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E-business and organisational change

Reconciling traditional values with business transformation

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Abstract *While much attention has recently been focused on the problems facing Internet start-ups, the challenge of e-business affects a much broader constituency of organisations. For established companies, the key challenge is one of change. Such companies must rethink fundamental aspects of company strategy, which may lead to a radical overhaul of existing ways of doing business, with company structure and culture becoming much more customer-focused. Resistance at all company levels may need to be overcome, with a need to build commitment and consensus around e-business strategies. However, companies must also deal with a paradox in e-business change. As the "dot.com" crash showed, there are many strengths in "bricks and mortar" companies. Evolving a new business model based around "e-enablement" must therefore avoid the "baby and bathwater syndrome". Only by recognising and rising to these challenges and dilemmas, and devoting sufficient time, resources and expertise to them, will companies make a success of their e-business ventures.*

Introduction

The commercialisation of the Internet has given rise to a range of new business concepts, most notably the notions of "e-commerce" and "e-business". For the most part, the popular imagination has been captured by the rise of Internet start-ups – the so-called "dot-coms". This is particularly the case where the companies involved demonstrate new business models and offer customers novel value propositions. The great "e-pioneers" are certainly worthy of attention and analysis. All businesses can learn much from their birth pangs and their experiences of the early days of the Internet revolution. But for most companies, e-commerce and e-business are not matters of innovation from scratch, but of organisational change and adaptation – even corporate transformation.

This paper addresses the problems faced by such companies. It argues that over and above the technological matters, major organisational change issues must be recognised and addressed for e-business solutions to be realised successfully. This is the case, it is suggested, because of the need to redesign

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business processes and structures, change organisational culture, and engage in education and training. A wide range of stakeholders may be affected, with many personnel needing to buy-in to the change. As Siegel (2000, p. 35) puts it:

> There is only one way to do e-business: fully committed. Everyone in the company must be dedicated to the effort. You can't have ten people for every thousand working on it. You can't delegate it. You have to encourage everyone to jump into the water and support them in teaching each other to swim. I'm asking for the biggest cultural change in your company's history.

To address these issues we will start by making a distinction between e-commerce and e-business, noting the greater scope of e-business change. We will then discuss some recent primary case histories of e-business change, including empirical case studies of a global technology firm and a major UK retailer. Drawing on change management theory, we will draw some general lessons from these changes and identify lessons for guiding managers through the process of change.

From e-commerce to e-business

E-commerce has existed for some years in the form of electronic data interchange (EDI). However, technical problems and restricted functionality ensured that such systems never achieved widespread credibility. The lack of a common standard meant that companies tended to get "locked in" to one supplier. It has taken the growth of the Internet, with its universal standard, to project electronic transactions into mainstream commercial credibility, allowing businesses to connect throughout the value chain, exchange real-time information and streamline business processes both internally and externally.

The scope of Internet applications can vary hugely between organisational initiatives, highlighting differences between e-commerce and e-business strategies. E-commerce strategies are characterised by companies whose catalogues are put online to allow electronic ordering. Such arrangements typically involve dedicated "Web groups", acting independently of other distribution channels, which are often the exclusive electronic contact point for customers. As Siegel (2000) notes, such sites tend to be mere virtual versions of their concrete counterparts. A genuine e-business strategy, on the other hand, seeks to "foster conversations" with customers throughout the organisation (actually or figuratively), with all employees having a direct electronic link. Such "customer led" approaches, according to Siegel, involve listening to customers in a strategic way, deepening relationships and loyalty.

The importance of engaging in rich customer conversations is underpinned by a number of recent works on e-business. The much influential *Cluetrain Manifesto* (Levine *et al.*, 2000), for instance, asserts in the first of its 95 theses on the new economy that "markets are conversations". Newell's (2000) *Loyalty.com* underlines this point, and highlights the way companies must "leverage customer information" for the effective management of customer relationships on the Internet. Seybold's (1998) *Customers.com* makes similar points, again focusing on the need for customer-focused strategies that engage customers as parts of a community based around a company's products and personnel.

Such strategies suggest something much more radical than the basic e-commerce/brochure-ware approach adopted by many businesses at the moment. It calls for a re-engineering of processes and structures focused around key customer groups, rather than product or service divisions. It also implies cross-functional, team working. As Siegel (2000, p. 107) puts it:

> The customer-led company has a broad interface across which all employees can get to know their customers. Employees invite customers in to collaborate on new products, support systems, and methodologies ... Facilitating those interactions will take new communication skills, new tools, and the ability to move people in and out of product teams easily.

Technology and change

The Internet and e-business are therefore having an enormous impact on organisations. It is affecting how they operate and how they do business; it provides new opportunities for businesses of all sizes and has created a new sales channel. However, as Butler *et al.* (1999) state, the network technologies that support this are built on silicon – i.e. sand – and "as the sand shifts so does an e-business". In other words companies have to be prepared to reorganise and restructure themselves continuously. As such, understanding how to manage change effectively becomes essential. As Stroud (1998, p. 225) notes:

> The benefits that the Internet is expected to deliver will not be realised unless a company adapts its organisational structure and methods to meet the radical new ways of working that this new technology makes possible.

So, how can e-business be integrated into an established organisation? For a start, e-business is affecting the way people in organisations work together, share information and communicate with one another. It is also impacting on the transactions and connections that occur across the supply chain between suppliers, distributors and their customers. The Internet makes it easier for companies to form and manage networks, thus enabling companies to forge closer links with each other to fulfil customer demands. In Dell, for instance, customers are brought into the product planning processes and manufacturing, with all employees encouraged to have contact with customers. Through effective collaboration across boundaries, ideas can be shared about product designs and value propositions. The result is faster and more customer-focused product and service innovation. To produce the capacity for this, considerable attention must be placed on organisational structures, processes, skills and culture – elements that may need a radical overhaul in established companies.

Change management

Companies that adopt the sort of e-business strategy outlined above face a seismic shift in the way they do business. While the new business and technological environment is creating both challenges and opportunities for them, companies therefore require considerable change. Kalakota and Robinson (2001, p. 300) sum up the challenge well: "In the eBusiness world, companies must anticipate the need for transformation and be ready to re-examine their organisations to the core." What is surprising is the reluctance of many companies to do this. In a piece of research conducted by Jupiter Communications (2000) only 24 per cent of US chief executive officers (CEOs) surveyed in 1999 viewed their Web initiatives as an integrated part of their core business. The US experience, according to Cohan (2000) is that companies generally fall into two broad camps with their e-initiatives: being "self-reinventing" in order to maintain market leadership, or "change avoiding" by persevering with exiting ways of doing business. As the Jupiter study infers, self-reinventors are in the minority. Such companies, according to Cohan, have the following characteristics:

- They believe it is better to attack their existing business models than allow competitors to.
- They are led by CEOs who are very concerned about keeping competitors from gaining access to their customers.
- Their CEOs have a financial incentive to reinvent the company in order to sustain rapid profit growth.
- Their CEOs are personally open to learning more about e-commerce if that is what is necessary to maintain the strategic initiative in the industry.

Similarly, Siegel (2000) recommends that in developing e-business strategies, executives and the change management team spend time sharpening the "big question". These include:

- Which business areas are we open to exploring, and which are we going to avoid?
- Which parts of our business are going online fastest?
- What changes do we expect from competitors?
- Which start-ups are going to put us out of business?
- Which of our competitors would make good partners?

These questions suggest a radical or transformational view of e-business-related change, rather than an incremental one. This has major implications so far as the process of change management is concerned, as well as the likely successes and difficulties it will involve.

"Genuine" e-business strategies can therefore be said to involve far-reaching organisational change. Moreover, the central role played by Internet devices will add a layer of technical complexity to what may already be a quite dynamic situation. However, the redesign of business processes and structures is far from a simple "technical" matter. It involves significant social redesign. Such changes will always be open to disturbances and threats. The successful implementation of e-business change thus demands a robust understanding of change processes – particularly their micro-political and cultural dimensions – and how they can be managed.

According to Boddy and Buchanan (1992), the more radical change projects are, the more open they are to organisational disruption and failure. Badham *et al.* (1997) point out that there are two aspects to radical change. The first concerns the issue of "breadth" – the degree to which change is central to the organisation's strategy and survival and demands modifications throughout the organisation. The second relates to the degree to which such modifications mark a significant departure from existing ways of doing things. Both of these are certainly the case with e-business, of course. For example, such changes point to business process redesign, the development of cross-functional team working, and the move towards a customer-focused (instead of management-led) culture.

Such changes are likely to be politically controversial. The interests of a wide range of stakeholders may be threatened. Unlike routine change, such initiatives are also likely to be highly complex. As Badham *et al.* (1997) note, there may be a high degree of uncertainty as to what to do and how to do it; objectives may be less clear, and resource requirements will be less well known. In addition, it may be less easy to create shared perceptions of goals and build and maintain necessary commitment. For this reason, Badham *et al.* (1997) suggest that more time will be spent ensuring effective communication to encourage flexibility, address perceptions and generate and regenerate involvement. To illustrate the problems that can ensue in such a situation the authors describe Merrill Lynch's move into online trading:

> At the core of the change process was conflict at many levels within Merrill Lynch. There was conflict between the defenders of the brokers and their commissions and proponents of online investing. There was conflict between Merrill brokers who were concerned about losing customers to online brokers and Merrill brokers who were concerned about losing commissions. There was even conflict among Merrill executives between who favored setting up a separate online unit to compete with the brokers and those who favored keeping the online unit under the same executive (Badham *et al.*, 1997, p. 151).

In such cases, traditional "project management" approaches to change are likely to prove inadequate. Managers and change agents will instead need to be skilled in the art of leadership and corporate politics. The need to enrol and re-enrol support, neutralise dissent and resistance, and secure resources will demand networking skills and the ability to build consensus and support

(Buchanan and Boddy, 1992). They must start by gaining buy-in at the top. As Siegel (2000, p. 82) puts it: "You can have the world's greatest web strategy, but it won't work unless managers have a stake in the outcome." To do this, Siegel recommends the formation of a change team, headed by a chief Net officer (CNO). Furthermore, he suggests that businesses should: "Strengthen the team with managers who have good relationships with people in other divisions. The CNO will need a lot of favors, so make sure the team is credible in the eyes of the rest of the company" (Siegel, 2000, p. 83). By recognising the type of change they are faced with, and the sort of skills and tactics that may be employed, the management of change is more likely to be successful. However, this will also involve addressing problems on some specific fronts.

One of the first challenges companies face when attempting to embrace e-business and its technologies is how to move from being a physical or "bricks and mortar" organisation to being "clicks and mortar". Here, a more "virtual" form of organisation may result, mixing traditional ways of working with electronic communications. As our second case study will demonstrate, one of the key problems for existing companies here is to migrate from their "legacy infrastructure" to an e-business infrastructure. While start-up companies can leapfrog these problems, established ones face some difficult challenges. This was one of the reasons why it was originally speculated that the Internet start-ups also known as "pure-plays" or "dot.coms" would become the dominant business model in the business to customer (B2C) Internet market place. Effective e-business solutions demand integrated front and back end systems, of course. This means that when customers interact via the Web, placing orders and purchasing goods, the stock control and financial systems also speak the same language and carry out their part of the transactions. The problem is that many such back end systems are unlikely to be based on open Internet protocols and may even have been custom-built. Nonetheless, such systems may be critical to a company's business, and include such details as bank account data and stock rotation information. As Conway (2000, p. 62) points out:

> IT managers are loath to replace them with something new and untested. They may not even fully understand how their legacies work any longer. The people who built the systems may well have left the company, leaving present IT experts reluctant to tinker.

Replacing such systems also takes time, which may slow up web developments critical to speedy e-commerce innovation. As a consequence, back end, legacy systems need integrating with the front end, Web systems, a process which may demand close co-operation between two groups (or even sub-cultures) with the organisation. As Nigel Waterson of Gemini puts it (quoted in Conway, 2000, p. 63): "The front end has quite often been built by guys in ponytails, while the people who understand the backend are often grey haired."

Case study one – global technology company

To substantiate the above arguments and concepts empirically, we will now examine some primary data collected as part of an e-business research project. This case study concerns the implementation of e-business strategies within a large international corporation that is at the forefront of providing Internet and e-business solutions themselves. Despite this level of expertise, the adoption of e-business strategies within the firm itself has been fraught with difficulties, which are explained below.

The case focuses on the financial services division. It is described as a "matrix organisation", with instructions flowing from headquarters in New York and the Geographical Team at the European headquarters in Paris. There is a hierarchical structure in that information flow is "top-down". According to one interviewee, a major problem with the matrix organisation is "conflicting instructions", in that world-wide headquarters says one thing and the European headquarters says another. Time is then wasted arguing about how to proceed, which means that decision making can be quite slow, despite the fact that the matrix organisation is supposed to encourage cross-functional teamwork and facilitate better communication. The firm consists of a top layer of vice presidents, chief financial officers and the chairman. This top layer is then surrounded by a "camouflage" layer, which controls the information that flows both into the top layer and that which filters to the bottom layers of the organisation. Control and power truly lies with the camouflage layer as they have control of the flow of information. Below this are numerous networks that have a mixture of hierarchical structure and a matrix structure. The matrix organisation is supposed to encourage cross-functional teamwork and facilitate better communications, especially with e-business tools such as e-mail and an intranet in place. Most employees are members of at least four or five networks, with one main sponsor or mentor.

Even though the firm is trying to shed its "dinosaur" image and has become more customer-focused, in some ways it is still very old-fashioned. In fact one interviewee claimed that it operates on a "feudal system". Such "mechanistic" organisations are better suited to stable conditions and find it more difficult to cope with change. Since the e-business environment is constantly changing and no one truly knows what the future holds, an "organic" form would appear to be more logical. All the interviewees agreed that the pace of e-business adoption in the firm had been slower than expected. A senior manager suggested that top management were more concerned with "selling the solutions" than implementing them internally, and that the changes that had been made so far were superficial – done to illustrate to customers and potential customers that the firm was taking a dose of its own medicine. As one employee put it: "We are often the last to practice what we preach; we can use the Internet for communications, we can use it to look up news, buy and sell shares but our finance system is not Web-enabled."

The common reasons given by staff for the slow pace of change were:

- Resources being concentrated on converting customers into e-businesses.
- So much information still needing to be on paper.
- Little integration between processes.
- The fact that e-business is not just about technology, and that other organisational issues have to be addressed.

One of the staff interviewed thought that the pace of adoption of e-business had been slow because:

> Employees are now expected to do and track everything themselves – too much time now gets spent accessing intranets to find out what is going on in the department.

She went on to say that a lot of people were suffering from "adoption fatigue", with too many new tools available to use, which were also slow to access on the servers. The problems encountered when managing change usually relate to organisational issues such as culture, strategy and structure, but additionally in this case server overload and system failures are discouraging employees from using the technology. However, one employee questioned whether speed was necessarily such a good thing anyway:

> If we are all totally honest we would admit that we do not know where e-business is leading or whether it has a long term future. At the same time however we have no choice but to adopt e-business or be left behind by the competition.

As mentioned earlier, problems encountered when managing change typically relate to organisational issues such as culture, strategy and structure. The firm's e-business strategy is one that is "customer facing", in other words directed at the external market. It could therefore be said that internal integration is a secondary priority. This order of priorities was reflected by one employee who claimed that "the customer comes first, then the company, and lastly the employees". One senior manager also noted that although the firm had embraced e-business because of the potential revenues and the market pressures, they also recognised that cost reductions and efficiency gains could result from becoming an e-business. The danger is, of course, that a focus on revenue does not allow "people" to be taken into consideration, and could go some way to explaining the slow up take of the e-business philosophy within the firm. This rather negative attitude contrasts with the positive disposition of employees when they noted how the clear e-business strategy has given the firm direction, describing it as "a banner under which the whole organisation could unite". All the employees interviewed agreed that in order for change to be successful, everyone should be involved and the change should not merely be "bolted on". One went on to say:

> You do not just have to change the process but also the behaviour, the people, their aspirations, the brand image . . . and in established organisations these can be deeply rooted.

This, of course, reflects the need for a "hearts and minds" approach to change, with culture – and therefore people – at the centre of attention.

Critical to success, of course, is visible and credible change leadership. However, one senior manager admitted that the firm does not have an e-business leader. He claimed:

> There are hardware, software and services leaders but there are no e-business leaders. There is no one writing the strategy or calling the shots. Some people think they are but they are not. If they are they are definitely not driving the individual components towards integration.

Research suggests that the process of e-business integration would be greatly helped if management led by example. A non-managerial interviewee believed that the bottom layers of the organisation are the real e-business people in the firm, noting that:

> The higher up in senior management we go, the less access they seem to have of the e-business tools. They talk about it with their team but they don't necessarily do anything with it.

One problem, of course, is that use of these tools demands a change in behaviour, involving greater openness and co-operation. But the sort of communication and knowledge sharing this demands is seen by and some middle managers as a threat to their position. Their power base is often viewed as a result of "the knowledge they have, the people they know and the position they hold". They therefore do not want information to flow freely across the organisation, rendering their roles as gatekeepers obsolete. In the words of one interviewee:

> Top management can have the commitment to change, people on the floor can see the market changing and the need to change with it, but the middle managers who see their job threatened are only interested in keeping status quo, where they feel comfortable and powerful thus hindering the process of change.

The firm is defined as having a "high performance culture". One of the senior managers suggested that this culture has taken some of the pain out of change, especially when compared with the past where the culture was paternalistic and meant that change was difficult. Within this high performance culture change is easier because the goal is what is important, so if change is necessary to achieve this goal then it is more quickly accommodated. However, some of the "relics" from the past are still there to resist the changes. Although these employees have worked for a technology company most of their working lives, new technologies are seen as "foreign" and they are therefore neither confident nor comfortable using the technology.

Case study two – UK retailer

This case study focuses on a traditional UK department store that has utilised developments in e-commerce to stimulate extensive organisational change and re-positioning of the brand, with a considerable degree of success to date. From a stagnant position in the retail market in the mid-1990s, the company recognised that complete redevelopment of the business was necessary if it was going to stay competitive in the long term. E-commerce was to play a critical – although by no means exclusive – role in the successful re-positioning of the business.

The first Web site was set up in 1996 (which was very early in UK terms) as an exploratory venture with the aim of improving the customer experience and increasing the number of available shopping channels. It was initially "content only" and presented in the style of a glossy magazine. Then followed a whole three years of careful planning and research before the company's first commercial Web site was launched in late 1999. This policy was in keeping with the company's careful approach to new initiatives and preference for incremental rather than radical changes to the business model. Consequently the new development was viewed as an opportunity to extend in-store and catalogue product ranges on a gradual and selective basis rather than attempt to cover everything at once. Unlike many "pureplay" competitors such as Boo.com, there were no expensive multi-channel advertising campaigns. Instead customer awareness of the new site was primarily created in-store with the URL address being placed on shopping bags, till receipts and posters. Site marketing and promotion, product selection and merchandise management, customer services and site development were all managed in-house. Outsourcing of content management was necessary to combat the limited specialist skills within the company at that time.

The interviewees reported that the company policy of slow and incremental change, particularly during 1999 when Internet "hype" was approaching its height, was frustrating for many staff who felt they were being left behind in comparison with what one called the "more fleet of foot dot.coms". The so-called "old-economy" firms were regarded by many as "dinosaurs" as their bureaucratic structures and management hierarchies only allowed the "wheels of change" to turn very slowly. In common with many such companies at this time, significant numbers of influential staff lost patience with the pace and extent of change and left to start their own dot.com businesses. However, despite the scepticism of those who felt the initiative did not go far enough to turn the fortunes of the company around, over 10,000 casual browsers sought out the new site before it was even launched. It was at this point that the realisation began to dawn of the enduring value of the traditional brand in the very different online setting. As the "dot.com crash" of 2000 unfolded, the value of the company's incremental approach to change became even more apparent as lessons were learned from the mistakes of online retailing pioneers. In addition, many staff that had left to embark on the "dot.com revolution" now tried to return to their old jobs, seeking the security of an established business model.

While the stability and security of the established business and its incremental approach to change was in many ways beneficial, the company still had to reconcile its policy of gradual change with the need to keep up with technological developments. The preferred approach of upgrading and integrating existing systems rather than undertaking a more radical overhaul, resulted in a number of problems:

- Affiliate partnerships could not be taken advantage of because site technology was incompatible. As "deep linking" was not possible, customers had to purchase goods advertised through partner merchants separately from "in-house" goods, causing much customer dissatisfaction.
- Banner and button marketing were also restricted as links were only capable of directing customers to the site or to a particular area, rather than to the specific product advertised in the banner.
- Affiliate management and analysis proved difficult as the supporting affiliate management agency could not integrate its software with that of the site, causing communication problems and additional costs.
- Day-to-day marketing efforts could not be developed quickly enough within the traditional department store operating constraints in order to be sufficiently distinctive, new and creative.
- Perhaps the most important problem was the missed opportunity to record and track individual customer purchases and the most visited areas of the site. These data could have been linked with registration preferences to create opportunities for personalised marketing campaigns.

So after the unexpected early success of the Web site, by 2001 the reliance on more "traditional" technology therefore caused serious problems for site profitability, credibility and market position. The software could not accommodate increasing numbers of users resulting in longer page download times, purchasing difficulties and navigation problems. Customer expectations were constantly rising as comparative competitor sites began to upgrade their sites by using new personalisation and CRM solutions in a more sophisticated fashion. In addition, new market entrants – also with established branding and a loyal customer base such as Wellbeing.com and Argos.com – have also entered the market for the first time in 2001 at this level of development, bypassing the preliminary stages altogether.

In October 2001 the company tried to address the problems identified above by launching a "phase 3" site, which incorporates the following features:

- increased functionality within the site and portal/affiliate presence;
- "fine tuning" of customer profiling;
- new data mining opportunities;
- personalisation of the customer's shopping experience;

- enhanced merchandising capabilities through cross-sell, up-sell and combination facilities;
- improved customer service; and
- increased efficiency and cost effectiveness.

The aim of "phase 3" is to improve the shopping experience by improving site navigation functions while learning about customer preferences and buying habits in order to drive loyalty by targeting people with the right products at the right time. New software has simultaneously brought much content management capability in-house, thereby reducing maintenance costs. Simplification and integrated information databases have allowed the company to transfer much of its operational customer service function to the call centre with the aim of improving customer service through faster response times.

The company is now almost unrecognisable from the struggling traditional retailer that launched a basic Web site in 1996, but it cannot afford to stand still. Emphasis is now directed at developing the core areas of the site to maintain customer retention with personalised experience being a key development task, along with multi-channel goals such as providing direct site access in store via Internet kiosks.

This example, of course, shows a paradox: on the one hand we find the enduring role of traditional brand values and the need for a gradual approach to change, and on the other hand there is the need for organisations to keep up with customer expectations and competitor activity.

Discussion and conclusion

The case studies have illustrated some of the challenges faced by incumbent firms in terms of e-business transformation, while also highlighting some surprising advantages over the supposedly more agile industry newcomers. Finklestein (2001) summarised the key reasons why many Internet start-ups failed where multi-channel sites have succeeded. He studied 15 "old" and "new" economy companies and came to the unanimous conclusion that not only did new start-ups "face many of the same rules" that old economy companies did, but also these rules actually favoured the old economy companies in battle with the Internet start-ups. The latter tended to lack critical mass, credibility, stability, established networks, management and logistics capabilities, which are key factors effecting long-term profitability. Finklestein believes four basic attributes (customers, capabilities, competitive advantage and internal consistency) are key to e-business survival, and many Internet start-ups failed the basic task of actually acquiring the customer in the first place. In terms of capabilities, he notes that many dot.coms arrived with "a vision of changing the world" (Finklestein, 2001) instead of establishing "effective routines" (Finklestein, 2001) with operations appearing more complicated than first conceived. Dot.coms such as Boo had difficulty transforming resources, people and ideas into "outputs that customers value." These findings certainly refute the claims of writers such as Kelly (1999) that new rules are required for the so-called "new economy".

Gulati and Garino (2001) studied three US Internet alliances/partnerships including the case study of KBToy's joint venture with BrainPlay.com (KBKids.com) where the benefit of brand recognition was a prominent theme. The authors noted that dot.com start-ups find it difficult and expensive to build brand identity successfully on- and off-line. The established KBToys name generates a "striking 80% awareness among toy buyers", giving KBKids a significant advantage. Other incumbent advantages highlighted in the study concerned the traditional supply chain, for example the value of purchasing leverage through bulk buying and distribution economies. Few dot.coms had a product turnover density large enough to gain such bargaining power.

There is one nagging criticism of this early literature which is that it tends to place much emphasis on strategies for overcoming different barriers to change, assuming that the "traditional" companies in question have destructive, dogmatic cultures with bureaucratic tendencies. This insinuates that at a basic level, such companies are almost by definition "change-phobic". Many early e-business writers made the rather enthusiastic presumption that Internet retailing was so revolutionary that traditional retailers would become obsolete. Traditional companies were criticised for being "slow off the mark" and for adopting cautious "toe in the water strategies". For example, Windham (2000) criticised traditional retailers for not finding "the vision, commitment and guts to proceed", but he mistakes caution for "e-denial". In fact, it now seems that those companies that exercised a careful Web integration strategy have been those with the most durable and promising Web sites. The incumbent bricks and mortar retailers (as the second case study demonstrates) have in fact not resisted change, but instead embraced it in an incremental way by creating successful and sustainable Web sites as part of holistic multi-channel strategies.

At this point it is also worth briefly examining the past in order to learn from the development and diffusion of earlier technologies. Hanson (2000) notes some uncanny parallels between the Internet and the growth of radio in the 1920s. He demonstrates that change is always with us, however radical we might think the Internet is "altering" marketing practices at the moment. His description of radio developments highlights that they made a huge impact on the society of the 1920s, but this did not happen overnight. Hanson (2000, p. 2) reminds us that radio "... so captured the public's imagination that commentators claimed it would revolutionise culture, education and commerce". Jardine (1999) looked further back into history, and claimed that the emergence of the printed book in the fifteenth century was equally as radical in its impact on contemporary life. Interestingly however, she notes that it took some 50 years for the printing business to become profitable, with a number of prominent early market entrants going out of business along the way.

In their study of the social influences on technology, Mackenzie and Wajcman (1985) claim that a new technology is created in the context of existing systems. It only appears to be radically different from what has gone before with hindsight, because the benefit of a historical perspective filters out less successful alternatives. They criticise the idea that a technology can be "invented" as a single inspiration in isolation of the influence of existing practices, by noting that the only hindsight allows a particular invention to be traced back to a single inspirational source. In reality, competing projects may have overlapped and been developed concurrently, but only the story of the "winner" survives the passage of time. As Phillips (2001) has shown, as much as 72 per cent of all IT developments are actually centred on improving the efficiency of current operations rather than creating new ones.

We tend to assume that contemporary changes are the most significant because we are closest to them and do not have the clarity accorded by distance from the phenomenon. It is evident that earlier innovations have had radical impacts on society, but perhaps not always in ways expected at the time. The perspective lent by distance is necessary to comprehend the full extent of the changes taking place over a significant period of time. The value of such historical thinking centres on the additional insights it provides to analysis of the current business environment. Our capacity to plan for the future can be enhanced by understanding how earlier innovations appeared at the time, so that we do not apply the standards of the present to the past through the "rosy glow" of hindsight. If the "traditional" business context is a significant building block for innovation as noted in case study 2, then perhaps we should not be too quick to abandon established business principles in our enthusiasm for new ideas, but rather to "mix and match" as customer needs and market conditions dictate.

As part of this we must recognise that companies that adopt e-business, as opposed to e-commerce responses to the Internet, face a number of key challenges. Initially, these involve rethinking fundamental aspects of company strategies and business models. The strategies that are adopted are likely, in many cases, to involve a radical overhaul of existing ways of doing business, with company structure and culture becoming much more customer-focused. Moving organisations towards such ways of working will have widespread consequences and will therefore not simply happen over night. Many stakeholders will be affected. New skills and forms of behaviour will be called for. To facilitate this, skilled change agents and leaders capable of championing e-business will be needed. Resistance at all company levels may need to be overcome, with a corresponding need to build commitment and consensus around e-business strategies. At the same time, care needs to be taken not to "throw the baby out with the bath water" and recognise that significant aspects of the "old" business structure or process may well have enduring value in the e-business context. Only by recognising and rising to these challenges and dilemmas, and devoting sufficient time, resources and expertise to them, will companies make a success of their e-business ventures.

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