulgate a culture of distrust and blame. Procurement will also take responsibility for ensuring that the total acquisition process operates effectively throughout the business relationship, including the performance and well being of secondary and subsidiary layers of the value chain.

Value demand management

As the global economy slows, firms are breaking traditional moulds for savings. But there are pitfalls for purchasers if they don't have long-term clear strategies. Cisco, the world's leading supplier of telecommunications network exchanges has outsourced all of its manufacturing. Such a strategy means the brand becomes the company's most valuable asset and procurement professionals become the driving force for maintaining the image. In this respect, because of their skill at negotiating and contract management, the next several years may see procurement staff becoming some of the company's most valuable employees.
David Arminas

The Value Demand Manager will emerge at company Board level and will possess an array of commercial, financial, information technology and related technical and people skills necessary to manage effectively the key business process of acquisition. Continuously monitored for contribution to the business, benchmarking will be against world class competitors.

The mechanisms for making routine deals will be outsourced largely to e-commerce specialist organisations. They will achieve scale economies by using global supply chains. Rather than the activity itself, the Value Demand Manager will concentrate on managing the process and its delivery, and on relationships with the key third party supply resources, including those to whom activity has been outsourced.

The drive to optimise costs will be a continuous process in successful organisations. Procurement influence will shift from the 'how to' approach to strategic integration into total value demand management. The focus will be on effective investment appraisal and the value brought to it by the acquisition process, which will achieve visibility throughout the supply chain. The emergence of value demand as a concept will lead to early cost savings as the power of an integrated approach to the acquisition process becomes apparent.

In this environment, Procurement will have truly integrated into the mainstream of business strategy.

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Emerging business models (2001)

New models?

Over the next ten years the very nature of competition will change. Increasingly customers will demand ever-greater choice, so that products and services are customised for market segments of one customer. Procurement will find new ways of working with suppliers – and new ways of working internally. New business models will emerge that organisations must learn to recognise and understand. This article addresses the key issues – the driving forces, the characteristics of the new business models, the keys to success and the challenges companies face.

In the traditional markets of the 20th century, barriers to entry for new suppliers were high; perfect information was an academic vision, not a reality, and conglomerate businesses were fashionable. The prevailing currencies of competition in the new, technology-enabled economy are knowledge, information and time – and a new set of rules is emerging. As a result barriers to entry are falling, information is increasingly ubiquitous and time to market is fast decreasing. In the Internet economy the prevailing model of competition is of a web of interrelationships rather than the hierarchical command and control model of the industrial economy. Unlike value chains, which reward exclusivity, the Internet economy is inclusive.

Throughout industrial history business models have adapted as markets have changed. At first competitive advantage derived from location. Access to raw materials provided advantages necessary to create and exploit temporary monopolies. But soon free markets for raw materials made it increasingly difficult to use location as the single source of competitive advantage. Innovation, new manufacturing technology and access to markets and capital became the new differentiators.

Increasing emphasis on speed and innovation and a massive demand for new products changed models again. Patent-expired innovations quickly become everyone's property and it is harder to base competitive advantage on technical monopoly. Then came the move to organisational innovation – splitting the company into small, product-focused units.

Throughout the latter half of the twentieth century organisational innovations gave rise to both minor and major temporary monopolies – for instance those based around the success of just-in-time. As organisations progressed to be more sophisticated in the use of IT, technology became an homogenising force – making companies more similar. Consequently competitiveness can no longer be based solely on location, technical or organisational innovation, since any advantages these might provide are likely to be short lived.

Five forces for the new economy

The following forces drive the emergence of new business models in the 'new economy':

- **Globalisation of both markets and sources.** Increasingly we talk of global markets with local perspectives – within this a wide framework is essential for excellence in terms of distribution of products and services. Many dot.coms, for example, have developed promising product offerings, only to fail because of the need to be capable of global distribution.

- **Open for business 24x7.** With global markets comes the need to operate 24x7 – every hour, every day, every week.
- **The rapid expansion of the Internet.** The Internet is now accessed by eight per cent of the world's population, with 476 million people online (www.euromktg.com/globalstats).
- **Continued evolution of transport services.** Expanding value chain options and the fragile nature of the existing infrastructure mean that no matter how efficient technology is we still have to rely on real world transport and logistics. For example, the petrol protests of 2000 held both the physical and virtual worlds to ransom in terms of delivery.
- **Service economy.** We are moving from a product to a service economy – and in the future into an experience economy, where owning something becomes less important than experiencing it. So the focus becomes increasingly one of customisation to ever-demanding consumers.

Characteristics of the new models

Other characteristics that are emerging defining the new business models:

Focus on core activities

Successful organisations will have agility as a cardinal virtue. A core competency will be the ability to sense changes in the environment, find out how to react and then respond - quickly.

Automation / integration

Organisations will have to work in real time as business-to-business interaction becomes more automated. The direct integration of companies with key customers and suppliers will have massive impacts on how businesses relate to each other.

Complexity of relationships

With e-commerce has come the need to manage an expanded set of organisational relationships. The appearance of 'virtual middlemen', such as e-marketplaces, has created this more complex web of connections. Outsourcing of non-core activities is facilitated by the technology but such relationships still need to be managed. In other areas companies are forging direct relationships with customers – who were traditionally at arm's length – because the technology facilitates more timely interactions, and also because e-commerce captures from customers detailed information about them, facilitating precisely targeted marketing.

Ubiquitous and real-time information

In the late 20th century we moved from data-driven to information-driven economies. In the 21st century we are aiming for knowledge management. Economist Adam Smith's 18th century vision of perfect competition and perfect knowledge seems almost within reach and the prospect of comprehensive knowledge management will affect business models of the ways in which organisations compete. The concept of 'Clockspeed' (Fine, 1999) supports this change of focus, where the ability to capture and share Internet-enabled real time information has dramatically boosted the clockspeed of many industries, dictating the key elements of survival. Industry's rate of evolution increases, manifested in areas such as the speed at which new products and services are introduced and new business model strategies are adopted. Product and service lifecycles will no longer be predictable. Consequently strategies must be swiftly conceived, rapidly executed and flexible enough to be changed at a moment's notice.

Organisational structure

Ridderstråle and Nordström (2000) argue that firms are starting to specialise– with the concept of the 'funky firm'. They back up their theory by pointing out that Fortune 500 companies employed 20 per cent of the workforce in the 1970s but less than ten per cent now. They also talk about organisations becoming flatter, so that the time from problem selection to solution implementation is reduced. Organisations will work horizontally, in processes.

New models – relationships in the e-economy

Pottruck and Peace (2000) talk about four types of company based on their ability to manage complexity and relationships in the e-economy:

- **Dot.com start-up:** Characterised by the simplicity of their business models. Excel at managing relationships but are often ineffective at managing supply chains.
- **Bricks and Mortar (BAM):** Traditional companies that can earn good profits and have substantial revenues. They may suffer from fragmentation, inertia and an inability to engage in e-commerce. Their challenge is to retain talent and develop new competitive capabilities.
- **Dot.BAM:** Growing out of BAMs, learning to combine the weight of a traditional multinational with enthusiastic championing of e-commerce to develop strong links to the e-world.
- **Dot.Clicks and Mortar:** Rare organisations that learn to combine an effective web presence with an efficient, responsive supply chain. Often they do not own the key elements of the supply chain, but manage demand, supply and fulfilment better than most.

Keys to success

The supply chain

The subject of debate over many years, technology now makes the extended supply chain possible - facilitating the integration and active collaboration of different players in the channel (Berger and Gattorna, 2001). This new technology enables the creation of visibility, real time planning, and the co-ordinated execution of activities across channel partners. The new approach will require a fundamental cultural shift. It no longer takes years of work and billions of dollars to establish a business with global presence. Organisations such as Amazon.com have achieved significant brand status very quickly.

The balance of power

The evolution of e-commerce can also be tracked by its impact on buyer / supplier power. Where buyer and supplier power are both high, there is an opportunity for mutual and direct partnership. Where they are both low, channels such as distribution agents and spot auctions can be used. Where an imbalance exists, there are clear opportunities for e-commerce to change that balance of competition.

The competitive landscape

The rules of competition are being transformed – companies can no longer rely on the same tried and tested formulae. The competitive landscape is shifting from the best and the rest (intra-industrial competition) to inter-industry partnerships and alliances (the best with the best). (Berger and Gattorna, 2001.)

Such competition is not new – but the speed of decision-making and execution enabled by new business models will be. Value chain competition will challenge traditional organisations and punish those companies that are slow to react. They will be required to do what they do better, faster and more consistently and multiple activities will need to be co-ordinated just as speedily and consistently. Value chain networks make sense, but this means assembling the right portfolio of partnerships.

Service not product

The focus will be far more on the experience and the service, with value no longer residing in the metal or the engine, but with the intangible elements. Some 70 per cent of the value of a new car lies in intangibles (Economist 28 September 1996). So knowledge really could be the competitive advantage of the future.

In 1776 Adam Smith pointed out that as the size of a market increases, so should the degree of specialisation. Two centuries later there are no more geographical limits to push – we are there. Global competition in an over-supplied world with increasingly perfected markets kills average product offerings and performers. In a society where money flows freely across borders, the shareholders will accept nothing less than consistently high value growth. But we have to stop believing that organisations can master all things and all situations on their own.

Future cast

The future may be filled with increasing complexity and be characterised by unprecedented rates of change in global markets, customers and suppliers. Typically, new business models will be facilitated by technology – with competitive advantage no longer solely about being first to market with product, but more to do with information and knowledge. Competition will undoubtedly increase – but no longer will the giant conglomerates dominate newer, smarter organisations. Agility will be key. Relationship management will be characterised by a diverse network of associations – and collaboration will often be with competitors. Individuals will spend more time managing a portfolio of projects, becoming specialists and forming teams to solve specific issues and drive progress within organisations.

Oh yes, and the future has already started – get peddling!

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Chameleon companies

Companies in the future will need to adapt more rapidly. Competitive advantage will no longer be a matter of understanding your market, creating the right product or service, marketing it effectively and ensuring that you keep your cost base low. New market opportunities will be much more diverse and the window of opportunity much smaller. Market geography will change rapidly and competitors will emerge, almost literally, overnight. With access to knowledge as universal and as easy as access to electricity in any industrialised society of today, those entrepreneurial management teams capable of envisioning and then rapidly creating new and effective business responses will provide the key differentiator between sustainable success and commercial decline.

These core management teams will need adaptable organisations around them. Skill sets, resources and routes to market will be subject to frequent shifts. Traditional business hierarchies and ownership of assets will become barriers to success. This is not something beyond 2010, it is already taking shape and is almost certain to become commonplace well within that time horizon.

Two closely related features of these highly adaptable organisations are a capacity to develop effective alliances and an ability to operate, in part at least, as virtual companies. It is these features that give organisations the necessary chameleon characteristics that enable them to stay tuned-in to the business environment. Procurement has to move towards this model, no longer engaging suppliers in fixed contractual frameworks but providing a dynamic link between the core business and its many, continually changing, allies and partners.

Defining the virtual company

Directly owning and managing every aspect of its product or service end-to-end, together with all the ancillary services, the complete company has been steadily eroded over the last forty years. The concept of the hollow company, if not the reality, is of a similar age. The development of e-business has accelerated the transition from one to the other and encouraged the wide use of a newer label, the virtual company. Professor Garelli of Lausanne University summed it up at a conference on Global Resourcing as ‘access not ownership’. We are moving from a world where the aim was to accumulate assets to one where the aim becomes to access assets, not to own business channels, but to access them.

A true virtual company has limited tangible assets and few, if any, staff. Entry costs for entrepreneurs are low. Facing no geographic boundaries and not recognising a nine to five day, it automates the mundane and celebrates creativity. Its primary strength is its intellectual capital and its capacity to operate is based on a complex and continuously changing network of allies. For example Monorail Inc. in Georgia, USA was set up as a computer manufacturer with no factories, warehouses, help desks or call centres. It was founded on the principle that, competitively, business models are more important than products. Other examples are Dell’s direct to the customer model, Compaq’s dealer network and Gateway 2000’s targeting of first time buyers. Monorail treated computers as fashion products - a concept that will increasingly apply to many other, traditionally more measured, purchasing decisions such as cars or even mortgages. Their focus was on process, starting at the retail interface with customers. An order goes to a contract manufacturer, working from a Monorail-specified parts inventory, who ships direct to the retailer to arrive within a few days of the original order, while another partner handles customer billing and credit approval. Partners also handle subsequent help desk and upgrade requirements. For this virtual company its only core resources are the experience of its senior executive team and its capacity to build and maintain partnerships.

Virtual people

Technology is the enabler for the virtual company but it still depends largely on people. People interact to process the inputs received from the virtual company network, they add value and generate the next output. Their independence, freed of traditional restraints of employment and company culture, makes them more responsive to external stimuli - quickly assessing and acting on new ideas or relationships that enter their virtual office in the virtual company. The management of these interactions will define the effectiveness of the virtual organisation. The advantage of the traditional business is that you can meet face to face around the water cooler. In the virtual company you may never meet in person and as there are no geographic boundaries you may need to address cultural barriers to communication that are invisible to the e-eye.

By 2010 the environment will be even more conducive to the virtual company. The future virtual meeting in which people can see and interact with each other freely and fully will be a far cry from the stilted and sometimes unreliable teleconference of today. People will have the different social skills needed in a total e-environment. Global cultural integration will smooth out the sharp distinctions that exist between countries and continents today. The structure of financial institutions and the legislature will have caught up with a world in which the Head Office moves around in the brief case of the Chief Executive and the points of manufacture, sale and delivery hang somewhere, ill-defined, in hyper space.

Going virtual

For businesses today that still have a firm bricks and mortar base the challenge is how far and how fast should they move towards becoming virtual. Retaining competitive edge demands a close match of resources to output, fast response to change and an inexhaustible capacity to innovate. Achieving those things while retaining control of organisational output and a reliable return to shareholders – or, more widely, stakeholders – argues against a blind leap into a virtual existence. But what business can afford to neglect the obvious advantages of reducing the cost and in-built inertia of a traditional organisation structure?

Since establishing, monitoring and maintaining a network of partners requires disciplines and skills related to the management of third party relationships, the natural place to which the Board should turn for implementation is Procurement. Nevertheless the importance of handling people-based interactions within the network raises HR related issues almost equally strongly.

A virtual company solution cannot be bolted on to an existing organisational structure like a new technical support contract or an outsourced contact centre. To be successful it requires a completely new approach to the selection, initial introduction and subsequent management of your chosen allies. Less rigid (but equally robust) contractual arrangements, sharing knowledge, building in flexibility and determining success measurements that are relevant to all parties are essential components of the virtual organisation, and senior procurement professionals should be leading the development of these approaches. Yet the importance of individuals has also been stressed and HR managers must recognise that their remit extends well beyond the dwindling number of long-term, directly employed staff.

Virtual culture

The importance of individuals returns the search for effective policies to the issue of organisational culture. Virtual partners are freed from the restraints of being part of an employer culture. Yet if the business is to maintain a distinctive character, which translates into a sustainable brand image for its market, there must be a culture that will govern and support a consistent quality and style of contribution within the virtual network.

Evidence from organisations that have been successful supports the need for some well-established techniques to be maintained. Examples that work include facilities for social contact; a tangible base that can be regarded as the Home Office - even if never visited; tokens of association (as simple as a corporate coffee mug or a wall plaque for the study); and recognition programmes that identify exemplary contributions. Where the virtual company network includes complete businesses the interchange of executives between partner organisations also generates common purpose and culture.

Nor does a virtual company need to be remote, although it can be. DTI policy on clustering for start-up businesses stems from American experience that proximity improves performance. Companies benefit from a pool of relevant resources that develop naturally around a group of people engaged in similar activities.

Managing knowledge

Setting up a part of a business to operate as a virtual company raises one further important issue. Capturing and sharing knowledge is vital where partners regularly come and go. A secure but accessible data room is essential for effective joint working, with an intranet that encourages the exchanges of ideas, in turn driving innovation.

Developing the appropriate facilities is a vital investment but contractual links are required to underpin the virtual network. Traditional employment contracts are not sufficiently output based, and procurement contracts generally lack the flexibility essential to a virtual organisation. Because exclusivity of service goes against the principles of virtual organisations, individuals and businesses in the network are not permanent features, nor necessarily working full-time on the objectives of that network. So working methods, contractual links and ownership of intellectual property must all acknowledge the coexistence of other virtual organisations drawing on the same resource pool.

A common feature of successful virtual companies is that they make information more available than is usual, not less. Trust and a form of loyalty become paradoxically more important rather than less. Once again, understanding people and cultures outweighs the importance of technology in the virtual world. This is crystallised in the 90/10 rule promoted in the Jessica Lipnack and Jeffrey Stamp's book on working across boundaries in virtual companies – 'Virtual Teams'. Managing a successful virtual company is ninety per cent people and ten per cent technology.

Beginning

The strength of a well set-up virtual organisation is its flexibility and capacity to change. This must permeate every part of an organisation that plans to survive for more than a few more years. But where does the learning and change process begin? Using a virtual company model might be a good solution for an on-going function like marketing, facing changing demands, but it is also a good solution for major cross-functional projects. Setting up a virtual company specifically to deliver a project can provide an alternative to conventional sub-contracting that reduces management costs at the centre. For example, the Building Research Establishment has developed a working model that delivers a web-based project management tool allowing real time access for all construction project partners to working drawings, minutes of meetings and project reports.

The survival of businesses will not depend only on speed and strength, but more on the capacity to adapt. Most companies change too slowly and in steps rather than accomplishing continuous change, which can effect complete transformations in months rather than years. Conventional corporate structures do not have that ability. Virtual companies do.

Managing risk (2001)

Risk and uncertainty

Every human endeavour is subject to risk, and because life is risky, we understand the concept of risk. Or do we? Few people realise that if they buy a lottery ticket one hour before the draw the risk of dying before the draw is greater than the chance of winning the jackpot!

However, organisations must take risks in order to progress and evolve, or even just to survive. The question for business is not if it should take risks - but which risks to take and with what likelihood of successful results.

In business terms, risk can be defined as:-

'An uncertain event or set of circumstances that should it occur, will have a positive or negative effect on the organisations objectives'.

The term risk is applied where the outcome of an event is unknown but the probability of that outcome occurring is believed to be known.

Uncertainty is used to describe a situation where neither the outcome nor the probability of the outcome is known. The term is also used where the outcomes may not even be identifiable.

Business risks should only be taken if the desired outcome is worthwhile for the organisation. Risk management is the process that is used to identify, measure and minimise risk, to ensure that the desired outcome is achieved. This study aims to identify emerging issues in the management of risk, whose impact will affect organisations over the coming decade.

Risk classification

The risks a business faces can be diverse, complex and ever changing. Fundamentally, all business risks must relate to threats to an organisation's financial well being. These threats can be divided into the three main categories of market, credit and operational risks: -

Market risks – relating to variations in the value of financial contracts. Whatever is being traded, the final focus of market risk is on obligations traded in financial markets - including the impact on business performance resulting from price fluctuations. Key areas for business are the value of stock (equity value), interest and exchange rates, commodity prices and indices of the major financial markets – see figure 1, below.

Figure 2: **Market risks and instruments**

PRICES	INSTRUMENT	ACTIVITY
Equity values	Short term debt	Cash flow
Interest rates	Bank debt	Cost flows
Exchange rates	Long term debt	Profitability
Commodities	Equities	Present value
Indices	Derivatives	

Credit risk - relating to the possibility that parties in any financial transaction fail to fulfil their obligations and honour their debts. Most businesses, whether in the financial markets or not, extend credit in some form to their customers. The effective management of credit risk is essential for all organisations.

Derivatives are a special form of credit risk, often used to offset other risks (hedging), or to make profits by exploiting anomalies in markets (arbitrage). Speculators use these instruments to undertake risk deliberately. Organisations trading in derivatives have to understand fully the risks involved, which perhaps go beyond those of other forms of credit.

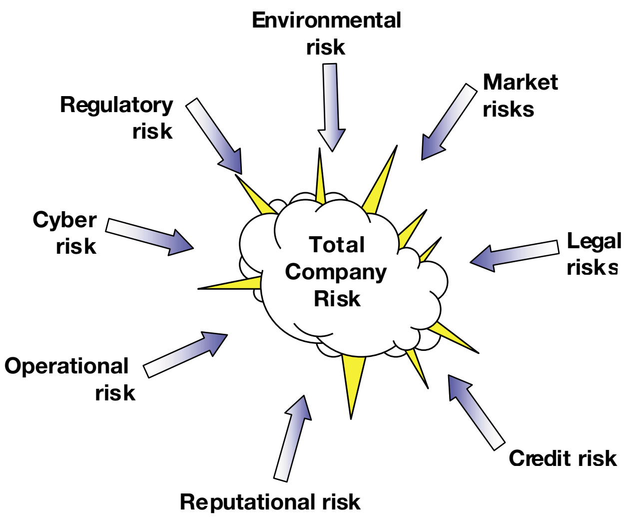
Operational risk - associated with the activity of the organisation – see fig 2. Recently this has become an all-embracing term covering all risks that are not strictly market or credit related. Many new and emerging risk issues will be categorised in this area, including some that are difficult to identify and the outcomes of which may not fully understood. Operational risks are some of the most problematic and difficult to deal with, and have been responsible for some spectacular business failures in recent years.

Figure 3: **Categories of operational risk**

Events and security	Supplies
Transactions	Human Resources
Information security	Theft and fraud
Poor MIS	Change management

Conventionally risks have been managed as if they could all be identified and measured. So insurance decisions are made on the basis of actuarial calculations and historical data. The military carried out much work on the analysis and development of systems for operational risk management. Organisations involved with the creation and disposal of nuclear waste and hazardous chemical and biological material developed risk management techniques focused on safety. Portfolio managers evolved their systems based on Markov's Portfolio Theory, fashioned in the 1950's. Financial institutions have always seen credit risk management as a core competence and a variety of mathematical and statistical techniques for understanding risk have evolved. These include variance/co-variance measures, Monte Carlo simulation and 'worst case scenario modelling'.

Figure 4: **Risks to the organisation (after Financial Times, 2000)**



The future of risk

Increasing the traditional risk by risk approach, outlined in 'Risk and uncertainty' on page 90, is seen as inadequate, and the gap between new risks and traditional business risks is growing ever wider in our changing times. The last few decades are well characterised in the words of Charles Dickens:-

'It was the best of times, it was the worst of times'

It has been a time that has tested and exposed the inadequacy of many cherished business assumptions and practices. For entrepreneurs the turbulent times have led to significant opportunities. For others it has been a period of war, famine and uncertainty, not only giving rise to discussions of chaos and uncertainty but also giving them new meaning.

Drivers for change

What is fuelling the change in our turbulent times?

Accelerated human discovery, fuelled by a growing population and the emergence of new economic regions, coupled with the demise of communism and widespread acceptance of capitalism, is a primary force. This has led to a doubling of scientific knowledge every seventeen years.

Changing expectations of this growing world population, coupled with a greater sense of self-determination, have led to ever-growing aspirations for a better life. These forces interact in a complex way to alter markets, business and regional economics. These effects are enhanced by the removal of many barriers to trade that previously protected conglomerates and small businesses alike.

The recent terrorist attacks on the United States have illustrated the inter-relatedness of many different industries on a truly world-wide scale and shown the need of all types of organisation to 'think the unthinkable' in their analyses of corporate risk profiles. Besides the benefits to businesses in using globalisation to reduce business exposure and risk, must be weighed the danger and scope for the globalisation of terror and human misery.

Globalisation has been powered by massively improved electronic communications, the dramatic rise in airline networks (although now entering a period of contraction), as well as by reduced economic and social barriers (GATT, NAFTA and EU). Financial resources are readily available anywhere in the world and can be moved quickly to the point of demand. Labour mobility has significantly increased – this is the age of the economic migrant, to an extent unmatched since the exodus from Europe to the New World in the nineteenth century. Corporations have evolved new models of employment, downsizing and process re-engineering are commonplace, even in the public sector. Such practices, combined with the elimination of entire industries, have fundamentally altered the relationship between the employer and the employee and eroded the concept of loyalty. No longer are 'jobs for life'.

High speed computing, the widespread use of the PC, and the universality of the Internet have also accelerated change – as well as generating new classes of risk. This is well illustrated by dramatic growth in virus damage over the last decade – see figure 4, below.

Figure 5: **Damage from computer viruses**

Virus	Year	Estimated cost of damage	Time to become global
Cascade	1990	$50 million	3 years
Concept	1995	$58 million	4 months
Melissa	1999	$385 million	5 days
Love letter	2000	$7 billion	5 hours

This is by no means an exhaustive list, but the combined impact of these factors makes forecasting the future much, much harder. The conditions that existed in the past are less likely to lead to successful predictions of the future – and therefore accurate estimates of risk - than ever before.

Has the rate of change slowed and is there any prospect for a reduction in risk and uncertainty? The answer is a resounding 'no'. The impact of discoveries in quantum computing, nano-technology and bioengineering, genetically modified (GM) crops, and understanding of the human genome, have yet to be considered. Significant political and socio-economic questions confront the global economy - 'How do we deal with the widening gap between the rich and poor?'; 'Can the world accommodate the exploding population growth?'; 'How can we combat globalised terrorism?' What will be their impact on risk management over the next decade?

Global trends

With the growth of the Internet and globalisation businesses face new operational risks every day. Liability, property damage and weather (despite a significant increase in European weather-related claims) are no longer the sole, or even the major source of potential risk. They have now been superseded by at least five identifiable factors.

Corporate governance and regulatory risk will be a dominant theme throughout the decade. The Basel Committee on Banking Supervision is re-writing the global rules for capital sufficiency and a working draft is available. The committee is reviewing three areas: -

- A risk based calculation of the required minimum capital for a financial institution;
- Enhanced regulatory supervision and review; and
- Full disclosure and transparency.

Due to be implemented in 2004, the effect of the Basel rules will be profound. They will introduce a significantly more stringent regime to the world's banks and financial institutions, and in due course all of their customers. The object is to increase the confidence of public in the global banking system.

Reputation and corporate image are significant assets for any business and provide a key impetus for success. They are also among the most fragile of resources that must be nurtured and can easily be damaged by a single event.

Gerald Ratner's unguarded statement at the UK Institute of Directors about the quality of the jewellery his company sold was sufficient to destroy his business – the share price falling from 389 pence to 12 pence in three months. Similarly the remark by Glen Hoddle (then manager of the English soccer team) in a TV interview, giving the impression that 'handicapped people' had received a judgement from God, produced an adverse public reaction that led to his resignation.

Corporate image will become an increasingly sensitive issue and the Federation of European Risk Management Associations (FERMA) considers image to be one of the most significant corporate risks.

The risk of product recall will increase significantly, particularly in the retail environment. High profile cases such as Coca-Cola in Belgium and France (total product recall); and Firestone / Ford in the US, have highlighted the potential damage to the brand. If there is potential bodily harm, the impact is even more serious, involving litigation, loss of sales revenue, replacement and damage to the brand.

The ability to communicate risk issues effectively will become a key competence. The Bridgestone – Firestone / Ford fiasco is a classic case in this regard. These companies apparently failed to communicate in advance some of their critical risks and risk decisions, making less believable their subsequent denials, protestations and counter-claims after the fact. The result was a lack of credibility, loss of market share, and high profile litigation.

The risk of litigation is increasing and is a global trend - rather than, as often pictured in the past, a US phenomenon. The era of blaming and claiming is definitely on us, coupled with the 'deep pocket syndrome' – making the party that can afford to pay bear the biggest burden.

This trend will be accelerated by changing public and governmental attitudes to: -

- Health and Safety at work
- Corporate manslaughter liability
- EU employment directives
- 'Ambulance chasing' law firms
- Infringement of Intellectual Property Rights
- Defamation and privacy.

Already, claims for medical negligence against the UK National Health Service have increased from £38 million to £400 million in three years.

Cyber risk and technology failure are well documented and we can be certain that threats from hackers and increasingly sophisticated viruses will multiply. Incidents of viruses targeted specifically at one company and cyber extortion will become increasingly commonplace, coupled with multi-media liability and cyber libel. The insurance industry is already developing products specifically tailored for these contingencies.

Environmental risk will continue to have a high profile, especially in the public perception. The 'greening' of business will increase significantly. The use of Environmental Audits will grow and suppliers may be excluded from sectors of business if they are considered to be deficient. Exxon has been pilloried for not investing in renewable energy and Tesco was excluded from a recently published 'environmentally ethical' list. There may even be refusals to supply if the buying organisation is deemed to be unsuitable (for instance the nuclear industry or animal breeding for research).

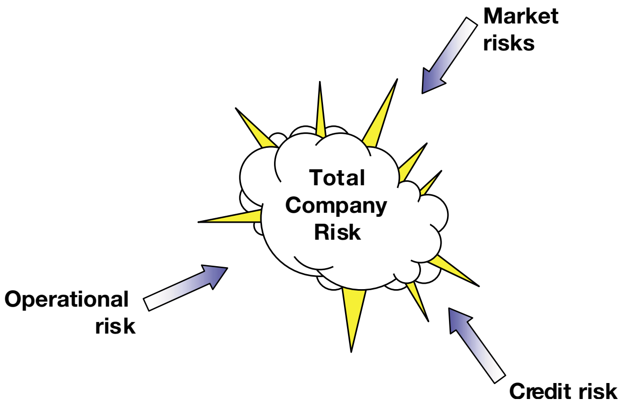
Shareholder value and the risk of an unforgiving stock market will drive organisations to become more risk averse. The need for small and medium businesses to prove that they are ‘worthy’ of business may be a significant burden.

Invitations to tender will become increasingly prescriptive. Unless the potential supplier can put the appropriate ‘ticks in the boxes’ - for ISO9000, IIP, Information Security Policy, Data Protection Policy etc., - they will be denied the opportunity to bid.

Conclusion

The risk environment of the future will be considerably more complex than suggested by the simple model developed in ’Risk classification’ on page 90 See figure 5, below. Risk management will not eliminate this risk. It will, however, become increasingly important and will enable a more effective handling of risk, which may itself become a significant contribution to competitive advantage.

Figure 6: **The risk environment of the future (after Financial Times, 2000)**



Links

Risk management

http://www.alarm-uk.com/
The Association of Local Authority Risk Managers (ALARM) helps, advises and represents public sector organisations and seeks to raise the profile and importance of risk management within the public sector. It assists in the development of risk management strategies that address the identification, analysis and economic control of all risks that threaten the assets and objectives of an organisation.

http://www.intranet.qld.gov.au/purchasingpolicy/mrip-p4.htm
Six easy Steps to Managing Risk - Department of Works and Housing, Government of Queensland, Australia

http://www.pasa.doh.gov.uk/
National Health Service Purchasing and Supply Agency (UK)

http://www.cabinet-office.gov.uk/eeg/1999/innovationaward.htm
PricewaterhouseCoopers Awards for Innovation and Risk Management

More general supply chain resources

http://www.hp.com/solutions1/supplychain/resources/index.html
Communicating issues, opportunities and objectives across functions, business units, and value collaboration networks, the Hewlett-Packard manufacturing council has created a glossary of supply chain terms.

http://www.ascet.com/
Achieving Supply Chain Excellence through Technology (US)

http://www.cips.org/
The Chartered Institute of Purchasing and Supply (CIPS) (UK)

http://www.capsresearch.org/
Center for Advanced Purchasing Studies (CAPS) (US)

Maintaining the competitive edge (2001)

Exploiting the supply chain

' People don't buy products, they buy benefits.'
Theodore Levitt: The Marketing Imagination

Competitive edge is not just a question of price. It is the capitalisation of all the facets associated with fulfilment.

The exploitation of the value chain has historically been undervalued as a primary contributor to overall competitiveness. Although it is common for organisations to focus on reducing their expenditure on products and materials to improve profitability, the concept of exploiting the value chain as an asset base has not been widely recognised. In an ever more competitive world the pressure to find innovative ways of staying ahead of the market is crucial.

As long ago as 1962 Peter Drucker said, 'The supply chain is today's frontier in business. It is the one area where managerial results of great magnitude can be achieved, and it is still largely unexplored territory.' In today's age of globalisation and technology we have to reassess how far we have come and how far we have to go.

Meeting customers' expectations

Peter Drucker also reflects: 'Customers only pay for what is of use to them and gives them value.'

Although low price is not the only issue, it will always remain an important part of the equation. Many of the factors that bring advantage are more abstract - the softer issues - and in turn are elements that build up the total value of ownership and bring the product closer to customer expectations. Included amongst these elements that differentiate suppliers are:

- **Quality**, both specified and perceived, is a major differentiator. It must be delivered, even when the value chain takes on a global perspective against a background of varying standards.
- **Service level** will be a key customer consideration. The more globally the value chain is stretched, the more doubt will arise in respect of ongoing support.
- **Reliability.** As the supply process seeks to be more price-competitive, so the question of performance takes on new importance, given the extended global supply network. Customer expectations are rising and the ability to match or exceed them is crucial.
- **Total life cost** is taking on more importance, as capital investment and product support have become more interwoven as factors for overall competitiveness. This trend will grow as products are increasingly sold as services and costs become more visible to the customer.
- **Relationships** that underpin business propositions will be responsible for a significant part of value chain performance and therefore confidence. Customers will expect ever-closer relationships with suppliers and, for those that can deliver, this will be a significant competitive advantage.

- **Trust.** The more mission-critical the application, the greater the interdependence. As supply chains extend, so confidence weakens. Increasing the transparency of the supply chain to the customer can counteract this, but it requires a high degree of trust between supplier and customer.
- **Communications** of good quality are essential. Enjoying a comfortable dialogue, linked to visibility on a global scale, provides a perception of reduced risk.
- **Connectivity** of processes and the application of technology by a customer create the necessity for the supplier to provide appropriate interfaces.
- **Ethical and environmental standards** are becoming a new currency. The 'wired world' creates a fresh vulnerability to pressure groups that may exploit issues within global supply networks.

Meeting the customer's expectations is a complex process and a challenge. This complexity increases when the market place is progressively more fluid and dynamic.

Integrating the supply chain

' What got you where you are won't keep you where you are.'
Charles Handy: The Age of Paradox.

The pace of globalisation and competition from the world market has been clearly identified as a major risk to many business strategies. The impact of the increased speed of technological change has further demonstrated that traditional business models and thinking may not be sufficient to maintain market share or growth.

' Globalisation and information technology are bringing about the most drastic transformation in the history of business.'
Tom Peters: Liberation Management.

The growth of internet technology has greatly increased the reach of organisations in the supply chain. Greater visibility - both vertically and horizontally - creates further pressures to be managed and opportunities to be exploited. Given the exponential growth of internet use and the increasing use of business-to-business applications, these competitive pressures will continue to grow over the next decade, increasing the need to maintain a flexible strategy.

However, through leverage and globalisation of supply most organisations have tried merely to contain their purchasing spend. As a result, despite an average 50-60 per cent dependence on supply cost, the internal culture of organisations has not changed. Companies have failed to recognise the untapped potential in the value chain. This lack of integration into mainstream business thinking and strategy is likely to restrict growth and limit market share. The strategies of successful organisations will focus on the creation of competitive supply chains. James Tompkins suggests that in future, competition will be based on 'my supply chain versus your supply chain'.

' The supply chain is really the cutting edge of contemporary re-engineering.'
Michael Hammer: Re-engineering the Corporation.

Differentiation will remain a major factor for marketing operations, but the cultivation of relationships and innovation should be a key constituent of all business strategies. This will remove duplication of effort, concentrate on performance-based value-added service and drive down total costs.

James Tompkins, in his book ‘No Boundaries’, advocates total integration of the supply chain through partnerships and alliances. He states: ‘The more boundaries we encounter in today’s business world, the greater the limits on our ability to move to the next level of performance excellence.’

Trust and knowledge

A strategic approach to the supply chain is unlikely to be successful without sufficient effort to establish workable relationships based on trust. These will promote the maximum utilisation of interdependent skills and exploitation of the knowledge base. These relationships will be deployed through multiple levels of the supply network to reap the advantages and benefits that currently remain untapped.

Michael Dell said, ‘Today we have access to technology that greatly facilitates the exchange of information. We can share methodologies with supplier-partners, which results in dramatically faster time to market.’ Dell looked at available technology and saw what could be done. Many established organisations should imitate this approach and take a more lateral view of their business. As Gary Hamel, co-author of ‘Competing for the Future’ said: ‘A company’s blindness is due to an unwillingness or inability to look outside current experiences.’

Based on the ubiquity of the Internet, future business models will open channels to extended, flexible and networked supply chains. This will provide the opportunity to create global value-based solutions, which can expand and contract to meet changing demands. Underpinning this concept will be partnerships and collaborative commercial agreements, developed around clusters of interdependent suppliers that can maximise their joint capability.

Strategies and skills

‘ The more volatile the market, the quicker an organisation’s success formula becomes obsolete.’
Daryl R. Conner: Leading at the Edge of Chaos.

Traditional approaches to trading may be found too rigid to accommodate the implications of the ‘wired world’. The drive towards ever-lower prices puts at risk many historical relationships, which with time have become complacent, while low cost supply markets will generate short-term gain. However, these windows of opportunity will progressively become smaller. They will not offer long-term sustainability, particularly when faced with political and environmental pressures.

Market volatility will increasingly undermine long-term planning and the static interdependence that past strategies have created. As organisations move further towards extended outsourcing programmes, so inherently the risk management profile will grow.

‘ Top management intellectually understands they need radical change, but they don’t have the courage to do what they see and believe they need to do.’
Sumantra Ghoshal co-author Individualised Corporation.

There will be no overnight solutions to this conundrum. Investment must be made to develop the culture and skills needed to manage this environment. Short-term focus has to be replaced with a longer-term strategy, providing a balance between quick returns and more durable propositions.

' The success and the rate of progress in achieving a world class competitive business are directly proportional to the participation of its managers and executives.'
Harry K. Jackson: Achieving the Competitive Edge.

Organisations have to recognise the potential and develop the new skills necessary to exploit dynamic supply chains of the future. They will create a versatile platform of relationships, with greater emphasis on integration. Forward strategies will be built, based on mutual objectives and targets, combined with an investment in shared resources, skills and knowledge.

' When there are no limits to whom you see, where you'll go, what you'll touch, the results are remarkable.'
Jack Welch, CEO GE.

Knowing your customers

Traditional supply relationships may be pressured to meet new low entry competition, although customers may resist alternative sourcing. However, the short-term impact may force established suppliers to withdraw. Sharing knowledge and risk will provide different options, where the benefits of a wider supply network can both maintain relationships and reduce the cost base.

An example of this 'pull through' concept, created within an enhanced style of relationship, is when overseas customers favour increased levels of localisation. Working with long-term suppliers and supporting their deployment of localisation provides a platform that can be mutually beneficial, at the same time building on historical patterns and knowledge to ensure continuity and enhanced management of change and risk.

Michael Dell's perspective from the Harvard Business Review was: 'Until you look inside and understand what's going on by business, by customer, by geography, you don't know anything.'

Developing a wider perspective, which vertical trading alone does not deliver, will enable the creation of innovative thinking within stable relationships. Recognising the longer-term implications for all parties ensures that greater flexibility can be maintained, together with a continued and sustainable focus on competitive edge.

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