

Re-defining the company: organisational dynamics in the new economy

The industrial revolution taught us that disruptive technological change – revolutionary as it may be – is insignificant against the changes it imposes on organisation dynamics (the strategy, business proposition and structure of the organisation and its people). Arkwright's water-frame – a water-powered spinning machine – destroyed cottage industry and led to the cotton-piece product; the mill and its dependent communities. The progression from shaft-driven machines to electrical machines allowed a total re-organisation of the early industrial factories away from a concentration of machinery around the source of power to organisation of machinery according to production process flow. So the 'conveyor-belt' worker – caricatured in Charlie Chaplin's 'Modern Times' – was born.

We appear to have forgotten this fact in the information revolution. If you are looking for revolution, look at the technology as only five percent of the total change that you need to embrace. Look everywhere else for the other ninety-five percent. eBusiness technology does not imply an incremental adjustment to your existing business proposition and organisational fabric, but complete organisational revolution. It is true indeed that competitive participation in eBusiness is impossible without such change and that failure to recognise this explains many of the false starts and disaster stories about eCommerce – wrongly pinned on the technology and not on the failure to change everything around it.

This paper will concentrate on the organisational dynamics forced on us by eBusiness and demanded by the global new economy. To do this, it is necessary to explain the transition from 'old economy' to the new, so you may understand why such a revolution is required and why failure to recognise this has created so many false-leads and blind alleys to business success.

Consequently, this paper will review the market preceding the revolution (i.e. to approximately 1997) and will demonstrate why we reacted in the way we did to eBusiness. Out of the hype a number of salient lessons have emerged and the paper will consequently review the sort of proposition companies should pursue and the combination of the organisation and technology they must adopt to make successful eBusiness happen.

Business Background

Our initial mis-reaction to eBusiness can be explained concisely as an over-habituating to the use of *cost* and *cost alone* as a competitive weapon and a presumption that all this new technology gave us was further means of cost-cutting.

Once a product has demonstrated enough demand in an emerging market, and is capable of mass production, then there is no longer a premium price that the producing company can charge for it. Rather, burgeoning competition arises amongst firms to reduce their production operating costs to such a level that the product can be sold cheaply, and yet enough *margin* can be made on the commodity to allow the company to continue surviving. One can trace the uptake of automation within mass-producing companies by its capability to keep operating costs as low as possible, so more profit could be made on goods sold. A whole generation of management grew up on this model.

Until about 1997, the information revolution was actually a force for stability in the market. This was good for producers and also provided *measured* product improvement for customers because:

- Technology's cost was a barrier to entry to all but the best funded or most aggressive new entrants;
- Most solutions from different suppliers were pretty similar. Company strategy was stable and therefore predictable, as there was little room for disruptive innovation;
- The speed to market for a good technological idea was slow due to the size and complexity of information systems. Consequently, obsolescence of products occurred naturally, keeping appetite for 'innovation' stable, but growing. Similarly, companies could not capitalise on a disruptively

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new idea, because of the time to market. By the time an idea's development was complete, most competing companies had thought of it too;

But, the position arrived roughly in 1997 where mass-producing business was so dependent on 'Operational Efficiency' for competitive edge and so dependent on the power of computers to achieve it that:

- Businesses' collective processing capacity was far in excess of market demand;
- Technology had automated number crunching & routine tasks and done nothing to make *management* of companies any easier. Large business had become very complex and poorly suited to adapt to disruptive change;
- All major vendor solutions ended-up looking remarkably alike – there was very little product distinction so little customer loyalty, but little reason to change, either.

A CEO of a large company in the late 1990s therefore had the following on his or her mind:

- Costs were too high;
- They possessed an inefficient existing operating model and a cumbersome organisation in which to initiate change;
- They were oversupplying a commodity product;
- They had mergers and acquisitions to absorb;
- They had existing and new competition to fend off.

If a CEO could not make the best of all these problems, then they were also not maximising shareholder value - which in the final analysis, is their most important indicator to the outside world. Is a company more valuable left running as an entity in its own right or are its assets worth more on the open market? The CEO had to prove that the company was worth more left running as it was.

In this position, the only competitive 'outlet' was typically to merge with another company, in order to obtain further operational efficiencies through greater scale. The late 1990s witnessed a large wave of mergers, especially in the high technology users such as financial services, automobile manufacturers, pharmaceutical companies and interestingly, in the large consultancies that served them (for exactly the same reasons of overcapacity).

Another possible response was to reposition the company in a different market or different sector of the same market. This re-engineering implied internal or external re-organisation of the company, a probable acquisition strategy and re-positioning of the company's offering and traditional markets.

(The other option for the CEO, of course, was that they could go. The Hay Group estimated that in 1997, the proportion of company board members with less than five years tenure was 14%. By 1999, this figure had increased to 17% and is still rising.)

The CEO of a medium-sized company also faced high costs and oversupply of a commodity product. Additionally, medium-sized companies would be aiming typically, for customers in the large-company space and would therefore be most keen for recent innovations that would allow them to offer a better product proposition or much better levels of service than the bigger companies in order to lure their customers away. These companies' smaller size made them faster to react to opportunities than their large competitors. There was also significantly less 'legacy baggage' to slow them down and communications between groups was significantly easier. However, in the mass-production market, in which the bigger players existed and at which the medium players nibbled, the sort of investment required to radically alter the business proposition or improve service was quite simply out of their reach, or if not, far too risky if it was genuinely 'new'. These companies may also have had very little investment muscle left if they had recently automated for any reason. So although the medium-size company was potentially the *most dangerous* threat to the larger, by virtue of their hunger and speed, their investment capability made any change unlikely or very high risk *before 1997*. This position radically altered after 1997.

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The CEO of the small business also faced high costs, although the products on offer were more likely to be more specialist or niche than those of the larger competitors. This allowed a better margin to be charged for the goods, which was necessary generally to cover also for greater market fluctuation and greater structural inefficiency of these companies. Use of technology to mass-produce the company's goods was prohibitive, as cash itself was perpetually short. Management of the company was also a large issue, due to the small ratio of staff numbers relative to customers and suppliers. The smaller company was perpetually overstretched staying in business in the current market, let alone raising its head above the parapet to predict what opportunities could exist. Any foray into unproven technology would literally 'bet the company'. It should be noted that whilst small companies individual revenue was small, leaving them poorly enfranchised (little clout) within domestic or global markets, collectively they accounted for at least sixty percent of any country's total gross domestic product making them a vital sector of the economy.

For all these companies, cost was clearly an issue. Yet in terms of new ways to generate revenue, technology was extremely expensive and little could be done with it to allow one to leap-frog larger competitors. One could merely replicate what they produced to overcapacity anyway. To all but the largest companies, investment was also an issue, making it hard or impossible for small or medium sized-companies to seriously challenge large mass producers or even change the rules of the game. And this game, you will recall, was governed purely on the ability to compete by cost.

Then came the internet.

This technology did not shave cents off the operating cost of a product, but dollars. The cost of performing business transactions therefore did not lessen marginally, but literally ceased to be. For example the cost of an Insurance transaction over a physical outlet (such as a regional office or branch) was estimated to be \$37. The same transaction over the telephone was \$22. The same transaction over the Internet cost \$1.20! A massive fall from \$37¹!

The technologies themselves were very much cheaper than previous offerings, since many of the problems encountered by previous technological 'waves (e.g. Client/Server) were now shrink-wrapped pieces of software you could buy off the shelf.

Gone therefore were the two-year development times too – a good idea could be brought to market very very quickly. The rapid development times now afforded by the new technologies meant you no longer lost a half-life of a good business idea during the implementation time of a project.

The technologies offered the opportunity to transact business twenty-four hours a day seven days a week across the globe. This was especially attractive to multi-national business, reliant on distributed datacentres and distribution channels world-wide.

The technologies also appeared to offer the capability (through Workflow and Customer Relationship Management) actually to start managing a complex business, rather than just fix number-crunching or volume processing problems.

And do not forget, that 'loose money' policies were quite deliberately pursued in the latter part of the twentieth century as the millennium approached – in order to ensure there was enough investment and work-in progress in the economy to pay for any potential negative effects that may occur because of the anticipated millennium bug.

As a consequence, by 1998-1999, there was an investment-rich global environment and a series of changes ushered in by the new technologies that were disruptive, not incremental, in their implications on standard business understanding.

What happened?

¹ (Meridien Research June 1999. Insurance and the Internet: Cutting Costs and obtaining customers)

Strategy gone mad?

The reaction of most companies to this exciting new technology was to read-into it the solution to all ills to which they were prone at the time, and not to look at the technology per se and work out what they could really do to capitalise on it.

So whereas all companies were capable of benefiting equally from the Internet, it was only those with the right mix of problems that by chance (more than vision) really capitalised on the new technology. It was simply not enough to look at this technology, as all previous ones, as the next era in cost-cutting.

The fact that the Internet appeared to offer solutions to every existing ill can be seen in the following diagram which shows the take-up of the Internet, when compared with other (now) familiar technologies.

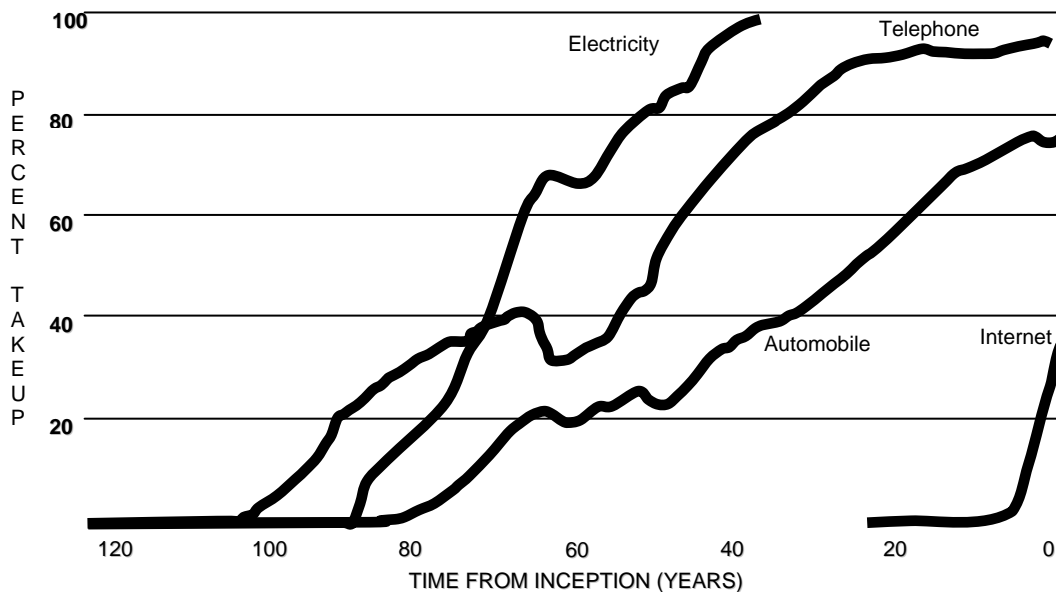


Figure1: Take-up of the Internet.

This did not show that companies were adopting the Internet *correctly*, merely that there was a mass-scramble for the Internet.

So what were the attractions (and pitfalls)?

Cost-saving

Companies facing a high cost-base typically saw the Internet as an additional distribution channel or substitute distribution channel for their existing commodities. Alternatively they merely saw it as a cheap means of servicing customer queries and not for generating new revenue. In this scenario, companies placed existing products on the Internet without modification in the expectation of cheaper customer take-up or servicing. Web propositions were poor and often not integrated with the existing physical proposition meaning that take-up was consequently poor and sufficient cost-gains were not realised.

Operational efficiency

Those suffering inefficient existing operational practice sought to start a new model business in parallel to the old one, perhaps cannibalising some of the traditional customer base to get some custom onto the new proposition. This was the right way to start. There was a right and a wrong way to continue:

Wrong way: In some cases, companies kept the new proposition separate from their original business, causing customer confusion and a 'two-company' image to the market. This was either because they did not or could not transition their old company into the new. Many companies that started with two separate propositions (e.g. Charles Schwabb) soon realised the advantage of integrating back with the

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existing physical company as they found that customer preference for channel use is *accumulative* and not exclusive.

Right way: In more visionary companies, transition of the inefficient existing company into the more efficient new model (note order) was achieved, so the web became an integrated channel with all data and services on the existing physical channels (and vice-versa). These are the true 'Clicks and Mortar' companies that Intel's CEO Andy Grove first mentioned as best users of the Internet.

Revenue generation

Companies seeking an expansion of customer-base (typically small or medium-size companies) took an additional few steps. Typically one of two paths was chosen:

- a) The speculative small company, unable to launch a powerful customer proposition on expensive physical media saw the opportunity in the web to launch such propositions. A flourishing of such sites earmarked the hype behind the web. However, with no existing customers and little customer loyalty, companies were forced to 'sell dollars for ninety cents' in order to attract custom in and this was an untenable business to pursue – as history has shown.
- b) Of the few companies that identified the need to merge both their physical *and* their electronic channels (as above) some also identified the need to re-engineer their *entire proposition* to offer on these combined channels.

And the last case is the one that has so far really come through for the web. The only proposition that really works is one that has combined elements of all these solutions and not the individual points covered above. In other words, the company that created an exciting new customer proposition and enabled it on the web AND in their existing physical channels is the company that has flourished in eBusiness. This has typically not been the very large players, because if they had the vision and the need, they can not integrate their technologies and business units together to produce this sort of proposition. It has typically not been the very small companies either, as they have lacked the investment power and customer numbers to make a dent. Is this statement a generalisation? Yes. Does it mean very large and very small players are excluded from effective eCommerce? No. But, consider the advantage experienced by those who got this right:

- a) the re-engineered proposition captured customers from businesses offering dull propositions over the web or existing physical channels;
- b) a mixture of channels fulfilled a customer's desire to access a company any way they wanted at a time suitable for them;
- c) the correct integration of the old and new channels forced the company to address issues of operational inefficiency (integration of their business units);
- d) the mix of new technologies and operational efficiencies conferred the cost-savings.

Let us look further therefore at the re-engineering of the company's proposition and then at the way they obtained operational efficiency if these are so *key* to eBusiness success.

The business proposition

Why should companies re-engineer their propositions to obtain eBusiness success?

If a new technology were to appear that did not allow cents to be shaved off the cost of a product, but so many dollars; if this technology was also available not only to those who could originally afford it (big players) but to *everybody*, then competition by *cost* suddenly cannot be sustained any more either as competitive advantage between peers, or as a barrier to entry for newcomers. Everyone is on the same level playing field. Looking to the web for cost-cutting alone therefore has zero net competitive advantage.

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Where advantage does lie is if companies look very hard at keeping customers by some other means - perhaps by pandering to the requirements of particular customer groups and charging them premium prices once again. Perhaps companies could try to cross sell their own products in combination with the products of other companies, in order to leverage mutual benefit out of each other's customer books.

There are many facets of eBusiness that attract different customer types and this will include a combination of:

- Compelling customer proposition;
- Price value (not necessarily cheapness);
- 24-hour service with control placed in the hands of the customer;
- Multiple distribution methods - Physical (face to face), Personal Computer, Mobile phones, Digital TV, Call Centres.

In order to change its customer proposition, a company needs to make the following considerations.

1. Do they understand their customers?

A company needs to understand their customer and product behaviours. See Table 1 below:

Product 1	Product 2	Product 3	Product 4	Total Business
Customer 1			Customer 1	2
	Customer 2			1
	Customer 3	Customer 3		2
1 customer	2 customers	1 customer	1 customer	

Table 1: Customer:Product affinity diagram

This table identifies what customer types buy which sort of product. The idea of this analysis is twofold:

- To identify your customer presence within your product set. This might suggest at which market groups and with what products to direct your company's efforts;
- To allow you to begin to assess the characteristics of customers 2 & 3 (i.e. those that appear to buy your most popular products) and equally assess the characteristics of customers 1 & 3, because they each buy 2 of your products.

Now, looking at the characteristics of the customer types, a company should identify the value of the customers they have and the type of servicing requirement they will have.

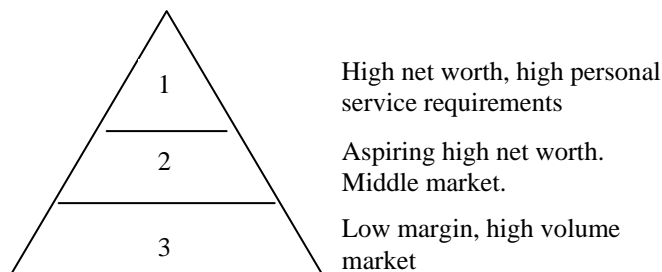


Figure 2: Market segmentation

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With knowledge from the above-two analyses, a company can now define:

- What 'packages' of products suit which type of market and what the servicing requirements of those products are likely going to have to be in order to keep those particular market types 'sticky'.
- Who their lifetime highest worth customers are. This may not be category '1' customers, as their servicing requirements may be too costly for margin the company expects to make on the product. Alternatively, a company may seek to reposition the product and charge more, in order to capture this market segment.

This type of analytical exercise should show a company what adhesion they have for each product type and for each particular market segment. Consequently it should help a company engineer an attractive package. This is crucial for regenerating the company proposition because:

Customers don't want products they want solutions to problems, needs or wants.

To keep customers sticky, companies must help them realise GOALS and not sell them PRODUCTS. Take an example from the banking industry. The companies that are getting this re-engineering right realise that when you want to buy a house, your 'goal' with them is not to buy a mortgage. You don't ever say to yourself 'I really want a mortgage'. You say 'I want a house'. These companies are therefore packaging up all the sorts of products you need to help you realise these goals. In marketing terms this is known as identifying:

'Customer prime desire'.

Companies may realise, when they have done this exercise, that they are not in a position to fulfil a customer's prime desire. This is good news. This means they are on the road to customer retention. Companies in this position should seek-out other companies that offer products sympathetic to that prime desire and make a *joint venture* with them. What does this do?

- It starts to give their customers goal fulfilment and is likely therefore to keep those customers 'sticky'.
- It opens up for both companies the order books of the other in a complementary, rather than competitive way. Each company can increase their 'virtual' customer order book because another company is now partly cross-selling your product to theirs.

The beauty of electronic commerce is that it allows companies to interface with each other incredibly efficiently and this enhances the networking capability.

In this way, rather than a mass-producing economy in which 'one size fits all', in the new global economy the diversity of human preference is catered for because a company (or group of them) seek to fulfil the desires of groups of people, with a unique blend of goal-oriented offerings. The benefit for the company is that they can charge a price that the particular market will bear, and also strive for lifetime loyalty from the customer market.

Operational efficiency

History tells us that technological revolution brings about organisational change. How many companies have tried to embrace eBusiness without changing the fabric of their organisation beggars belief. This section will demonstrate the extent to which an organisation needs to change to support the sort of re-engineered proposition alluded to above, whilst making their own internal workings efficient-enough to keep prices low.

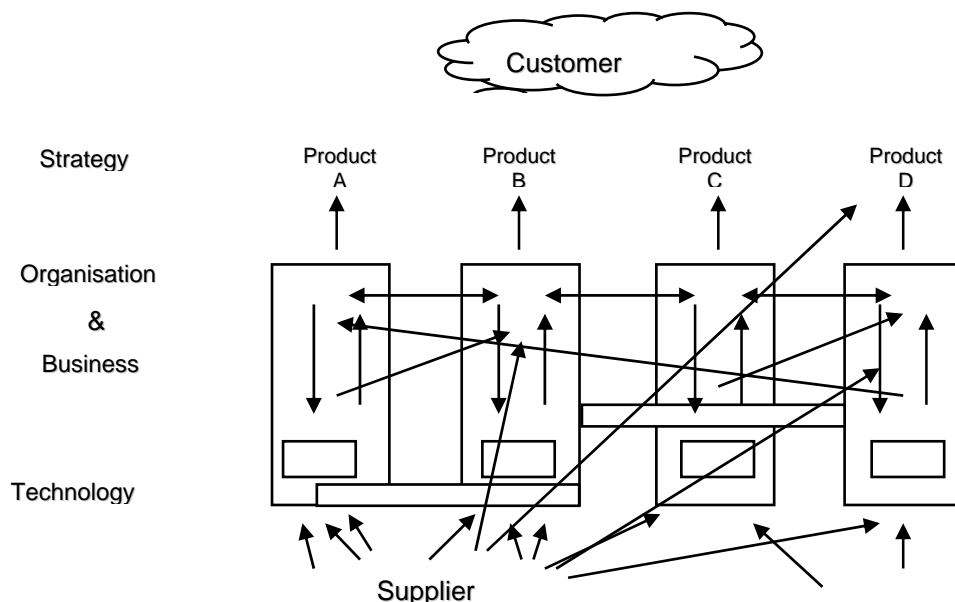
Perhaps the biggest factor facing companies wishing to change is the weight of investment they have already made in change. One of the biggest hurdles to successful eCommerce implementation - and a reason that compromises large companies - is the actual organisational structure itself and the extent that it will have grown to support physical distribution and to reflect a mass-production (product

focussed) market. This organisation has to change again for eBusiness: its current form cannot support an integrated product (goal-based) offering.

Vertical integration of business grew companies into a number of vertical silos each oriented towards production of a specific product. The strategy of a company typically focused product by product and no single company vision really existed; technology was implemented to support each individual product, with little re-use across business units. The only common technologies were likely only to be accounting and financial systems. Although part of one organisation, separate product silos saw themselves as unique from other departments in the firm, creating political and communication problems. Business processes within each product silo were duplicated across others and were conducted by separate staff using separate facilities. This was wasteful and inefficient and worked against a 'one-company' vision and culture. Similarly, down the supply chain, procurement was organised business unit by business unit.

Figure 3 shows this situation, without too much parody. (It is no wonder the main driver of these companies was to keep costs down.)

Figure 3: Organisational silos in the vertically integrated company



Insight that organisation change has to accompany eBusiness and the ability to get it done is the key to operational efficiency in eBusiness. This is because all channels must be able to service the customer in the same way in order to make the best servicing sense for the customer and to leverage the technologies in the best way and therefore capture the best operational efficiencies for the company. This implies:

- The company needs an integrated channel architecture promoting a single company strategy, rather than being a collection of silos offering one product to whichever customer wants it;
- The company must pursue a 'customer', not a product-centred vision;
- The company must integrate all previously separate customer fulfilment, production and servicing functions into a single entity (not spread them across separate product silos);
- The company must integrate front-end channels with back-end technologies. This implies that all business 'functions' need to be identified and isolated into programmed 'business objects' usable by any of the channels, not just by one or two. It also implies that the disparate back end-systems and data are made available to all front-end systems and no longer just to the individual channels or products they used to serve. Large businesses have found this very hard to achieve and in many cases have failed or given-up. This has meant that they can only offer existing products over

existing channels or brand-new products over electronic channels and cannot actually achieve the vision of full-blown eCommerce;

- The company must face redundancy of staff. By integrating functions across the former business silos, companies will realise an inherent inefficiency in their structure and face layoffs and redundancies at worst, or re-deployment of certain staff at best.

The above changes not only best facilitate eBusiness for the company, but by the very process of re-integrating the old silos back into one entity and removing those old 'territorial principalities' built up by the former product 'chieftains', the whole company is brought back into the realm of manageability. Former technological revolutions could never accomplish this.

A company that embodies this organisationally looks like the one shown below.

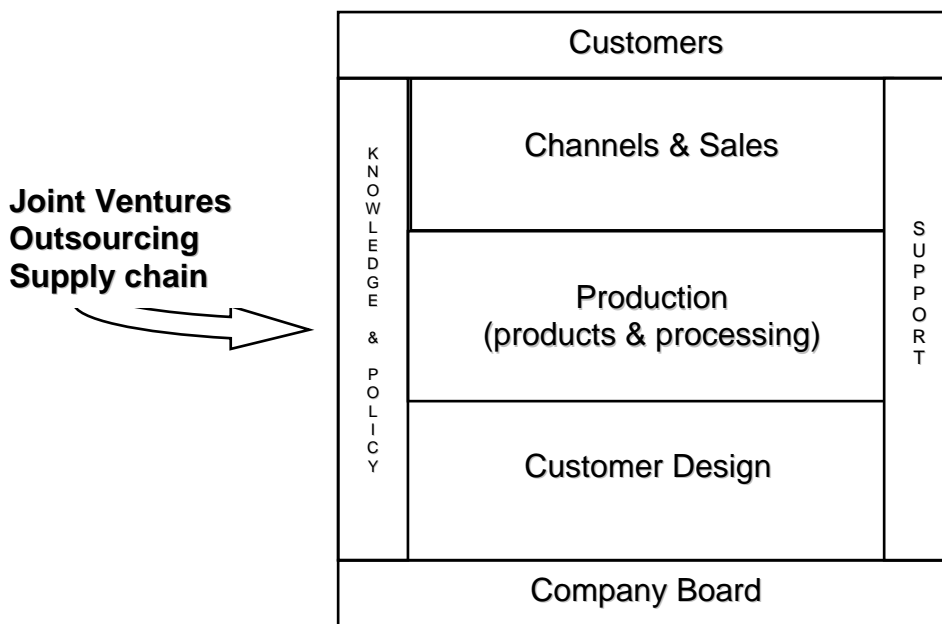


Figure 4: The shape of clicks and mortar companies

This organisation puts right the problems with the 'silo'-based company:

- Customers are explicitly considered as a strategic part of the organisational fabric, rather than as an entity 'out there' and out of control. This explicit recognition of the customer as part of the organisation is a necessary component to a successful re-engineering of the company's proposition: to ensure that it produces what suits the market, not what suits itself.
- The company is visibly a single entity, not a loose collection of product channels. This brings the company back into effective manageability and also offers the opportunity for removing duplicate processes right throughout the business.
- You can offer a mix of physical and electronic channels that all host your offering and give your customer the *same* perception of data and service from whichever channel they choose to access you.
- 'Production' is a single unit that integrates the production of as many different individual products as the company has into the customer 'prime desire' package.
- Companies can foster a group to perform customer intelligence, collecting data on customers already with the company and identifying buying habits, trends and desires.
- If one defines the 'Customer' segment as a distribution interface to the market, the 'Knowledge & policies' segment is the company interface both internally (company communications) and

externally to your joint ventures, suppliers and outsourcers. This forms your 'intranet/extranet', your repository of corporate knowledge, insight and practice. This interface is key to the networked company.

- One can similarly define the 'Support' segment as the company's single support interface. This is the area to which all sections go for maintenance, support and smooth running of the company and includes the IT department, Human Resources etc.
- The Company board (note its position) provides the drive for the company and must unequivocally be the place from which vision is pushed.

If you now take the above diagram and superimpose the technologies offered by eBusiness vendors, you will see a very elegant fit of technology to organisation and the basic fact this paper is trying to communicate. (see Figure 5 below). This fit is impossible with a silo-based company structure.

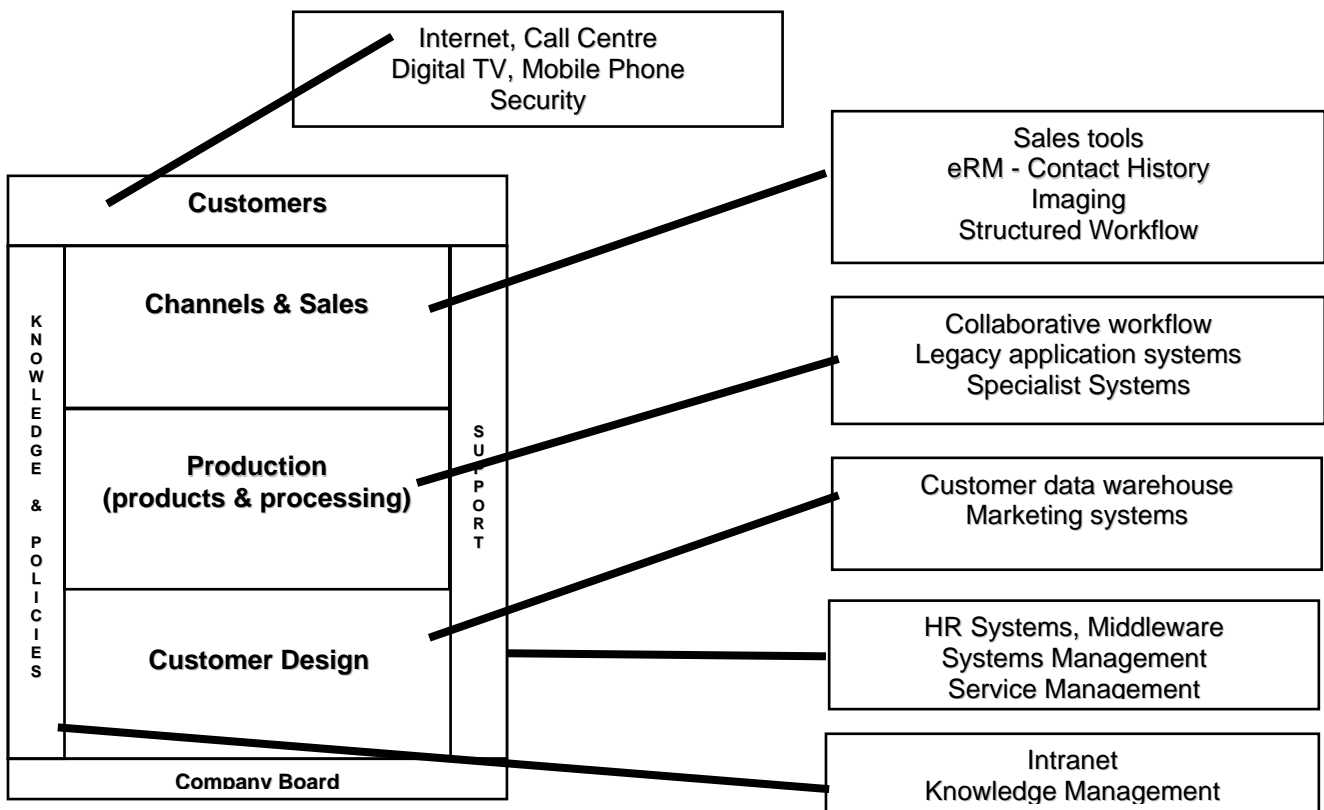


Figure 5: How technology supports the re-engineered organisation

The global supply chain

If you have successfully re-engineered the company according to figure 5 and implemented electronic interfaces to the outside world, you can begin to exploit business to business electronic commerce.

Figure 6 demonstrates the electronic business within the new supply chain:

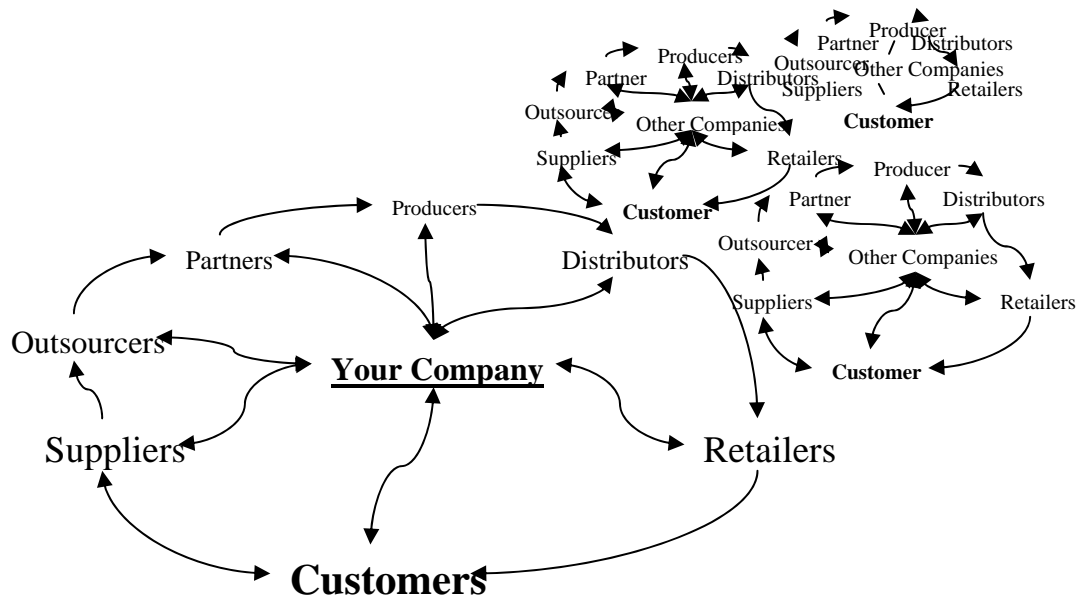


Figure 6: The new supply chain.

The organisation redesign discussed above fully supports the idea of networks of businesses working together to produce total solutions for customers. And because companies create standard interfaces into and out from them, alliances can be made or broken relatively easily.

The supply chain vision culminates in the integration of everything that that has been re-engineered internally within your company with the systems that exist within your suppliers and customers. With the Internet, the possibility exists for you to integrate with absolutely anyone (and to de-integrate equally quickly). With the sort of picture in place as figure 6 shows, business will have created a common *trading* communications basis between companies and individuals worldwide.

At the moment, there is still a long way to go with web enablement like this for global business. Uptake of electronic trading over the Internet is growing, but as yet, there is still little business-to-business functionality on the web. Consequently there are few defined standards for goods interchange. This is absolutely critical for successful exploitation of the Internet. Currently, the web also suffers from an absence of viable products and services and a lack of complementary systems between companies that want to trade. This position is evolving, but it is waiting for companies to get their organisations and propositions right.

Conclusion

Technology has implied organisational and proposition restructuring since the beginning of the industrial revolution in the 1700s. Consider that the companies that have flourished under eCommerce are those that sought not just to minimise costs, but to grab customer numbers through a uniquely re-engineered proposition over a *mixture* of physical and electronic channels. This implied organisational restructure as much as a technical and market change. Consider that those that failed to realise this have either failed or made no serious inroads in the web space.

What is the implication for companies that have not addressed the points covered in this paper? In the example of Compaq, who fired CEO Eckhardt Pfeiffer in late 1999 for failing to orientate the company towards the web, the future is questionable. Still selling through dealers and not, as its rival Dell, over a mixture of the internet or physical channels, Compaq knows it will lose dealers if it sells over the web, and lose a year's worth of sales if it now switches. Does Compaq switch channels and lose short term profit – punishable by the shareholders? Or does Compaq pursue the remaining profit in the physical market only and shun the new channels? Compaq is caught by the conundrum that there is

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more net present value for them not to invest in web technology. However, long-term this means they may have to exit the mass Computer construction business².

Consider this and think back to the way that companies reacted to the internet according to what was hurting them most. Dell was not the world's main computer manufacturer in 1998 when all this started, but had the hunger not only to reduce costs, but grow customer numbers through re-engineering their proposition and changing their operation.

The failures we have seen and are seeing now in high technology stocks are not a signal to dismiss eBusiness but a very clear signal that we are witnessing a structural shift in the makeup of companies. Those that have succeeded are shedding jobs as they integrate; those that did not change are facing decreasing sales. Many have not started at all. The industrial revolution taught us that technological change – revolutionary as it may be – is insignificant against the changes it imposes on organisation dynamics, but many have learned that lesson too late.

² Lester Thurow. 'Does the "e" in e-business stand for "Exit"? MIT Sloan Management Review Vol 42. No 2. Winter 2001. P 112.