



First Thoughts

business@100Mbps

A View of the
Firm of the Future

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www.bullseye.com.au



First Thoughts

This publication is the first of a series that will utilise social media and electronic publishing concepts. The *First Thoughts* white paper outlines some key portents of change, and Bullseye's view on how these might impact business in the future.

Public commentary will be captured by making this paper available as a discussion blog at www.bullseyereports.com.au/business@100mbps.

The concluding publication, *Final Thoughts*, will consist of a wrap up of public commentary and further research.

About Bullseye

Bullseye is an integrated digital marketing and technology services agency with specialist capabilities in digital strategy, digital technology, and digital marketing. Bullseye is now Australia's largest independent digital services agency. Offices are located in Sydney, Melbourne and Brisbane, with an offshore development centre in Bali.

Internationally, the company has had offices in London, New York and San Francisco since the early 1990's.

About the Author

Jim McKerlie's career in Australian and international consulting spans 25 years. An experienced company director, Jim provides strategic advice to many international businesses, regularly writes about business management for global audiences and is a much sought-after keynote speaker.

His corporate advisory and management experience has seen him take the lead advisor role on numerous media and telecommunications transactions, including lead consultant on the demand study undertaken by the Broadband Services Expert Group, lead advisor in the creation of PowerTel (now part of AAPT) and managing the process for issuing Vodafone with its Australian mobile licence.

Jim has lived and worked in North America, Europe, Asia and South Africa. Presently, Jim is the Group CEO of international digital services company, Bullseye Group, and Chairman of Drillsearch Energy Limited. Prior roles include being a Managing Partner at KPMG and a Partner-in-Charge at Deloitte. Qualification-wise, Jim has a post graduate in Economics and Finance, and is a Fellow of the Australian Institute of Company Directors, Institute of Chartered Accountants, Institute of Management Consultants and Australian Institute of Management.

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A View of the *Firm of the Future*

Purpose Of This Paper

Business managers are the custodians of the future of their organisations. They must not only deal with the here and now, but with what's coming tomorrow. In times of change, there is a trade-off between focusing on the present environment, and investing and preparing for the future.

The Internet is now all pervasive. We all know about it; it touches many of us in our daily lives in one way or another. Most of us are using it more and more, and at some time in the future it will be central to how we all live, work and play.

The Australian Federal Government has recently launched a major initiative to provide the infrastructure required to deliver Internet 'to the place' (i.e. home or business) at high speeds. Around the world the importance of the Internet to economic and social development is recognised by most governments and is a public policy priority.

This paper is very specific in its purpose, and that is to help business managers form their own view about what their business will look like in the future. It is not about technology futures, but rather the direct and indirect impacts high-speed Internet will have in terms of social, economic, psychological, technological, and regulatory changes and interactions.

We aim to paint a picture of the business Firm of the Future, so that business managers can prepare for the profound changes that are coming and start developing their roadmap to a digital future.

A View of the Firm of the Future

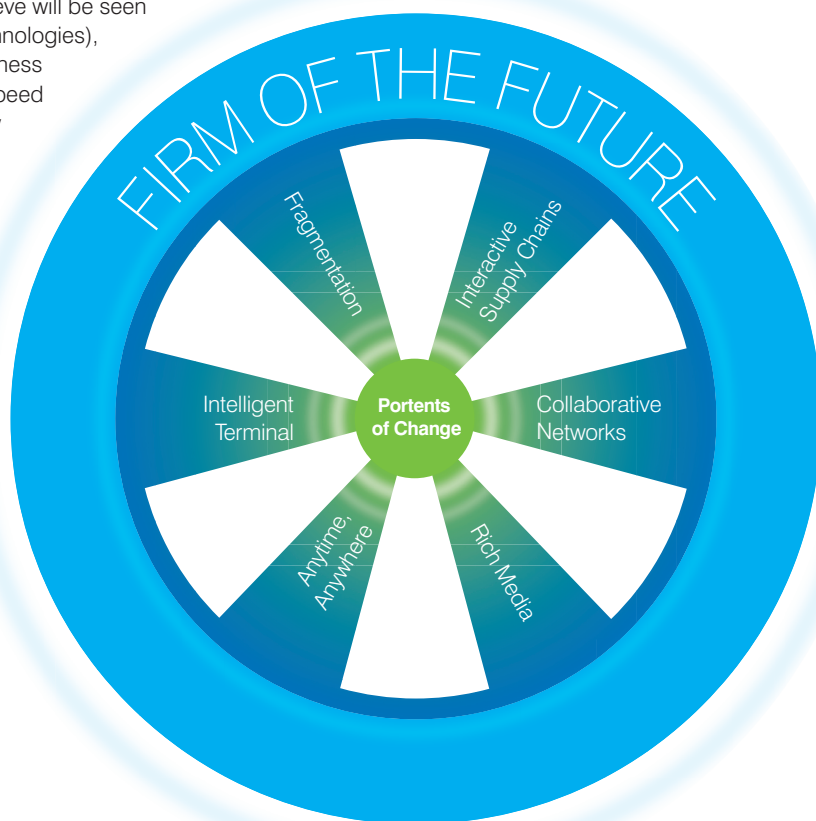
Portents Of Change

The way we do business is constantly undergoing change, some of these are gradual improvements, and others involve the creation of new paradigms.

The Agricultural Revolution saw great advancements in agricultural production leading to food surpluses and the emergence of trade. During this era, landowners had the power, and landownership was a sign of wealth.

The Industrial Revolution saw a new set of rules come into play with the introduction of the division of labour into specialisations, economies of scale, and the commercialisation and leveraging of invention. Power transitioned from landowners to those who controlled labour and capital.

We are now in the Digital Revolution, (which has been described as the Information Revolution, but which we believe will be seen as a part of a wider change driven by digital technologies), and comprehensive changes in the rules of business are emerging. Over the coming years, as high-speed broadband becomes more widely available, new paradigms will emerge that will again redefine the keys to economic success. These 'Portents of Change' will be central to preparing your digital roadmap.



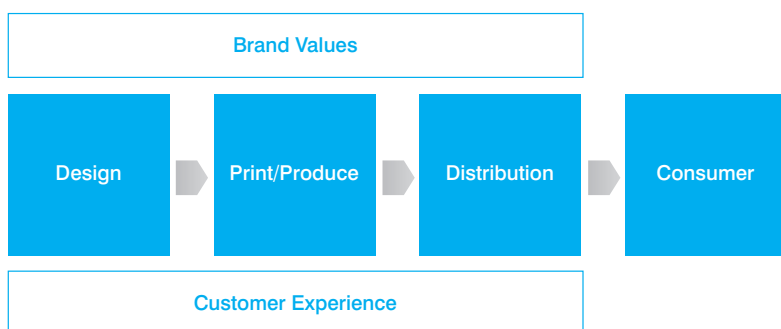
A View of the Firm of the Future



From Product-Driven To Customer-Driven Supply Chains

Portents Of Change

The product manufacturer typically drives supply chains, i.e. the upstream party who controls capital and labour has most influence over the various other parties in the supply chain, including the customer. In many respects, these supply chains are linear. They flow from upstream producers to the downstream distributors and retailers, and, finally, the consumer. We can summarise the way these product-driven supply chains work like this; upstream parties make goods and services (let's call this producing or printing), which are then distributed and sold downstream, as shown below:

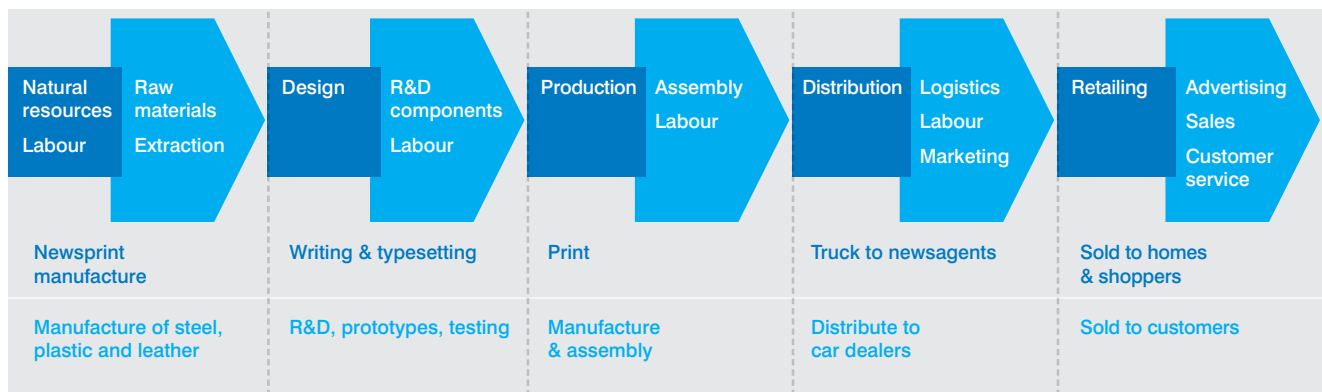


This diagram also shows where brand values and customer experience are created. They are upstream with the producers.

The next diagram shows a generic supply chain and provides two examples; one for newspapers, and one for motor cars.

Newspapers are printed, put on trucks and distributed to outlets; cars are manufactured and shipped to dealers. The flow is substantially one-way and, by definition, each downstream activity is dependent on the upstream links.

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Under product-driven supply chains, the following typifies the business relationship between producers and customers:

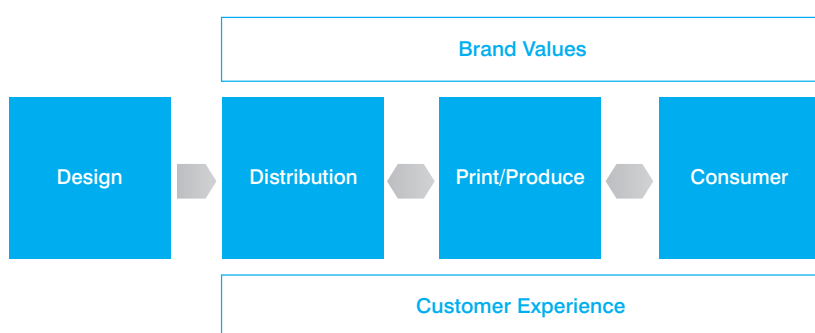
- Producers create goods and services that they hope customers will buy. To do this there is a heavy reliance on market research and testing. The consumer is typically far removed from the product development decision-making.
- Customers accept products with limited ability to customise these to their specific personal preference. The concept of caveat emptor (buyer beware) is predicated on the power of the producer.
- Producers use mass marketing to reach their target market, meaning a large part of advertising effort is wasted and is cost-ineffective, but it is where the brand personality is established.
- Product-driven supply chains have distinct players, and there are typically many intermediate links (businesses) between the originating producer and the ultimate consumer. Each link puts an additional step between production and consumption.
- The situation frequently arises where one link in the supply chain can exert a high degree of influence over the other players. This is possible due to the linear nature of product-driven supply chains where the whole chain is dependent on all the parties within it. Anti-monopoly and competition laws are designed to prevent one economic force having unacceptable power in the supply chain to the detriment of others.

In a high-speed broadband environment, new paradigms will emerge in the form of customer-driven supply chains. Downstream players, and in particular the ultimate consumer, will have access to information, instructions and options; they will make their selections and send information back up the supply line. This will allow much greater customisation of goods and services. It will also allow direct consumer input into product design and development, and change the power flow in supply chains.

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One of the principle reasons for this change is the greater capacity to move production/printing downstream in the supply chain, which puts consumers closer to the product decision-making process. Compare the following diagram to that above where 'print and then distribute' has been replaced with 'distribute then print'.

Portents Of Change



This is occurring in the field of printing, which has started to move from large central production, to a decentralised local print capability. A further example can be found in the photographic industry which originally operated as - snap off a roll of film, get it developed and then choose which photographs you wish to retain and use. Today, photographs are taken using digital cameras, and the consumer views the product before deciding which particular photographs are to be printed and used. This is a classic example of moving from 'print then distribute' to 'distribute then print'. The impact on the way people now approach their photography has significantly affected photo shops and the makers of traditional film based cameras, like Kodak.

We have seen the newspaper industry move towards this model with decentralised printing in regional centres of papers being sold locally. The next step will be the distribution of newspaper content to the ultimate consumer, who will print it out. People like reading paper products, so we are not talking of an electronic newspaper product. Rather this is your normal newspaper, comprised of information you are specifically interested in, printed at home before you read it. Printing may take many different forms, it may be ink on paper, but it could also mean podcasts or video content. It could be read from any number of screens in your home or car. The key point is that you will decide what content you want and you will consume it using a medium of your choice. Decision-making has moved from the producer to the consumer.

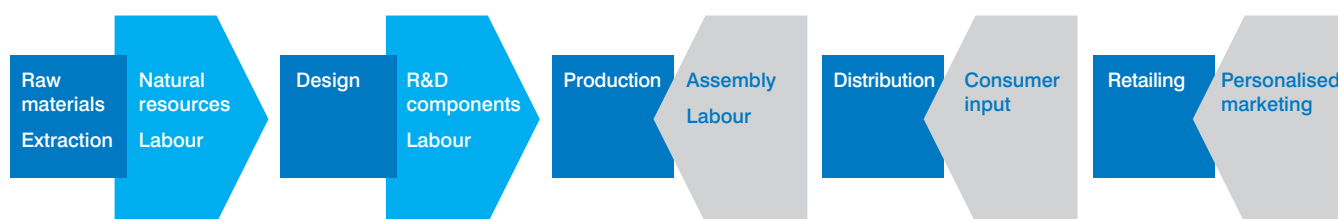
A further interesting development in this trend is the recent move by Fairfax to sell papers directly to home readers, and pay the local newsagent a delivery fee. The reader now becomes the customer of the newspaper, and the newsagent is one step closer to being bypassed.

Online services are increasingly reinforcing this trend. Online boarding passes, online loan applications and online car registrations are examples of the production/printing activity moving downstream in the supply chain towards the customer.

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The flow of Consumer-Driven supply chains is illustrated in the following diagram, where input from the consumer flows back upstream.

Portents Of Change



In the Firm of the Future we can expect to see supply chains become much more interactive, and power shifting towards the customer:

- Consumers will have much greater input into product design and development. Dell and its IDEASTORM (www.ideastorm.com) is a good example of this in practice.
- Mass production will be replaced with volume-based personalised production. Consumers will place orders so that they can get exactly the specifications they want, i.e. they will custom order goods or services, much as they did for bespoke goods in the past.
- Take cars for example: a buyer will log on and itemise exactly what make, model, options and colour they want. They may even negotiate the warranty terms, financing terms and service agreements they want, and the respective price adjustments will be made to their order. This is a far cry from the current situation of selecting a car that is in stock or in transit, and then dealing with separate financing and after-market suppliers.
- Some suppliers in the supply chain will be disintermediated, i.e. simply cut out, as consumers deal more directly with upstream suppliers.
 - Consider the changes travel agents have experienced as airlines themselves have offered online services.
 - For a more recent example, take the relatively new concept of 'dropshipping'; people can now easily engage directly with producers in China, and have goods delivered directly at a fraction of the recommended retail price. The local producers are responding to this opening market with English language websites and support staff, specifically to target the Western 'eBay' market.
- Supply chains will polarise into those who make the goods and services, and those who own and manage the customer relationship.
 - The 'producers' will focus on being the best of breed at their price point.

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- ‘Customer-owners’ will focus on managing the customer relationship of the full lifecycle, providing the right customer experience and brokering the delivery of what producers have to offer, to best meet the needs of their customer. They will outsource those business functions that are not core to their business. An understanding of your business model becomes important here; to retain your edge you would intuitively avoid outsourcing this.
 - Consider fund managers who market and sell financial services products, and the potential they have to provide a fully personalised investment management service to their clients. They ‘outsource’ the management of the funds to wholesale fund managers, and they also outsource the administration of the fund to specialist providers of funds administration services. They buy in best-of-breed back office functions, and focus on delivering a unique customer experience. They understand their customers’ needs, and find the best solution in the market to meet this.
 - Consider the recent offer from Penske Automotive Group to buy the Saturn car brand from General Motors. Penske have stated their intention to preserve the Saturn brand and retain the retail distribution networks, but to outsource the manufacture of the vehicles to specialist manufacturers. This is a major change for a traditional manufacturing industry; the brand will be owned by the distribution network, and the manufacture will be contracted out. This happens already with generic products in supermarkets (the home brand). For recognised brands, however, this is a major step. (Mind you, it is not unknown for major brands to operate this way. Hewlett- Packard does not manufacture many of the PCs they sell under that brand).
 - The music business has evolved from content stored on a medium (vinyl, CD, DVD) by a producer; to being downloaded and packaged by the consumer in whatever arrangement or medium they choose.
 - Sources of competitive advantage for the Firm of the Future will be found in those supply chains where decision-making has moved downstream to be as close as possible to the customer.
 - Post-sale product management could take on a whole new meaning. If a small transmission device was placed within a product which recorded a level of usage, then signals could be sent back to the supplier indicating when a product service was due, or the product was nearing the end of its useful life. This would provide a prompt for the supplier to contact the customer and organise a service or, even better, a trade-in to a new model. This is a practical example of the consumer triggering a message back up the supply line, i.e. it is illustrative of a consumer-driven supply chain.
 - There are many examples where this is happening already. Software upgrades are managed via online upgrades; some cars have tracking built into them, and there are many other instances. However, the motive for much of this is easier distribution. It is when business start using this information to improve their customer relationship management that it will be adopted more widely.

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From Homogenous To Highly Fragmented Markets

Mass production with mass marketing results in concentrated markets. Mass production provides the consumer with the benefit of lower prices, but customisation is sacrificed. Mass marketing is a 'one to many' medium that allows only one message to be conveyed to the market. Consequently, producers and marketers treated customers as if they were homogenous, and this led to a larger single concentrated market. The power of television commercials in establishing brands is now part of advertising lore.

But all this is changing. There are an increasing number of channels to market, and greater diversity in the way in which a marketing message can be delivered to consumers. The reform in supply chain supports this argument. Larger markets are fragmenting, as producers realise they can reach targeted segments. Oligopolies will no longer be the natural market state. Barriers to entry are changing, and the new, 'fleet of foot' producers are eating away at traditional producers, whose sunk costs often create barriers to exit.

Surf magazines, although a subset of the general sports magazine market, are actually further segmented into older surfers (you know the ones, they set sail on their Malibu looking for the perfect ride, and they're still out there looking), through to teen surfers. Each segment is targeted by different surf titles. This fragmentation of the market has interesting economic consequences. Very specific titles build their readership, and in the process cannibalise the less differentiated established titles.

Fragmentation has major implications for brand managers, who have historically relied on television commercials to build and maintain their brand presence. Nowadays, the rules about a brand and how it is used have moved from the producer, to the owner of the customer relationships to, increasingly, consumers themselves. Specialisation is replacing generalisation. Producers are pitching their offering at people within a narrow market segment.

In time, personalisation will replace specialisation, as information progresses from being targeted to the needs of a specific consumer segment, to being aimed at an individual consumer. How soon will it be before we each receive targeted and personalised advertisements through our digital TVs, mobile phones and electronic newspapers? Advertisements that are injected directly into our movies and games. The ad on the side of a taxi may even change to a different scene of the movie it's promoting next time *you* watch it!

Radio Frequency Identification (RFID) technology coupled with the fat-pipe to the cloud could facilitate public personalisation. The RFID might be installed on a person's phone, watch, smart card or even on their body. It would specify that person's interests and needs. This would activate changes on billboards, screens and building facades, so that the display advertisement was appropriate to that person - similar to the movie 'Minority Report', where billboards and ad screens changed to reflect what the passerby was interested in.

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The viability of many niche operators is often marginal and not sustainable. If personalisation replaces specialisation, what will this do to the niche operator? There is no doubt that the small 'fleet of foot' operator is well positioned to provide specialist services, but who is in the best position to provide personalised services?

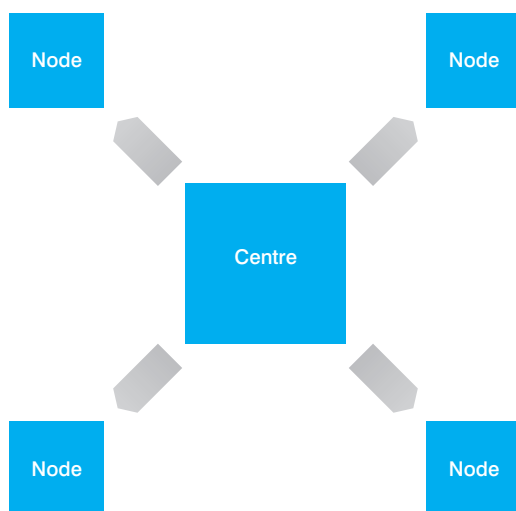
Personalisation will put a further nail in the coffin of traditional thinking about advertising.

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From Distributive To Collaborative Networks

Networks exist throughout the environment, and they take all forms and sizes including: technical, organisational, economic, social, political, business and familial.

Most, but certainly not all, networks that exist today are distributive, i.e. the 'Centre' distributes information to the 'Nodes'. This is predominately one-way, where the Centre is the holder of knowledge and power, and the Nodes are dumb terminals that can receive, but they are not capable of transmitting or processing information.



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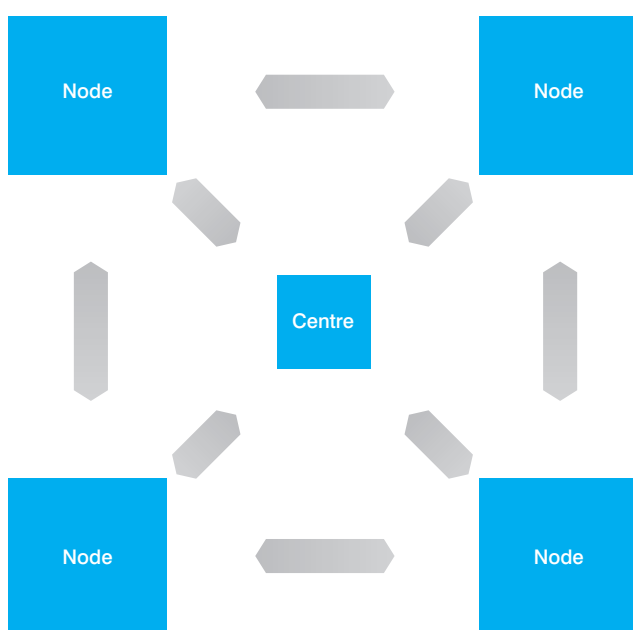


Under the Distributive Network model, typically the relationship between the Centre and the Nodes is:

- Knowledge sharing is only one-way, and sharing is limited to the content stored at the Centre.
- Nodes can develop extensive knowledge, but this cannot be easily shared with others. This leads to duplication, varying standards and failure to optimise the network offering.
- Tensions exist about the value and pricing of knowledge provided by the Centre.
- Conflicts exist about ownership (Intellectual Property Rights), particularly relating to knowledge originally provided by the Centre and then enhanced by the Node.

High-speed broadband will create a new networking paradigm, with traditional distributive networks being replaced with collaborative networks. This paradigm shift will allow the Nodes to generate and send information back to the centre. They will also exchange information with each other.

The role of the Centre will change from knowledge base to a governance, quality assurance or regulatory role within the overall network. The Centre is unlikely to disappear, as in many cases the governance, quality control and regulation cannot be left to the Nodes. The Nodes are often competitors in some way, or at least have their own agendas, and the centre will be required for independent governance. The following diagram shows how information will flow in a collaborative network.



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This will lead to a dramatic change in how networks operate. Consider the changes in the table below:

	Example: Centre and Nodes	Impact of Collaborative Network
Technical	Broadcast distribution system: Broadcast centre and TV sets	YouTube: Nodes contribute content that is being consumed by all elements in the network.
Organisational	Company: CEO and staff	Collaborative working environments; a move towards a democratic workplace, and the sharing of spontaneous ideas.
Economic	Cooperative: Coop and growers	Growers bypassing the cooperative and finding their own markets. The cooperative must deliver value to the growers, or it will cease to have a purpose.
Social	Sports club: Committee and members	Committees can seek input and participation in club decisions, and stay in tune with the mood of their members.
Political	Government: Elected politicians and citizens	Instant democracy. Politicians do not vote during their elected term, but rather citizens can vote on every bill. Politicians propose and debate bills before putting them to the electorate.
Business	Professional association: Institute and members	Members will share information across the whole membership base. Support teams, problem solving teams and peer support will be available from a far larger base.
Familial	Family: Parents and children	Parents will go from being the sole source of influence to one of many, as kids consume more content and develop diverse relationships online – good and bad.

The Firm of the Future will be able to harness and leverage the emergence of collaborative networks. The following are some examples of changes to the network environment and business relationships as they become collaborative:

- The volume of information will grow dramatically.
- Thought leadership and problem solving will be more effective if staff work as part of a collaborative network.
- Collaboration between a business and its customers will enhance loyalty, customer experience and client service.
- Businesses that are part of a professional association, industry group or buying group will benefit enormously from a collaborative approach.
- Social Media is essentially the first example of this; the Nodes generate content, and the centre facilitates and regulates (censoring). Facebook, YouTube, LinkedIn and Twitter are all early examples of collaborative networks.
- Wiki is a tool that has the potential to be used extensively to house a collaborative network. While Wikipedia is well known, it is a public wiki. As a tool, business can utilise a Wiki for internal purposes.

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The Rise Of Rich Media

The traditional nature of information flow has been data (think back to Morse Code), then voice and then video. Data and voice require low bandwidth, and have been interactive since people have had the capability to send and receive. Video requires higher bandwidth, and this constraint has limited video to be a largely one-way information flow. The biggest discernible change with high bandwidth will be the growth of video. We are already seeing this even with one-way information flows, as considerably more video content appears on the web. As a form of media that everyone has grown up with, interactive video will become the norm. With greater bandwidth, we will have a larger number of participants concurrently participating in a video call.

Web cams will improve in quality, and their use will grow significantly. Security monitoring, CCTV, video telephony, video based on-line learning and training, and many more applications will become commonplace. There will be marked growth in mobile video.

As customer experience and branding move down the supply chain towards the customer, producers will bundle their product with rich media offerings to enhance and influence the customer experience.

The Nike + iPod Sports Kit (www.nikerunning.com.au) demonstrates this concept well. The kit is able to store information such as the elapsed time of the workout, the distance travelled, pace, or calories burned by the individual wearing the shoes. It then displays the information on the screen, or broadcasts it through the headphones of the iPod.

Blackmores is another example of a company that provides consumers with a high level of consumer experience. Its various sites are tailored to specific consumer needs and circumstances; like pregnancy (www.blackmores.com.au/pregnancy), well being, detoxification and weight loss.

Most web content will become video-based rather than text-based, and it will be delivered to new places and new devices (see next topic). This will change consumer behaviours – think of cooking recipes delivered as video instructions direct to your oven 'screen' by celebrity chefs!

The other human senses of smell and touch have not yet been contemplated seriously. But these, particularly smell, can conceivably be delivered with the rise of rich media. In the same way as a camera is a necessary aid for video, it is conceivable that certain scents could be stored in a 'smell box', and when the appropriate data is received the nominated scents are released. If you have ever had the pleasure of visiting Macallan Distillery in Scotland, you can walk through the smelling room and enjoy the different aromas stored in smelling containers. Sign of things to come!

Jules Verne and other science fiction writers have contemplated what might be the technology futures, and many of these things are now possible. It is the things that we have not yet contemplated that provide the most excitement.

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The Firm of the Future will be an early adopter of rich media; taking advantage of the positive impact this will have on clients, staff, investors and all other parties it deals with.

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The Role Of The Intelligent Terminal

Most devices are dumb, i.e. they do not have any processors built into them. At best, they have a receiver so they can get information sent to them, but few can receive and transmit. Television sets are dumb terminals that can receive signals. In fact, a TV set receives all the signals sent by the various broadcasters, and the channel selector puts the chosen channel on the screen. Refrigerators are dumb terminals with the only processor being a thermostat, so you can set the temperature. Although phones used to be dumb receivers, the latest mobile phones have enormous processing power.

There are two different arguments as to the role of intelligent terminals. Which is right depends on the nature and purpose of the network in which the device will be used. The first view, (and it applies logically to computer networks), is that a dumb terminal will be fine as long as you have a 'big fat pipe to the cloud'. The terminals don't have to become very smart, they just need a high-speed connection to act as transmitters and receivers, and the massive processing ('the smarts') can happen elsewhere.

A perfect example of this is the Apple iPhone application that has built-in voice recognition. Voice recognition by itself is very processor intensive, potentially more than the iPhone processor can handle. The application works by simply capturing a signature of what you have said and passing it on to a web service. This is hosted by a powerful server that processes the signature, and returns what you said in text to your phone. The iPhone is actually a dumb terminal. It simply sends a print of your voice, and passes on what is sent back to it by the server. You, as the user, don't know where the processing grunt resides.

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We can extend the same concept to the refrigerator. The refrigerator of the future might take pictures of the state of different foods inside it, capture results from sampling the particles in the air, and transmit all this information to a powerful server. The conclusion might be that your yoghurt has gone sour and the bananas are brown - in which case, an order is sent to the grocery store to restock these items. Once again, the terminal is still dumb, but the results are amazing. For such advances as these to be possible, there is a need for a very high speed, widely available connection to the cloud.

The other side of the coin suggests that processing power in the device is important. The argument is that it will be cheaper to store and process some level of information at the Node, and not load the pipe and the cloud unnecessarily. In reality the preferred solution will be driven by factors other than the economics of the technology. If the interests of the users are not aligned, and the ownership or management of the information being processed is competitive, then parties will want greater influence over it, and storage and processing will occur within the device.

Traditional communication infrastructure posed limitations on how much information could be transmitted, and terminals were designed to perform a single task. With high-speed broadband, the capacity to transmit high volumes of data both ways sets up the opportunity for terminals to become much more functional.

The functionality of almost all appliances could be significantly enhanced, and this will happen particularly to those that can be connected into information, entertainment or communication-orientated activity such as printers, faxes, set top boxes, phone handsets, GPS navigation devices, time keeping devices or any device that might be used on a pay-per-use basis.

For the Firm of the Future, there is no doubt that more terminals will have communication and process capability than they do today. The use of this to better manage customer relationships, and potentially many other purposes, will represent a major opportunity.

My Time Is Prime Time – Anywhere, Anytime, And Only What I Want

People are users of information and people are mobile. As we become more accustomed (and possibly dependent) on having high-speed access at our fingertips, we will also want it when we are on the move. As a result, wireless will become a vital part of the broadband offering, and services will need to move seamlessly between fixed line and wireless infrastructure. Wireless has often been considered a low-cost way of providing broadband infrastructure, but its essential use in providing mobile broadband access will mean scarce radio spectrum may be reserved for mobile usage (as against fixed wireless usage).

Individuals will have 'follow me' communication addresses that will mean information will find them irrespective of where they are. Advanced VoIP systems have already moved in this direction. Will we end up being assigned with a digital number at birth that will be our lifelong contact number? In any event we will be online anywhere, anytime (unless we turn it off).

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Products will also have a follow me capability allowing them to be tracked over their physical life. This will facilitate improved asset management and, of course, enhance customer relationship management.

The current paradigm is that producers set the timelines for when things happen; particularly in relation to receipt of information, communications and entertainment. This is because the transmission comes from a central source, and we only have limited time shifting capacity. We watch the news when it is being broadcast, or we record it and watch it later, but the recorded version is then dated. Broadcasters have tried to get around this by broadcasting multiple channels with staggered content. In the future content will be available on-demand. This is a significant paradigm shift that means people will be able to order up what they want, when they want it.

On-demand services require significant bandwidth, and a high-speed network will significantly enhance this capability. The new paradigm will be 'My Time is Prime Time', as people will be able to access online services at any time they want, from wherever they are.

Another aspect of this change is the profiling of individual consumers. With users/consumers driving their power and influence up the supply chain, they will see content served up to them that is relevant to their needs. The days of mass marketing are numbered. If you have purchased a book on Amazon you might have noticed that you are offered books on related topics, along with recommendations from reviewers. How long before consumers will be able to filter out messages and content they do not want to receive?

The ability to filter out advertisements might have a significant impact on the pricing of content because much of this is supported by advertising revenue. Newspapers get a large proportion of their revenue from advertising; the cover price of the paper in many cases does not cover the cost of production. Advertising largely funds television services. In fact, free-to-air TV is fully funded by advertising, but Pay TV attracts subscription revenue as well as a growing advertising revenue base. Will consumers be able to elect to screen out advertising, and pay a higher price to see advertising-free content? Maybe consumers will consider highly relevant and timely ads as 'valuable' content that they want to receive.

To provide online services anytime, anywhere, the use of a particular intelligent device may emerge in the form of a super smart card (i.e. one with high storage capacity). This card could carry all your communication, licence, registration, credit card, health, passport, banking and other forms of personalised information on it. While you are offline, the data stored on the card would allow it to be used extensively. This information could be updated whenever the card was 'docked', and could connect to the broadband network. The alternative to a smart card (with all its problems of privacy and security) might be a digital agent that lives in the cloud and is accessible from any connection point.

Your digital agent holds all the information that the smart card does, but it is a virtual smart card. The difference between the two is that smart cards do not need to connect to the cloud to transact business, whereas a digital agent will require a connection.

Portents Of Change



From Fortress Analogue to the Digital World

Invisible Balance Sheet

Academics, managers, consultants and analysts all have one thing in common; they share in the search for strategic management frameworks that help them understand how businesses work, and how to improve business performance. It is, however, a moving feast. Not only is our knowledge of management science expanding, due in large part to the increased access we have to data about business performance, but the very dependence of business on people (customers, staff, investors) and how they behave, in itself, creates constant change. Global political and economic changes since the end of World War II have had enormous impacts on the environment in which businesses operate.

Over the last 15 years it is technology, and more recently the emergence of the Internet, that has been a major driver of change. Its rapid adoption in recent times has created what is now widely referred to as the 'Digital Economy'. The prospect of 100Mbps speed being accessible from almost all Australian premises will drive a new set of business rules.

What are these rules, and what will it mean for management? It is our view that these changes are so far-reaching that they will drive new business and social paradigms, and will result in the 'Firm of the Future'.

For the purpose of this document we have elected to adopt a strategic management framework known as the *Invisible Balance Sheet*, a model developed and used by Bullseye in the creation of the business solutions products we distribute around the world. The framework provides a structured way of looking at the impact of high-speed broadband across all aspects of business, and the environment in which it operates, and is described briefly in the following section.

The Invisible Balance Sheet framework recognises there are many aspects of a business that are not measured by traditional financial statements, but are critically important to the performance, success and sustainability of a business. These aspects are identified and assembled as part of the 'Invisible Balance Sheet'.

This paper will examine how each item on the Invisible Balance Sheet will transform to shape the Firm of the Future.

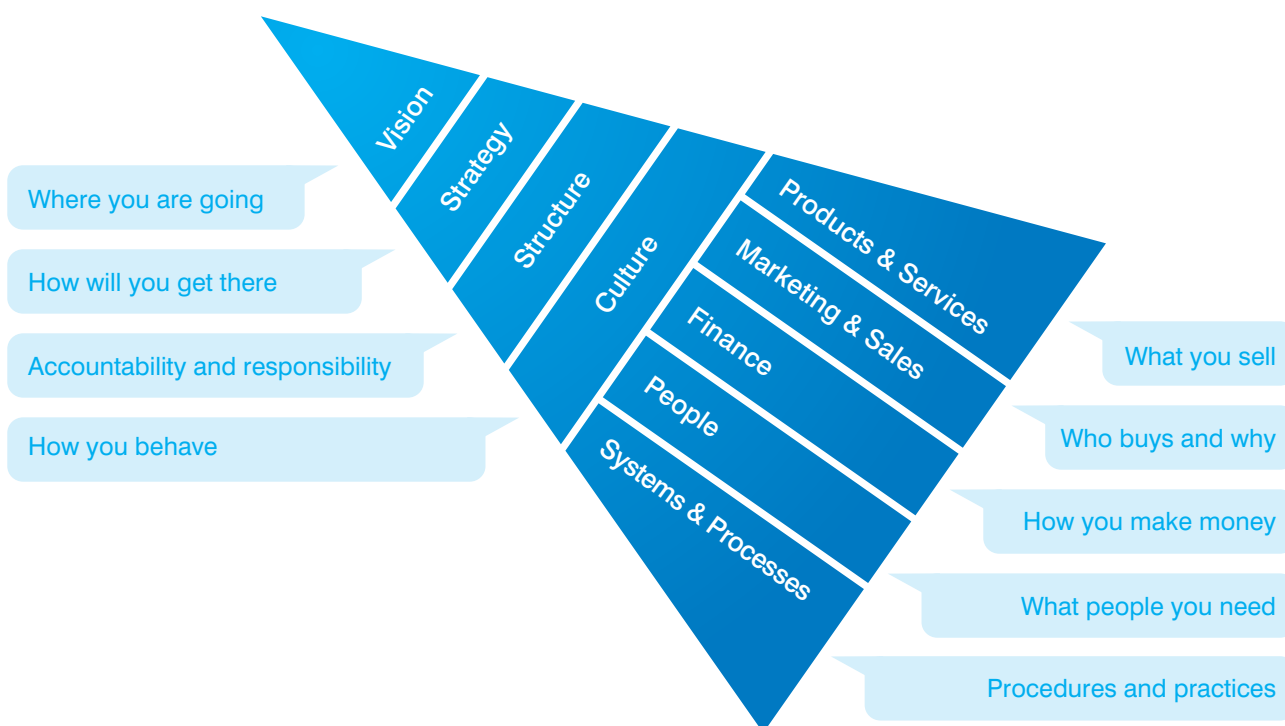
A View of the Firm of the Future



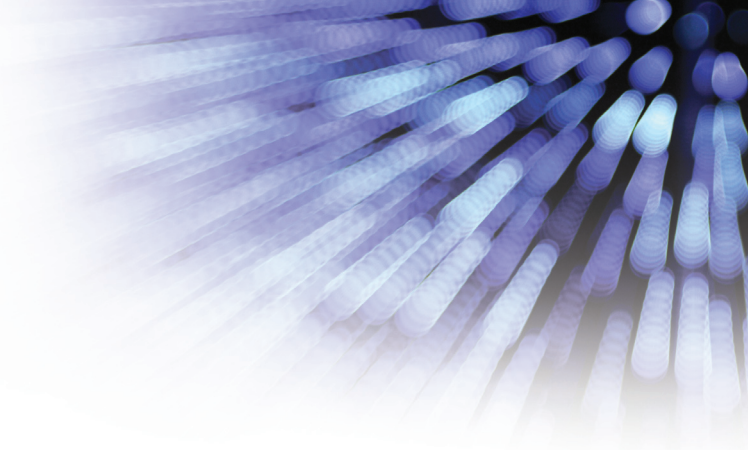
Internal Analysis Of A Business

The Invisible Balance breaks a business down into the following nine internal elements. These provide a helpful context for our predictions for the business Firm of the Future.

From Fortress Analogue to the Digital World



A View of the Firm of the Future



Business Models

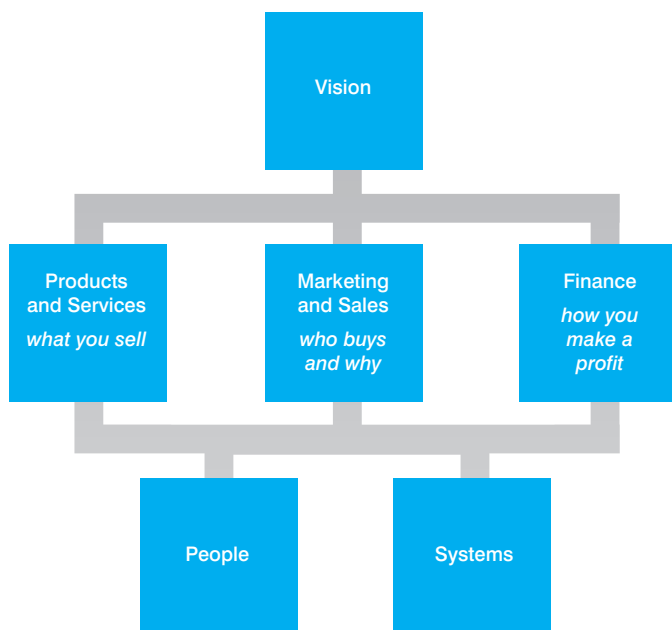
The definition of a business model is important to this discussion, as your business model is the heart of a business. Your business model makes the achievement of your vision possible, and all other elements of the business should be supporting the business model.

A business model is defined as:

- WHAT products or services you sell
- WHO buys them and WHY they buy them
- HOW you make a profit out of the transaction

This is represented in the three core elements of the internal business analysis, and is inextricably linked to the business' vision.

From Fortress Analogue to the Digital World



Business models will tell you what business you are in and identify your business drivers. Everything you do inside your business should be done to enable the business model to be achieved. This view provides a helpful way to consider many of the key management issues you face, e.g.

- Will the successful execution of your business model deliver the vision you have for the business?
- How future-proofed are you? What changes are going on that will impact your business model?

A View of the Firm of the Future



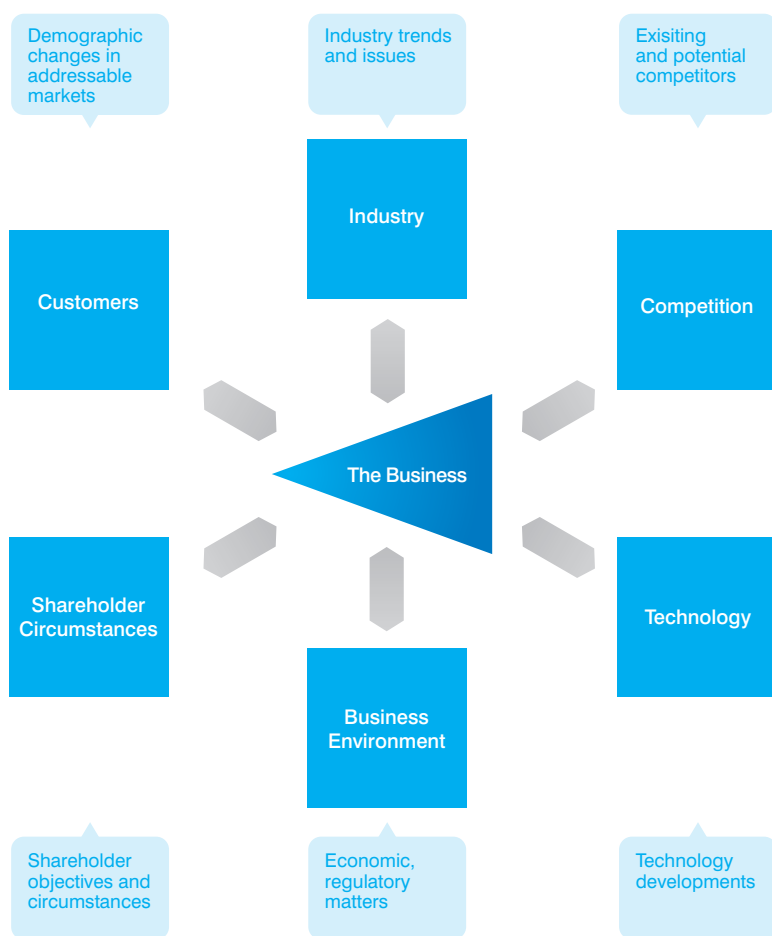
- What is your source of competitive advantage? Why do customers buy from you (as against your competitors), and how do you make your margin from this?

Doing business@100Mbps is going to change the rules significantly, and many business models will be challenged by these changes. Understanding what business you are in is a critical starting point to the analysis of what impact digital will have on it.

From Fortress Analogue to the Digital World

External Environment

There are also many external factors that should be considered in assessing the opportunities and threats the Firm of the Future will face. A business is like a cork on the ocean; it may want to travel in a certain direction, but the wind, waves, current, tide and any large ships that pass by will impact its direction significantly. The following diagram provides a framework of the external environment and a logical way to identify opportunities and threats.





Impact Across The Business

To look at the impact of these digital paradigms, we refer to our strategic management framework – the invisible balance sheet.

Products And Services

Consumers Will Extend Product Life Cycles

What will the impact of high-speed broadband be on product lifecycles? With the growth of information flow, conventional thinking has been that there is a reduction in the time to market. Hence, 'first mover advantage' may not be as big an advantage as it may have been. Supplier A puts a new product in the market, and Supplier B gets its version out there quickly, with enhancements. This has the impact of reducing product lifecycles. Mobile phone handsets are a perfect case in point. Everyone has several old, but still working, handsets in the top drawer. The cost of this is high for handset manufacturers, for telephone companies that subsidise them and for consumers who buy them.

It is possible that if customers can buy custom-ordered products that have the exact product features they want, they will retain that item longer. It is possible that the Firm of the Future will provide products will have intelligent receivers, which can provide functionality updates, so the item can be improved without being replaced. Regardless of the outcome, there will be limitations. Firmware (fixed, usually rather small programs that internally control various electronic devices) upgrades are utilised now by many producers, but if there is a physical attribute that wears out or needs replacing, Firmware will not be able to handle it.

Supply Chains Will Be More International

Supply chain management has already witnessed a massive positive impact from the use of technology. The reform of supply chain systems has delivered significant improvements in resource and inventory management, for example: linking ordering up and down the industry supply chain, lean manufacturing and just-in-time ordering systems.

One major change as a result of high-speed broadband is the 'internationalisation' of industry supply chains. Access to suppliers that are not geographically convenient has provided challenges in the past; the advent of interactive supply chains not only allows suppliers and customers to connect more readily, but also allows for them to do business. Business can look at spot markets to source their needs more economically. One impact of the improvement in ITC (Information

A View of the *Firm of the Future*



Technology and Communications) is that supply chains will splinter as business see opportunities to consolidate, either horizontally (merging with others who do the same), or vertically (merging with someone upstream or downstream in the chain). The Firm of the Future will need to look carefully at this, as new opportunities will clearly exist, but equally new threats will emerge.

Impact Across The Business

Product Tracking Systems

Product tracking systems will be developed that maintain details of the product's location, usage rates, service history and condition. This information will be transmitted back to vendors periodically to allow them to monitor the lifecycle of the product. This information is extremely valuable in determining when the product needs servicing and when it is due for replacement. To a limited extent this is already being done. Chips are currently being used in products to help manage the supply chain. However, the big shift will come when the Firm of the Future uses product tracking devices from the time the product has left the supply chain, to provide much improved customer relationship management.

Know-How Will Trump That Commodity Called Knowledge

Most business models have a geographical dimension to them; however, one of the big changes with high-speed broadband is that businesses will overcome the tyranny of distance. Customer proximity will be far less important than product innovation and improved customer service.

In the Firm of the Future, knowledge will become a commodity – we are seeing that now where publications like Wikipedia provide free access to any amount of valuable information. Product knowledge, customer history, procedures documentation and other forms of knowledge will be vital but not unique. Know-how on the other hand will be critical.

Know-how is defined as the expertise to undertake a specific activity and deliver a result. Know-how creates knowledge, solves problems and fosters innovation. Unfortunately for business managers, however, know-how resides with human beings who are going to be increasingly mobile across workplaces.

Darwinism Will Accelerate In Some Industries

Historically, most market places have operated with imperfect information; this has allowed suppliers to extract higher prices, and inefficient operators to survive, because buyers have not known there was a better deal available elsewhere. The tyranny of distance and mass advertising supports a local market that might not be as efficient as, say, a larger market.

With the advent of fuller information about suppliers' offerings and more channels

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reaching consumers, there will be a better informed market. Inefficient operators will suffer from greater competition causing some to fail. There may be social impacts as well from this industry restructure. For example: local governments will try to sustain their tax revenue base through regional development programmes and governments, for political reasons, will try to protect inefficient industries. Ultimately, the citizenry at large will pay the price.

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Marketing And Sales

Differentiation Driven By Service Delivery, Not Product Functionality

The polarisation of supply chains into a focus on either production or customer management has a significant impact on competitive strategy. Producers will continue to try and provide the most bang for the buck. However, those who manage the customer relationship will have the ability to provide unique customer experiences, and this is how products and services will be differentiated.

Specialised knowledge about what customers want, their preferences, buying patterns and their income bracket will be invaluable information, and will allow the development of unique offerings tailored to individual customers.

Brands Will Be Driven By Online User Experience

An interesting consequence of supply chains moving from being product-driven to consumer-driven is a change in how a brand is defined and what it stands for. This has moved downstream towards the customer, and will occur somewhere between owner of the customer interface and the consumers themselves. Ownership and control of a brand will be forfeited by the producer (or their advertising agency), and will be defined through a multitude of online avenues.

In the first instance, customers who research and purchase online will equate their online experience with the brand. In other words, an easy search, an informative web site, reassuring testimonials and a straightforward and painless online purchase of a product is going to have a strong influence on the customer's perception of that brand – and they haven't even touched the product yet. It is critical that the Firm of the Future builds trust through honest and transparent online dealings.

Secondly, the power of the various social media channels to provide independent customer feedback on a product shapes the brand positioning enormously. Online rating tools, such as TripAdvisor, are a good example of consumers providing critical input into defining a brand.

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Customer Relationship Management – The Next Big Job In Town

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The two sides of marketing, customer acquisition and customer retention, will merge into the single activity of managing relationships over the customer lifecycle. Customer relationship managers will utilise their knowledge and understanding of the customer's personal preferences to tailor their communication and offering, and ensure it aligns with the customer's needs at that stage of the customer life cycle. This will have the distinct advantage of eliminating the online noise caused by bombarding a customer with information that is simply not relevant to them at that time. Instead, suppliers will be putting forward an offer that is relevant to the customer at the time it is made.

Where Web 1.0 was one way web and Web 2.0 is the two way web (where consumers generate content), Web 3.0 will be the contextual/semantic web that provides information that is relevant to each individual at the time it is received, in the form that they want, when they want it.

Customer relationship management (CRM) systems as we know them today will become significantly enhanced and more intelligent. Most CRM systems are updated only by information generated by the user, e.g. the account owner or from information easily accessible. In the future, CRM systems will include information from a variety of sources that are selected according to relevance. This could include product tracking information on past purchases, information from media scanning and any other public domain information, including births, marriages, deaths, club memberships, professional body membership and credit agency ratings. It could include the length of time standing in front of an electronic billboard when a particular advertisement is showing (using RFID technology). All of this information builds a profile and allows personalisation of offerings to each individual customer.

The opportunity exists in here to make a fundamental change to your business model. Currently, most business make a sale, provide a warranty period, render support on a fee-for-service basis, and hope to sell a replacement item when the product is worn out. Often this repeat sale does not occur. This model could be replaced by charging a monthly fee for the provision of a guarantee to provide a working, fully serviced product for the contract period. This approach is not unchartered, but for many suppliers the risk of the unknown has made it too challenging to contemplate. The use of a product tracker and a CRM, could take the risk out of this situation. The advantage to many businesses would be the conversion of a lump sum sale with unknown contingent liabilities for post-sales support to an annuity income stream. This would put real meaning into the 'lifetime value of a client' calculation used by some organisations.

Over time, the business Firm of the Future's CRM systems could extend into virtual account management. Variations to an account plan will be reported on an exception basis, and account managers will action the necessary steps. This will increase the level of account management in business without necessitating the use of more resources. The following diagram from Cisco Systems highlights how the sales and marketing function will be in the future.

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Sales 1.0	Sales 2.0
Rigidly following a sales process	Helping prospects buy
Controlling what the buyer knows	Buyers educate themselves before they come to you
Marketing vs. Sales	Integrated and interdependent Marketing and Sales
Selling Solutions	Helping customers succeed
High-efficiency vs. high-touch	High-efficiency AND high-touch
Volume vs. Relationships	Relationship-driven volume
Travel, meeting and schedule hassles	Engaging anytime, anywhere
Technology is a burden	Technology makes sales reps more effective
Count every activity	Measure activities that count
Forecast probability	Forecast predictability
Pipeline volume	Pipeline shape and velocity
Mass prospecting	Network/Community of unlimited opportunities
Hoarding best (and worst) practices	Making best practices pervasive

Source: Shankar, K & Bouchard, SA, 2009, Enterprise Web 2.0 Fundamentals, Cisco Press, Indiana.

Customer Lifecycle Management is going to become a major function in the Firm of the Future, and its effective execution will be dependent on high-speed broadband capability.

Mass Market Advertising Decline Will Impact Content

The importance of traditional mass market advertising will dramatically diminish, and the fall in this revenue will have major implications for content owners. Advertising revenue has funded production particularly of television, newspaper and magazine content. We have already seen a change in the quality of content in major media outlets as fragmentation has eroded their revenues (and of course the new channels provide a competitive outlet for some of the content).

Content owners will need to find new business models, including subscription services, niche online publishing with targeted online advertising, content syndication and pay per view. The growth in Wiki-based products, social media and other forms of consumer and user-generated content is filling many of the new channels, but will the consumers still require 'quality' content, and if so will they front up to the bar and pay for it?

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Markets Will No Longer Be Defined By Political Or Geographic Boundaries

There has been general recognition for some time that the Internet does not recognise national borders. This has many implications. Clearly, a business can find customers anywhere in the world, providing they are online. Equally, most people can buy from a supplier based anywhere in the world, and with greater security in payment systems, they are comfortable transacting across borders.

Delivery of goods and services is more challenging, but the digital revolution has not been the only significant change that has affected international trade. There have been dramatic improvements in transportation and distribution systems, such that even fresh produce can be cold-stored and delivered anywhere in the world. The lowering of costs and the increase in reliability of transportation is a major factor in the growth of international markets.

There are other issues that arise in relation to national boundaries including government activities, such as taxation and the implementation of trade initiatives, like protection or subsidisation policies. The cost of policing international taxation avoidance and evasion is significant, and the benefit cost of devoting resources to this is surely a major decision for governments. High-profile activity such as Project Wickenby, a \$300 million multi-agency taskforce set up to combat tax avoidance, tax evasion and large-scale money laundering, is used to act as a deterrent.

The success of government trade initiatives is somewhat dependent on how closed a market is. The removal of national boundaries will fetter the ability of governments to protect domestic industries, and will lead to greater overall economic efficiency, although this benefit will not necessarily be shared equally by all domestic economies. The flow of manufacturing jobs from western economies to lower cost countries is a case in point.

Sales Strategy – Cut Out The Middle Man

Perhaps the greatest change to sales strategy for the business Firm of the Future will be in the channels to market. Traditional supply chains have a number of 'middle men', who have added value through distribution and retailing. In the same way that mass marketing was the only way to reach customers, utilising a distribution and retailing network was often the only way to get a product to market.

The advent of high-speed broadband allows intermediation of the supply chain, making it possible to reach customers by bypassing a stage in the supply chain. Look at air travel, where travel agents have been intermediated by the airlines that offer online booking services. Just as some business models are failing, new ones are being spawned.

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Aggregation is the new model. The various online travel and accommodation booking services that bring together a whole suite of offerings are one illustration of this. Finance broking is another example, where the broker goes out for its client and finds the best deal it can, e.g. online mortgage broking.

An interesting possibility is in car manufacturing where the ability to use the web could provide all the information to allow the consumer to narrow their selection. Dealers could be a thing of the past with manufactures providing demonstration and testing facilities. You want to kick the tyres of a 4WD? Then why would you want to go to a dealer to do a test drive limited to the vicinity of the dealership which is probably located on a main road? Why can't you test on a carefully constructed 4WD track? Consumers don't buy a car just for transport; they buy it for the experience, whether they actually realise that experience or not. Car manufacturers could establish service centres, and in fact as part of the purchase price, they could get a replacement car dropped off and their car taken to a large, economic service facility that does not need to be located on expensive main road property.

The key thing from the examples above is that your channel to market could change dramatically. Someone could cut your lunch, and you could have the opportunity to cut someone else's.

More Price Based Competition

For many businesses, pricing has been an unsophisticated process that has relied on an imperfect market, i.e. one where customers are not aware of all offerings available in the market place. This has allowed suppliers to achieve above-the-floor pricing.

The availability of information and the removal of the tyranny of distance will mean that more suppliers are accessible. Buyers will have greater ability to do research into what suppliers have to offer. In many cases, they will conduct a tender to find the best deal. This will accelerate the trend towards commoditisation of many goods and services, and reduce competition down to price.

eBAY is a very clear example, where buyers and sellers are brought together in a virtual environment from all around the world, to bid on products.

The natural defence against this priced-based competition is not to allow the customer to make 'apples to apples' comparisons. Suppliers will bundle offerings, create numerous product variations, offer different payment schemes and do everything they can to make it difficult for a customer to make straight price comparisons. Mobile phone plans and insurance policies are good examples of complexity making comparisons difficult.

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Finance

The finance function can be broken into several broad areas: processing and reconciling transactions, management and financial reporting, and the management of financial flows.

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Real Time Online Accounting

There are many conventions in accounting that have come about because of the manual processing of transactions. Month-end closes, aging accounts payable and receivable into 30, 60 and 90 days, payments terms of 30 days and many other practices have been adopted simply because that was the most convenient and practical way to do a proper accounting.

With high-speed broadband, and as more and more transactions are done online, we will see the electronic transfer of information between businesses occur in real time. This will eliminate the need for many of the conventions upon which accounting is currently based.

In the same way as financial markets settle their books each day, a business could perform an accounting 'close' each day, or on any day it chose to. The information that makes it particularly difficult to close the books is quantifying payables and inventory, including work in progress if the business is in manufacturing or production.

Real time business-to-business connectivity allows accurate recording of liabilities arising from purchasing, so that accountants do not have to wait until statements are received, or rely on internal purchase orders that often carry only cost estimates. Inventory recording for many businesses relies on a physical stocktake, as perpetual inventory systems that record stock in and stock out, often have variations to actual. Scanning, product identification transmitters and tracking devices are examples of ways real time inventory recording could improve in the Firm of the Future. This is in place today for larger companies which have had the resources to make the investment, but such solutions will become very attractively priced and available to business of all sizes.

A View of the *Firm of the Future*

Another interesting development could be the creation of spot markets every time a business wishes to make a purchase. High-speed broadband will create 'more perfect' markets, where price offerings will be more widely known by buyers. When a buyer goes out to market for a specific item, vendors may differentiate their offering by including various payment terms, and the buyer may lock in on the payment term that best suits them. For example, a buyer wants to buy a pallet of photocopying paper – a year's supply, and several vendors have responded to this 'tender'. The only difference between them is the price, but one (who may have an excess of inventory at this point in time) offers payment terms of 75 days. The deal gets done, and an automatic settlement system ensures the payment occurs in 75 days' time. The transaction is recorded when it happens, the cash flow forecast updates for the pending payment and the cash settlement system makes the payment on the due date.

To take this example even further, another problem accountants have is matching revenues to expenses. If this transaction occurred on the 28th of June, two days before the end of the financial year, then the full cost of a year's supply copy paper would be charged to that financial year. If there was a counter on the copier that measured the use of paper, this could transmit information into the accounting system and the expense could be charged on a usage basis rather than the date of purchase. Imagine applying this foresight to all items of expenditure. Once again, not only could a much better adoption of the matching principle be achieved, but also a far more accurate set of financial statements could be produced for any time period that management desired. All that is required is some intelligence in a terminal (in this case the photocopier) and a data link.

Numbers Never Lie

If this information was readily available, not only could accurate financial statements be produced in real time, but also a range of other valuable reports could be generated based on actual transactions and activity that has occurred. Most reporting is retrospective and comes in a summary format that has its heritage in financial reporting and the limitations of information that the accounting system contains. You can only manage what you measure, and the most reliable information system in a business is usually the accounting system. What other information is locked away in other information silos?

Monthly management reports invariably show revenue changes, but how many show the number of customers, the number of times they do business with you and the average value of the transaction? Wouldn't that be valuable information? How about revenue per employee, revenue per sales employee, number of customer complaints and the number of customer complaints per employee?

We currently measure the number of days we have cash tied up in receivables. What about tracking the full length of sales to cash cycle to assess not only how efficient the cash collection process is, but also how efficient the sales function is in shortening the sales cycle?

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The actual profitability of products or projects undertaken by a business is often lost as traditional accounting uses aggregated business activity when producing financial statements. Activity-based costing is a commonly understood principle, but for many businesses there is simply not an accurate way of measuring and attributing these costs to specific product lines or projects.

Better business systems, the use of analytics and real time measurement and the allocation of activity driven costs will allow a more accurate measurement, and detailed analysis of business performance. More reliable information of this nature will lead to the better use of lead and rather than lag indicators.

Good management decision-making will lead to better business performance with management becoming more of a science than an art form. None of the above is new thinking, the principles are well established and understood, but there are barriers to the implementation and execution of this. High-speed broadband will address many of these barriers and make this a cost effective and a standard business system.

Impact Across The Business

Nickels And Dimes

Managing cash flow remains one of the most vital business management functions, and the global financial crisis has provided a reminder of this to business managers. With high-speed broadband facilitating a free flow of electronic trading and recording of transactions between businesses in real time, each and every transaction can have a 'pay by' meta tag so that the compilation of outward cash flow commitments could be produced at any time. Cash inflows are more difficult to predict, but over a shorter forecasting period, a business would have information on all of the sales it has made and when they are due to be settled (paid).

Long-term forecasts move into the area of estimation, and the more reliable the lead indicators are, the greater reliability predictions can take on. (As an aside, the author is an avid wine who has often contemplated developing a system of predicting great vintages before they are actually made, and, of course, purchasing futures in each 'soon to be' stunning wine. The variables into the quality of wine are the grape variety, the vines, the soil, the winemaker and the weather. If the winemaker remains the same, the only thing that really varies from year to year is the weather – so close monitoring of the weather leading up to the vintage would correlate quite highly with sales and cash collections during a longer forecast period).

The number of businesses that measure and report cash forecasts in a meaningful way is surprisingly low, and this is probably because there is a low-level of reliability in these forecasts.

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People

The End Of The Master/Servant Relationship

Almost since the beginning of time, the relationship between employer and employee has been founded on a master/servant model. During the Agricultural Revolution, at a time when ownership of land was a sign of wealth and power, workers lived on the land and were tied to the owner of that land. During the Industrial Revolution, power moved to those who controlled capital and labour. Employees have generally been subject to the instruction and direction of their employer.

If we consider a collaborative network model as a way of working and look at what is already happening with social media, consumer-generated content and the success of knowledge accumulation tools such as Wikis, then an extrapolation of this trend into a workplace environment could see a fundamental change in the traditional master/servant relationship.

This outcome may be based on how businesses manage knowledge; an often-stated corporate objective, but one usually found wanting in terms of achievement. Will businesses be able to utilise knowledge management and knowledge bases in such a way that highly expert people can be replaced by well-trained, but less experienced resources? Or will businesses find that knowledge bases are a library of information that, while useful, do not provide the know-how necessary to deliver the expertise, entrepreneurship and innovation necessary for business success?

While the systemisation and storage of knowledge will be a major contributor in the improvement of business performance, this will not replace the need for individual expertise in the workplace.

If we look at the employment of people as a network, historically it has operated as a distributive network where the employer sits at the Centre, and the employees are the Nodes who are told what to do, how to do it and when to do it. The output from a network, (irrespective of whether this comes from the Centre or from the Nodes), is going to be a major contributor to the overall success and performance of a business. Organisations that encourage their employees to generate and exchange information across and between all Nodes will challenge those that retain a Centre-based knowledge management model.

Impact Across The Business

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Tomorrow's Competitor Is Inside Your Tent Today

This change will have major ramifications for workplace relations. While the Centre was once in control and the natural master in the relationship, we will find in many cases that the Nodes will no longer need the Centre. As a result, the master/servant relationship will experience a change in the balance of power between the Centre and the Nodes, which will be seen in the negotiation of employment conditions. Alternatively, will there be a 'unilateral declaration of independence' by the Nodes, and a new arrangement will come into being that covers the provision of services by individuals.

If there is a new form of arrangement, what form might it take? There are interesting potential developments that will emerge. Some (but not all) Nodes will lay claim to the intellectual property they have worked on; be it product design, customer relationships or any other form of value-add they have been involved in. This will lead to a changed commercial and legal relationship between the parties. Nodes will seek greater independence and a move towards self-employment or contractor status. They will seek not be tied exclusively to any one business.

Employment and contracts for services will concentrate more on intellectual property rights, ownership of corporate property, non-competes and other matters that define who has the right to what. The business Firm of the Future will need to carefully and clearly define what belongs to the Centre, and what belongs to the Nodes.

The Workplace As A Continuous Learning Environment

Lifelong learning is another of those terms that has been bandied around as a desirable business objective, particularly by sociologists and educational experts. In the Firm of the Future, it will become a major source of competitive advantage. Businesses will progress by providing learning and expert training. They will move from being the Centre, to fulfilling a facilitation and empowerment role. Knowledge management will become critical core business function, but in a way we have probably not yet imagined. It needs to be accessible, intuitive, relevant and available anywhere, anytime. This will require high-speed broadband capability.

Workers (employees, dedicated contractors or service providers) will be attracted organisations that provide the best continuous learning environment or at least are the most supportive of lifelong learning. Training is a big business, and online - especially with high-speed broadband - provides an opportunity for quality training programs to be offered to employees irrespective of location. There may actually be less reliance on organisations providing learning, with employees being encouraged to find accredited externally provided programs that suit their needs and career path.

Impact Across The Business

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Human Resource Management – The Next Video Game

The various aspects of an HR management system: recruitment, induction, performance management, training and development, reward and remuneration and exit management, will all be significantly enhanced by high speed broadband. Currently, all aspects of HR management are people and process intensive. While the nature of the function will require a continuation of high-touch, much of the processing can be done online.

Recruitment, reference checking, appraisals and remuneration are all activities that will benefit from video conferencing capabilities. It is, however, in the areas of induction, training and development that the greatest gains can be made. This is particularly important in the current labour market, where the average length of employment is rapidly shortening. The sooner new employees can become fully productive, the better.

The use of LinkedIn and Facebook is changing the way people are recruited, with businesses gaining confidence about a potential employee's capabilities. Like eBay, potential employees could be rated based on past job history that is published.

Online learning, virtual tours (think of a mining company with properties around the world) and accreditation will be delivered using new and exciting applications based on broadband. Usability is a key requirement of any web-based application, and games formats have proven to be hugely successful in capturing the attention of younger people. In the Firm of the Future, expect to see these types of formats used extensively in online HR applications.

Systems And Processes

There Will Be No New Business Problems

Some argue that someone, somewhere, has already solved every problem in business. The art of management is not to develop solutions to business problems, but rather to identify what the problem is, and then access a solution that already exists. This might sound simplistic, but in essence, how many times (and at what cost) do all businesses recreate the wheel? How often do you hear a business manager say, "We have a problem with customer service standards" or "We have too many bad debts"? The solution to these problems, like most others in business, lies either in putting a proper system in place, or correcting a system breakdown.

The systemisation of business processes leads to quality improvement, better business operations and, hence, improved business performance. Systemisation is the key, and high-speed broadband will facilitate the instillation and standardisation of systems across the Firm of the Future.

Impact Across The Business

A View of the *Firm of the Future*

Large businesses will develop customised systems, and smaller businesses will be able to buy a proven, reliable and economical solution off-the-shelf. So perhaps it is being too bold to claim that there will be no new business problems, but it is realistic to state that solutions for the problems that are experienced by businesses all over the world every day will be more readily available.

The Firm of the Future will have access to solutions that address all standard business functions and processes, and these are likely to be web-based.

A World Without Software

The way businesses have managed their computing needs has progressed from being initially based on mainframes, through to a client/server platform and, in recent times, Software as a Service (SaaS). This latest trend involves applications being accessed via the Internet. They are made available from shared infrastructure, usually on a subscription basis. This removes the need for on-premises software with its associated licensing costs, hardware management and maintenance, and perhaps, most importantly, upgrade costs and management. The SaaS provider upgrades the software, and the user continually enjoys the benefit of accessing a fully maintained application. There is a trade-off however; SaaS offers limited customisation. But increasingly there are options being made available to allow businesses to tailor applications to their business needs.

The availability of high-speed broadband is essential for the wide adoption of SaaS solutions. Users need to access the shared infrastructure using an Internet connection. Application performance is therefore dependent on size of the 'pipe' between the user and the host. The Firm of the Future will not own software, but will have a 'fat pipe to the cloud' - a 'fat pipe' is a high-speed broadband connection, and the 'cloud' is a term used in relation to computing that broadly represents access to a range of services via the Internet.

Security Up, Privacy Down

Two vitally important issues are security and privacy. As more commerce is transacted over the Internet the need for fail-safe security becomes critical. Achieving high levels of security is always possible, but there is a high cost associated with building it into the application. Online fraud is already an issue and, as business open their systems up to other businesses, the risk of fraud will increase. Will there be an opportunity for 'banks' to provide the Firm of the Future with safe and secure clearinghouses for online payment services?

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Privacy on the other hand will remain a public issue. Various interest groups will continue the crusade to protect individuals from the infringement of private information. Undoubtedly though, as the world continues to network itself, our individual data will be stored in databases somewhere and it will be increasingly accessible. This will include information about our identity, our careers and social activities, our consumption preferences - and that is just the start. Just as you can now 'Google' a person and get a degree of background on them, in the future there will be many more databases to access. No doubt someone will start a business that assembles electronic profiles and sells this information to marketers. This is already taking place, but we have only seen the tip of iceberg.

How society and business will deal with the need for greater security and the loss of privacy is yet to be seen.

Vision

It's Not Where You Are Going, But How You Behave

Vision is a term used in business management to cover many and varied concepts, all to do with 'the finish line', i.e. where the business aspires to be at the end of the planning period. Some management writers are arguing that the relevance of vision is declining for many rank and file staffers within a business. Consistent with the decline of the master/servant relationship and the growth of lifelong learning, individuals are looking at 'what's in it for me', a balanced lifestyle, flexible working conditions and other considerations related to their personal life, rather than yearning to be part of a team that achieves the corporate vision.

Visioning as a process is probably going to receive lower priority in the future, but the Firm of the Future will spend significant resources in defining concepts like corporate behaviour, corporate social responsibility and purpose. Employees will want to be associated with a business that is ethical, responsible and making a positive contribution to the world.

In times of rapid and prolonged change, defining where you plan to be as an organisation in five years time is increasingly difficult to do. Objectives set as part of the planning process will be more about creating an environment of spontaneity, flexibility and innovation.

The business Firm of the Future will set a strategic direction, and focus on building capability and resources to get. At all times it will aspire to meet the standards of corporate behaviour expected of it.

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A View of the *Firm of the Future*



Pathfinding Will Be Spontaneous, And Not The Domain Of Leaders

In the Firm of the Future, the active involvement and interaction of network Nodes (the team) in developing corporate knowledge, innovation, ideas and solutions will shift the direction-setting role from being the sole domain of the leaders, to being more inclusive across the team. This will achieve a greater level of genuine involvement and engagement across the business. This is not dissimilar to the bigger role consumers will have in setting brand values.

Pathfinding is that part of strategic planning that provides the inspirational, 'gut feel', and intuitive decision making that often makes the business what it is. Businesses that promote spontaneous input from people in the organisation will outperform those who run a closed shop.

Strategy

Future-Proofing The Business Model

High-speed broadband is going to change the business rules; of that there is no doubt. How much and how soon are the only real questions. This means existing business models will be challenged and organisations will need to have their antennae up and working. They must pick up on when, and how much, the elements their existing business model will change.

Structure - Management And Organisation

Virtual Teams Inside The Matrix Organisation

Organisational structures have traditionally centred on geography, products or markets (the dilemma of the matrix organisation). Will there be a dominant form of organisation based in the virtual dimension where people are assembled for specific projects and contracts, then disassemble once that specific job is complete?

The Firm of the Future will optimise the use of their resources by putting the best available team on specific jobs. It will support them with HR management systems that can assess performance and provide mentoring, training and development support, even though staff rotate through several teams over the course of time. An online HR system will be critically important because of virtual teaming, tele-working, the greater role of contractors and the use of international resources.

There will continue to be some functional-based organisational units such as finance and HR that sit in 'corporate'. Organisational structures will then consist of core and virtual teams. The core will still need to be organised either by geography, products or markets, and will consist of management and project management skills. The virtual teams will operate like a consultancy pool. The core would select from these teams to staff up each project/contract.

Impact Across The Business

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Corporate Governance And The Public Audit

The hottest topic in business over the last decade is corporate governance. It has been hot because of the public and blatant misuse of other people's money by business leaders in powerful positions in companies that no longer exist. The addition of the challenges arising from the global financial crisis, and the associated government bail-outs around the world, has brought about expectations of much greater accountability and disclosure.

Corporate Governance is little more than tokenism in its current form, as evidenced by the frequency with which it has recently been breached. Taxpayers around the world, through their respective governments, have subsidised these breaches and will pay the price for the next few decades. Governments, regulators, investors and stakeholders will call for greater public accountability, and with the increased flow and quality of information in the public domain, there will be higher levels of scrutiny. This will relate not only to public companies, but also to their directors.

There will be a public audit by way of examination of public domain information that will include greater disclosure and reporting requirements. In the same way as consumer organisations provide valuable information about various products and services, there will be corporate evaluations available. These will be different from the analyst's reports produced by stockbroking firms, which are essentially prepared to guide investors in buy or sell decisions, and the auditor's reports, which provide shareholders with information on the corporation's compliance to a complex set of accounting standards.

Referring back to the collaborative network concept, think of the company as the Centre, and the Nodes as all the parties it deals with (customers, suppliers, regulators, employees, and partners). How much information could be generated about a company? Much of this information could be exchanged in the public domain, and could be used in a public audit process.

Impact Across The Business

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Culture And Behaviour

C U @ club 4 a big 1

Organisations will be looser, more diverse and more dispersed. Co-workers may rarely, if ever, see each other, and the communication between them will often take place on online platforms. This will have a significant impact on corporate culture, which for many organisations is largely determined by norms observed in the workplace.

Clearly, Internet etiquette will become a new organisational challenge. This will cover answering emails and text messages promptly, ensuring company standards are followed, and ensuring the language and style used reflects the message intended, i.e. "Well done...that was really clever"; meaning you did a good job, or alternatively, you're a smart arse. There is a new world of language emerging, particularly around texts, tweets and blogs that organisations will have to adapt to in order to be relevant.

The Polite Indifference Of Gen Y

The impact of Gen Y on culture will be significant on the Firm of the Future. This is an age group that is environmentally consciousness and in love with technology. They prefer loose to formal, want to learn, and operate most happily in a highly social community. They do, however, have their challenges. Gen Y lacks 'grit'; they have high expectations, little loyalty toward employers and can easily lose heart. Employers need to nurture their quirky needs if they want to engage them. The collaborative network model is far more suitable and appealing to Gen Y than the chain-of-command approach.

Impact Across The Business



Impact On The Business Environment

Customers

Customer 2.0

– Adam Smith’s Invisible Hand Rides Again?

Customers have got back the power from the mass advertisers and are exerting their influence in significant ways. Adam Smith, the eighteenth-century founder of political economics, developed the concept of the ‘invisible hand’, which, in essence, says if consumers can choose freely what to buy, and suppliers can choose freely what to sell, the market will determine an equitable outcome that is good for consumers and suppliers and, hence, to society overall. The resurrection of the power of the consumer, who has found their voice through social media, is seeing a more equitable outcome for society overall.

Build It And Will They Come?

It is going to take a cultural shift across the community if the Firm of the Future is going to become a reality. Providing a high-speed broadband network is not enough. To get the benefits there must be a high-level of adoption, and this need to start in the market place, i.e. with customers buying goods and services online. Nothing drives behaviour like the holy dollar, and if businesses see an opportunity to drive revenue, then it will put in place the infrastructure to make this happen. Once an organisation has started to commit to the infrastructure and can see a commercial benefit from this, it will push the adoption across the organisation. If people in the workplace are experiencing broadband, they will be adopt it more quickly outside the workplace.

Competitors

The Enemy Is At Your Gate, But Are You At His?

The tyranny of distance will be seriously challenged by high-speed broadband. This means that competitors that are no longer restrained by geography will seriously challenge your comfortable relationship with customers.

A View of the *Firm of the Future*

The Firm of the Future will recognise that it will lose business if it just focuses on what it has done in the past. It will seek out ways not only to defend strongly what it has, but also to aggressively pursue business development opportunities that open up because equally, the restraint of geography no longer applies to it either.

The Firm of the Future will manage both the bricks and mortar business they are in, and an online business that they must get into. Multi-channel will be part of business as usual, and will be used in both defending what you have and developing new opportunities.

A story on competition.

Every morning in Africa, a gazelle wakes up. It knows it must run faster than the fastest lion, or it will be killed... Every morning a lion wakes up. It knows it must outrun the slowest gazelle or it will starve to death. It doesn't matter if you are a lion or a gazelle; when the sun comes up, you had better be running. And remember, somewhere in the world right now, the sun is coming up.

Industry

Get Competitive Or Get Out

Darwinism will be more evident in that inefficient operators in every industry will be found wanting and will wither and die. Sheltered industries will find it more difficult to survive, even if they have protectionist government policies and tax benefits. Industries will be subject to international competitiveness.

Industries will also be redefined. Most businesses are part of more than one industry, e.g. a grape grower can be considered to be in the agricultural industry (and subject to the trends and issues of this sector), and in the wine industry (and equally subject to market trends and issues with wine consumption). The traditional barriers to entry will change, and new entrants from different industries will emerge. We have seen this with the photographic and the mobile phone industries.

Industry economics will change and perhaps people will be able to rely less on the lessons from the past as the new paradigms kick into play. Industry associations and bodies will need to stay in the pace car or they may cease to be relevant, particularly if members can gain access to much more information than in the past.

Technology

Power Up

Technology will be all-pervasive, but its presence will be such that it will be virtually undetectable. Web-based inter-operative systems will dominate, and privacy and security will become major issues. The emergence of 'cloud computing' will dramatically change the way organisations manage their ITC needs. Hardware and systems management will be increasingly outsourced, and everyone will have access (at a price) to leading edge ITC based solutions. Technology may have once been a source of competitive advantage; this will not be so easily achieved in the future. On the other hand, it will be extremely easy to suffer competitive disadvantages from the failure to use current, relevant technologies.

Impact On The Business Environment

A View of the *Firm of the Future*



Business Environment

Global Village

A significant trend is globalisation, which challenges national boundaries and political positions. The global tide of trade and economics will prove to be more powerful than national and religious factions. This might lead to situations where government and political leaders apply greater pressure on their peoples to try and exert political or religious will.

No More Havens

Many businesses have based their operations in countries that have provided favourable taxation, legislative or regulatory regimes. The combination of factors such as the internationalisation of business, the trend for countries to join economic unions, the growth in free trade agreements and the emergence of the global village is making it less likely for any single country to provide a competitive jurisdictional environment. Undoubtedly some countries are going to be more attractive for some businesses than others. This will be due to natural economic factors, such as access to cheap labour, centres of excellence, raw materials or markets, rather than lower tax rates, lack of IPR protections, or some other government policy that provides an artificial incentive.

Shareholders

You Can Run, But You Can't Hide

The significant impact of moving into the information society will revolve around transparency, real time reporting, accountability, corporate social responsibility and behaviours. Shareholders in both publicly listed and privately owned companies will have to live with a much more transparent environment. Privacy concerns will not be restricted to personal information; corporate privacy will be an issue, as parties who deal with a company will want to know a lot more about it. The concept of a Public Audit where information about a business from all sources will be aggregated and put into the public domain will very likely be a cause of celebration for those arguing for greater transparency in business dealings. Undoubtedly though, some will view it as a 'pain-in-the-you-know-what' for business managers trying to guard their precious business intelligence.

Impact On The Business Environment

A View of the *Firm of the Future*

Have Your Say

We are eager to gather the thoughts, opinions and comments of people from all industries and across all disciplines. Bullseye has set up a blog at www.bullseyereports.com.au/business@100mbps to open the topic up for discussion. What do you think will be possible at 100Mbps, and what do you think the Firm of the Future will look like? Discussions that appear on the blog may be used to complete the report. This will be referred to as our 'Final Thoughts'.

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