Life in 2020
A Summary Report of Scenarios and Perceptions of the Future

The future cannot be verified
(Rolf Jensen, 1999)

A Personal View
Prepared by
Dr Bettina von Stamm
As follow-up of
the Innovation Exchange’s First Anniversary Celebration at the Millennium Dome, March 2000
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1.0  In a Nutshell

What Participants of the Innovation Exchange Event Anticipate

As preparation for the Anniversary Celebrations of the Innovation Exchange at the Millennium Dome participants were asked to report the 5 biggest issues and the 5 greatest advances they anticipate for their industry over the next 20 years. Looking at the responses for both questions together, changes and issues were anticipated to affect primarily three broad areas - Society, Technology, Business – and one more specific aspect - Human Resources. The Table below outlines what kind of changes were predicted.

<table>
<thead>
<tr>
<th>Area of Change</th>
<th>What will Change</th>
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<tbody>
<tr>
<td>Society</td>
<td>Increasing concerns about the environment</td>
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<tr>
<td>Technology</td>
<td>Increases in e-commerce</td>
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<td></td>
<td>Changes in way of working (home, anywhere)</td>
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<td></td>
<td>Due to above, changes in lifestyle</td>
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<tr>
<td>Business</td>
<td>Competition from unexpected quarters</td>
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<td></td>
<td>Still increasing automation</td>
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<td>Mass customisation - not only for products but also services</td>
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<td>Human Resources</td>
<td>Need less but higher qualified people</td>
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<td></td>
<td>How to recruit and retain high quality people</td>
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<td></td>
<td>Interaction between people changes (less face-to-face)</td>
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</tbody>
</table>

During the event groups of participants were asked to consider how these issues and advances might impact on one of the selected aspects of life - work, education, medicine & healthcare, shopping, home & family, leisure.

What Futurologists Anticipate

Reviewing various books, reports and websites the following themes have been identified – I have referred to them as ‘Overriding Trends’:

- E-commerce, the Internet and Technology
- Globalisation
- Environmental Consciousness
- Ageing
- The “Dream Society”

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1 See Appendix II for a listing of all submissions, by industry.
2 A term borrowed from the Danish futurologist Rolf Jensen.

Bettina von Stamm
It is perhaps not surprising that some of the above trends show considerable overlap with the two sets of predictions. What I find interesting is that there are certain things that everyone seems to anticipate such as the advent of e-commerce & the Internet and their impact on our lives, e.g. working from home, etc. It seems that today they are more or less taken for granted. I emphasise ‘today’ because if you think back just 4 or 5 years, people were quite doubtful about the impact and power of the world-wide-web, and there were probably not too many who would have suggested that working from home would become acceptable and quite common.

**What are Implications for Business?**

As a consequence of the above predictions, a major message to business could probably be: be alert, be prepared for the unexpected, keep scanning the environment for competition from unexpected quarters, establish a foothold on the www and think about global alliances. This sounds like change non-stop but in fact, it does not mean that a company should change its strategy with every new trend or development. Rather, organisations need to keep thinking and asking ‘what it?’ ‘how does it affect me?’ ‘what doors to new and different competition does this change open?’. It is more about awareness and being – mentally more than anything – prepared. The Table overleaf suggests how megatrends and aspects of life might affect each other.

Organisations of the future will provide products and services that show environmental awareness and they will keep working to improve their reputation and brand awareness – not least to make the choice easier for the consumer in an increasingly complex and crowded market place.

### A Challenge for the Future by Charles Handy

He had observed, so Charles Handy said in his address at the Millennium Dome, that in uncertain times size seemed to matter, it seemed to offer safety. So elephants, the big companies, were marrying other elephants, getting ever bigger - and in the process shedding quite a number of jobs. And then there were also the fleas. Individuals, such as the Alchemists portrayed in his book, who make things happen and who are the ones who are responsible for the future.

But the two need each other, the elephants need the ideas generated by the fleas to grow and evolve and the fleas need the scale and resources of the elephants to make the ideas happen. However, fleas are people who are different, who don’t behave and generally don’t sit too well inside large organisations. So the big question is what kind of relationships and arrangements fleas and elephants have to develop if they want to come to a mutually beneficial arrangement?

The company of the future will give its employees a choice of where to work, provides a stimulating and appealing work environment ‘at work’, reward people based on delivery rather than time – and not necessarily with promotion and money. And it is flexible and open to work-time arrangements, allowing to combine home and work life at a desired level. All this implies that the relationship between employer and employee needs to shift from control to trust.

Bettina von Stamm
## Table

### How will Megatrends impact on the 6 Aspects of Life? – Some Suggestions

<table>
<thead>
<tr>
<th>E-Commerce &amp; technology</th>
<th>Globalisation</th>
<th>Environment</th>
<th>Ageing</th>
<th>Dream Society</th>
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</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
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<tr>
<td>Work from home – or anywhere</td>
<td>Competition with the rest of the world</td>
<td>Different work environment</td>
<td>Working longer or working differently</td>
<td>Work is not all in life</td>
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<tr>
<td>Time and place are less important</td>
<td>Need for languages &amp; cultural awareness</td>
<td>Environmentally friendly products &amp; services</td>
<td>The largest customer segment</td>
<td>Stories are important</td>
</tr>
<tr>
<td>Immediate global access and presence</td>
<td>Be big – or have a good network of partners</td>
<td>Re-usable resources</td>
<td>New product &amp; service opportunities</td>
<td>Image is becoming more important</td>
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<tr>
<td>Increased importance of branding and image</td>
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<td>Premium price market?</td>
<td>Pensions</td>
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<tr>
<td><strong>Education</strong></td>
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<td>Different ways of exchange</td>
<td>Access to world-class education from where ever the computer terminal is</td>
<td>Need to be integrated into curricula</td>
<td>Life-long learning</td>
<td>Communications and interpersonal skills</td>
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<td>Improved distance learning</td>
<td>Information beyond the classroom</td>
<td>New degrees &amp; professions</td>
<td>Students don't have to be in their 20s</td>
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<tr>
<td>Information beyond the classroom</td>
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<tr>
<td><strong>Medicine &amp; healthcare</strong></td>
<td>Work from home</td>
<td>Increase of alternative medicine &amp; healthcare</td>
<td>Increased costs</td>
<td>Holistic &amp; personal</td>
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<tr>
<td>On-line doctor</td>
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<td></td>
<td>Better quality of life</td>
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<td>Longer young, living longer, better quality of life</td>
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<td>Easier ‘repair’</td>
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<tr>
<td><strong>Shopping</strong></td>
<td>‘Shopping around the globe’</td>
<td>Organic food</td>
<td>Home deliveries</td>
<td>Products that are ‘me’</td>
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<tr>
<td>Shopping via the computer – not necessarily only from home</td>
<td>Greater choice</td>
<td>‘Green’ products &amp; services</td>
<td>Specialist products</td>
<td>I buy into the company, not only the product</td>
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<td>Personalised products &amp; services</td>
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<td>Less fancy packaging?</td>
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<tr>
<td><strong>Home &amp; family</strong></td>
<td>Need for community &amp; local roots</td>
<td>Energy/ material consciousness &amp; energy saving</td>
<td>‘Portfolio career’</td>
<td>Relationships are more important</td>
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<tr>
<td>Work from home</td>
<td></td>
<td>‘Green’ architecture</td>
<td>Children later in life</td>
<td>Importance of community</td>
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<td>The ‘wired-up’ home</td>
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<td>Recycling</td>
<td>Need to provide for later</td>
<td></td>
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<tr>
<td><strong>Leisure</strong></td>
<td>Increased accessibility of remote places</td>
<td>Bicycles, not cars</td>
<td>More leisure time</td>
<td>Experience and adventure</td>
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<td>‘Splendid isolation’?</td>
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<td>Caring for the environment</td>
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<td>Virtual holidays &amp; other virtual activities</td>
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2.0 Introduction

Why this Report

Everyone in business is concerned with the question, ‘what will the future be like?’ What will major trends be? What do I need to be prepared for? What are existential changes that will influence the way we do business? Important questions hardly any of us have the time to ponder about, let alone work through scenarios and play with possibilities.

Fortunately, there are some people out there who spend their time doing exactly this – ‘imagining the future’ – and they are even paid for it. As a result there are lots of books, reports, websites, which to read would require more of the time we do not have – and it is not only the time of the actual reading, finding what’s relevant is an issue too as many reports seem to be published in obscure places where business people would not necessarily come across them.

So, the aim of this report is to draw together as many different views as possible and present them in a reasonably short summary that will allow the reader to dip in and out and that might help him or her to focus on aspects that are particularly relevant to their specific situation.

For that reason the report is organised along two lines:

1. What I have called ‘Overriding Trends’, i.e. anticipated developments that can be found one way or other in most of the reading, and

2. Six aspects of life – work, education, medicine & healthcare, shopping, home & family, leisure - which have been used to structure the First Anniversary Celebration of the Innovation Exchange at the Millennium Dome March this year – and by the way, this event also happens to be the trigger for this report.

@ The ie Anniversary Lord David Sainsbury observed about change and innovation:

- In this country 10 years ago the top 10 companies in FTSE100 had a capital value of 40bn and net assets of 40bn. Today the top 10 have a capital value of 430bn and assets of 90bn. So today, in valuing companies, the value of the actual assets is less important. In future, more intangible assets, such as creativity, knowledge and human skills, will be much more important, and the intellectual capital will determine the value of a company.

- Innovation is not just for business. It is about the environment and education too and here it is just as exciting as wealth creation in business. My daughter, who recently started at Cambridge, where I studied too, sits in the same buildings, listens to some of the same lecturers, takes notes the same way - and could probably even use my old ones. That will have to change and the prospect of life-long learning is very exciting.

3 See Appendix I for a list of selected books, reports and websites.

Bettina von Stamm

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During the Innovation Exchange’s First Anniversary Celebration a group of interesting people, such as

- Management guru Charles Handy and his wife, acclaimed photographer Elizabeth Handy,
- Lord David Sainsbury (see photo),
- Some of Charles Handy’s ‘Alchemists’, e.g. the inventor Trevor Bailys,
- High-powered members of organisations such as: Allied Domecq Spirits & Wine, AXA Sun Life, Bell Pottinger Communications, BT, Hewlett- Packard, Mars Confectionery Ltd, Nortel Networks, Pearl Assurance, Roche Consumer Health, Rolls Royce PLC, Standard Chartered, UDV, and Unilever plc

got together not only to celebrate the Anniversary of the Innovation Exchange but also to spend a bit of time ‘gazing into the crystal ball’.

**ie Anniversary Celebration @ Millennium Dome**

Participants were split into 12 groups, 2 for each of the six aspects of life (see above). After watching the Millennium Show, they ventured into allocated zones to get inspiration for how ‘their’ aspect of life might look like in 2020.

Gathering back together Charles Handy provided them with further thought for the future scenarios. After about 1 hour of group work, for which ample material was provided by the creative consultancy ?What IF!, each group had 1 minute to present their vision of the future. After an address by Lord David Sainsbury participants had the opportunity to network, raid the buffet and take a closer look at other groups’ scenarios. The evening closed with the prize giving by Lord Sainsbury.

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4 ‘The Alchemists, How visionary people make something out of nothing’ is Charles Handy’s latest book, with photographs by Elizabeth Handy. (Random, House, 1999)
Of course, this Report claims neither being all-inclusive nor indeed of being the only possible collection of views on the future. While I have aimed to cast my net as wide as possible and rely to a great extend on quoting on other people’s work (a lot on “Next?” by Ira Matathia and Marian Salzman and “The Dream Society” by Rolf Jensen), the trends I have picked-up and the way I report them may be influenced by my personal preferences and values.

And the reader should also bear one more thing in mind, something Charles Handy (see photo) put to the participants at the Dome before they started the ‘gazing’: He suggested that groups should focus on how they wanted the future to be, not how they thought it was likely to be. “After all”, he said, “making things happen is what business is about.”

I agree wholeheartedly and believe that there is something in ‘self-fulfilling prophecy’. We are fundamental in determining what values and ambitions our children follow – and therefore, what the future will be like, what it will feel like.

Some Comments Up-Front

Before commencing I would like to comment on a few observations.

First, going through the literature I found it interesting that future scenarios seem to concentrate on predictions for the so-called ‘developed world’. While this might be understandable for reports concerned with the future of the UK, I found it a bit surprising that there was not too much in the more general reading on implications of differences between the developed and developing world, about conflict potential between rich and poor, and about the influence of the world’s largest nations, China and India.

Second, I also felt that the overall outlook was quite gloomy – at least in my perception. The vision that people are most likely to live as singles – instead of families, communicate via email – instead of talking face-to-face, and focus on their careers and standard of living as major aim in their lives, is rather depressing to me. However, more recent reports, and particular Rolf Jensen in his book ‘The Dream Society’ seems to predict a swing of the pendulum in the opposite direction: focus on emotions, on relationships, on balance and equilibrium – both of work/home and progress/ environment.
Finally, many reports and books read as if the future is something that happens to us. Yes, there are certain things that cannot be ‘un-invented’ and they seem to develop a life on their own – nuclear power, gene technology – but it is in our hands to what use they are put and how they are applied. I believe that future is something that becomes reality because of the decisions we are taking today.

I agree with futurologists Margaret Kin & Jamie O’Boyle who believe: “The companies that succeed will be those that can maintain a consistent, positive vision of the future. Companies must find a new way to contextualise their products. They need to tell stories that will capture people’s positive imaginations”. (In FastCompany, April 2000)

What’s Next?
The following Section provides a brief summary of what Dome Event participants and Futurologists expect of the future and outlines some possible implications for business. It concludes with a challenge by Charles Handy. Section 3.0 then looks into the Overriding Trends in more detail while Section 4.0 investigates the six aspects of life further. The report concludes with ‘A final comment’ in Section 5.0. Throughout I will refer to material from the literature as well as from the Dome event (both ‘homework’ and outcome of the group work).

I will also insert snippets from three scenarios developed by Richard Scase for the report “Britain towards 2010: the changing business environment”. As Scase says in the introduction to his report, “Each of these scenarios reflect emergent trends in British society: greater individualism, personal mobility, individual freedom and choice, and the greater use of information and communication technologies. But they also reflect the continuing divisions of British society in which economic, educational, social and cultural inequalities persist. Each of the scenarios reflects sources of continuity as well as of discontinuity.” An introduction to the people in each scenario, Rachel, Craig & Maria, and Duncan & Kim is given below and you will meet them again at several points of the report.

As Rob Goffee and Kim Slater say in their cover notes, this report should not be the end, it should be the beginning. It should be the beginning of a debate on the future in your organisation.

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5 Fast Company is a publication of the Innovation Network, an US initiative. Details can be found in the Library Section of the Innovation Exchange Website (http:iexchange.London.edu).

6 The report with the full scenarios can be found on http://www.esrc.ac.uk/2010/docs/britain.html.
The year is 2010 and Rachel is an advertising executive. She runs her own business and has clients throughout Europe. She started her own business after working for major companies based in New York, Sydney and Toronto. She graduated in 2003 with a degree in media studies and healthcare.

<table>
<thead>
<tr>
<th>Rachel</th>
<th>Craig &amp; Maria</th>
<th>Duncan &amp; Kim</th>
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<tbody>
<tr>
<td>Craig and Maria are both 34 years old and live in Rochdale with her two children. One of these is from a previous marriage, while the other was born during a one year relationship she had while a teenager. Craig has never been married but has lived with two other women. He also has two children as a result of these relationships but he rarely sees either of them.</td>
<td>Duncan and Kim have lived together for twelve years. They met at Leicester University in the early 1990s and have now known each other for almost twenty years. They still debate whether or not they should get married but cannot see the point of it. There are no tax benefits and the legal and pension changes that were introduced in 2008 make it even less of an incentive.</td>
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Source: Scase, 1999
3.0 Overriding Trends

The observation “When one looks at the primary cases of business failure over the last decade, resistance to change routinely emerges as a culprit” by Ira Matathia & Marian Salzman, authors of *Next? A vision of our lives in the future*, will hardly be debated by anyone. Preconditions for changing are (a) the realisation of a need for change and (b) a plan for how to change. Of course, an idea of what might change and how would be quite useful too. Therefore I will explore the five megatrends identified from the literature in a bit more detail below.

- E-commerce, the Internet and other Technology
- Globalisation
- Environmental Consciousness
- Ageing
- Dream Society

3.1 E-commerce, the Internet and other Technology

E-commerce and the Internet are probably most widely acknowledged and accepted factors that will influence not only the way business is conducted in future but it will also have implications for our private lives—they already have. As Sir Peter Bonfield, Chief Executive BT comments on the big influences on life in general, “It was the railroad in the early nineteenth century, it was the motor industry in the early twentieth century – and as we enter the twenty first century, it is communication.”

But why is it happening now, the information revolution has been heralded for the last 30 odd years? A question Barwise and Hammond rightly ask. Conveniently they also provide an answer:

“First, computers have become more powerful, cheaper, smaller easier to use and more widely distributed. ... Second, the Internet. The Internet is a loose network of networks which enables PCs in most large organisations and many homes and small business to communicate with each other around the world at low cost. ... The Internet exhibits a characteristic crucial for all successful communication networks: that their value to each member increases with the number of other members.”

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8 Professor Paddy Barwise and Dr Kathy Hammond direct the Future Media Centre Research Programme at London Business School.
Historically, enthusiasts for new technologies have usually been over-optimistic about the speed of change, most new technologies take longer to be adopted by the general public than these enthusiasts expect, although there have been exceptions: once they had reached critical mass, VCRs and mobile phones took off faster than most experts predicted.”

It is probably even more drastic with the world-wide-web. Whereas about 10 years ago few of us had probably heard of “www”, below a few figures that show how dramatically that has changed:

- Four years ago (in 1993), the Internet was mostly the preserve of university academics and technical users. Now this computer network has the potential to become the catalyst for global economic and political change. Sound far-fetched? Perhaps, but this is exactly what has set the IT world abuzz with anticipation. (Wolfgang Grulke, CE of business consultancy FutureWorld)

- [In the 90s] The number of Internet users has risen from next to nothing to hundreds of millions. (Sir Peter Bonfield, CBE, FREng, Chief Executive BT)

- April 1998 the US clocked in at 203.4 Net users per 1,000 people, the worldwide user rate is 16.9 (Matathia & Salzman).

- The following is taken from the 1999 PriceWaterhouseCoopers World Economic Forum Global Survey’ Report, quoted in the Design In Business Week 1999 publication:
  - 1998 an estimated 128 million people were connected to the internet worldwide, expected to rise to 300 m in 2005;
  - e-commerce revenues are expected to rise from $ 6 bn in 1998 to $ 223 bn in 2002;
  - 40% of chief executives anticipate that 10% of their company revenues will come from the e-commerce over the next five years – half expect this proportion to exceed 20%.

- Christmas shopping on the net alone appears to have amounted to $1,2 billion (1998).

So the Internet and E-commerce are undeniably on the increase, what then are some implications for business? The authors of Britain towards 2010 anticipate the new technology to cause “A decline of traditional forms of organisation, ranging from large business corporations to government and the public sector”. And, in my view, it will have a profound impact on how companies operate, speaking from own experience, it is no longer acceptable to have to wait for the delivery or an order for days or weeks, when amazon.com shows that you can receive your goods the next day!
And already in 1996 Quelch & Klein predicted that “Small companies will be able to compete more easily in the global marketplace, and consumers in emerging markets, in particular, will benefit from the expanded range of products, services and information to which the Internet will give them access” (quoted in Matathia & Salzman). Or as Grulke puts it, “Today these small companies can have access to global networks for a few hundred Dollars a month - something that would have cost millions of Dollars just a few years ago and would have been available only to the largest of businesses. In future ‘bigness’ alone will be less and less of a competitive advantage.” This might be something worth thinking about for the ‘Elephants’ of the business world.

However, this instantaneous access to a global market has also its downsides. Once a company opens shop on the internet, it is global from the moment the website goes live – which of course makes piloting and conquering the world in small steps, i.e. market by market, rather difficult, production, delivery, services, all needs to be geared for instant scale-up.

An issue for the consumer is that it is difficult to assess whether the company you are dealing with is large or small, next door or across the world, financially potent or just a fad. As a consequence, reputation and brand awareness are likely to become more important. We will come back to that in Section 4.1, Work.

But it is not only small and new companies that react to the new possibilities, USPS, the US Postal Service, plans to offer official time and date postmarks so users can send certified and registered letters via email (Matathia & Salzman).

So small or large, there is no avoiding it and it concerns not only how companies deal with end-users, it will also affect business-to-business. According to Sir Peter Bonfield, Chief Executive BT, “the e-commerce consumer market will be worth $ 100 billion in five years, but the e-commerce business-to-business market will be – wait for it - $ 1.3 trillion.” With more and more organisations trading over the net, the authors of the dti publication Vision 2010 speculate that E-business-to-E-business will “Be the usual method for most businesses to acquire the majority of goods that they buy” and “rely on common security and other standards developed to ease trade, with a few software platforms dominating”. Further, these companies will “Almost without exception use internet technology (including extranets, intranets and virtual private nets), rather than dedicated links”. By mid-2000, Sir Peter Bonfield expects BT to use their on-line system for 95% of their routine purchases.

Grulke also reports, “Existing companies are being forced to change. Barnes & Noble, America’s largest traditional bookstore, placed in grave danger by amazon.com, has been forced to launch its own massive on-line bookstore; the largest music companies in the US, representing over 50% of the industry, have announced they will sell directly to consumers over the Internet, despite resistance from traditional retailers. Dell Computer recently started peddling its
PCs and peripherals over the Web. It is now selling $2.5m worth of equipment a day.” He cites banking, insurance and news as three further examples where the internet has a profound impact.

A  Banking
Grulke feels that the impact of e-commerce will be particularly noticeable in the financial services sector, where over 30% of administrative jobs will be lost within five years. He refers to Stephen Carlin, CEO of Persetel Q Data's electronic commerce division, who believes that new technology will be encroaching on the traditional role of banks. If a retailer can offer the same ability to store money, then why go to a bank? Already today, financial services companies process less than 30% of all credit card transactions, the most powerful competitors are non-banks, professional services companies that focus on nothing else.

B  Insurance
Reflecting on the chain in the insurance selling process, Grulke refers to recent trends in the United States. In the US there are scores of new intermediaries that offer a wide range of financial services directly to the consumer - in one case 40 instantaneous quotes for life assurance from which the customer can choose simply by ‘clicking the mouse’ on his personal computer. He points out that insurance brokers will have to find innovative new ways of adding value as these new information-intermediaries explode onto the scene offering superb quality and extremely low-cost service. He continues, “This is really nothing more than an extension of the Direct Line services that have proliferated in the UK during the last ten years - but on the back of an infrastructure that is global, extremely cheap and truly easy to use. And, in this case, many of the new competitors are not coming from the existing insurance industries. There are telecommunications companies like AT&T, retailers such as Marks and Spencer and consumer champions such as Virgin who are using their powerful marketplace image and consumer infrastructure to steal market advantage and disintermediate traditional players.”

C  News
Grulke states, “The weekly Time Magazine has been available on the Internet for more than a year. With the addition of CNN to the Time Warner stable, Time Magazine has discovered that on this electronic medium you have new competitors. On the Internet it is not good enough to have an electronic magazine that publishes once a week. CNN’s site on the Internet publishes real-time news and comment. Time’s Information Economy competitor is CNN – a ‘television company’ in Industrial Age language. CNN would not have been considered Time’s competitor in the pre-Internet world. Now, Time Magazine has responded to these market realities by publishing Time Daily on the Internet. Time is no longer a weekly news magazine but has become a real-time news resource.”

His second example is the Wall Street Journal, “In my view one of the best newspapers in the world, is using another strategy. They aim to deliver not just the Wall Street Journal, but rather your Wall Street Journal. For a monthly subscription charged to your credit card they will deliver your Wall Street Journal electronically to you each morning with the front page configured exactly with the topics you choose and the reporting in each category to a depth that you choose. There is perhaps no other Wall Street Journal like yours in the world. Customers are prepared to pay a premium for instant mass-customisation, for getting exactly what they want.”
I started with the suggestion that the internet levels the playing field between large and small – but, as Matathia & Salzman suggest, implications go beyond that, “As with any form of mass media, the Internet wields great power. The difference between the Internet and TV or radio is that the Net allows two-way communication and gives as much potential power to a thirteen-year old computer geek as to a corporate CEO or government leader.”

Grulke also comments on the wider implications of the internet:

- The Internet and e-commerce dominate a world economy which could not be regulated by any government.
- In the global Information Economy, for the first time, the entire economic pie is in turmoil. There is an explosion of new markets and new competitors. Large corporations are not net new creators of jobs - although they may be growing turnover and profit. It’s the small and medium-sized entrepreneurial companies that are being created in the wake of their success that are the new stars - they are creating phenomenal new growth by competing with the new information age tools and ideals.
- Most economists reckon the world's largest market in 20 years will be China. They are wrong. It will be cyberspace.

But the title of this section of ‘E-Commerce, the Internet and Other Technologies’ and to do the title justice I would like to conclude with some other technology trends, identified by IDEO, a consultancy specialising in helping companies to develop new ideas, concepts, and products:

- **Flexible LCDs.** Think about it. The ability to pull out a large screen from a cell phone or a tubular scroll cuts the cord to desktop computers. The mobile Net, today more of a European than an American vision, becomes a reality.
- **Artificial Intelligence.** Return from vacation today and hundreds of e-mail messages await. Maybe a quarter are useful. In a decade, data will drown us. Software will filter, prioritize, and communicate.
- **Holography.** A tenfold jump in the size of current holographic images changes communication forever. Faster processing speeds will permit huge numbers of pixels, which generate moving 3-D images in real time.
- **Speech recognition.** It moves from a gimmick to an absolute necessity as the need to communicate with huge numbers of people makes typing obsolete. As communication returns to speech, boxy screens disappear and the shape of things morph.
3.2 Globalisation

The second widely accepted megatrend, and closely linked to the first, is globalisation. As Grulke says, "The driving factor behind globalisation is a revolution in Internet and bandwidth technologies. Already companies, such as mobile phone maker Ericsson are using the global communications infrastructure to operate business units in parts of the world that are best for the company’s bottom line. Though Ericsson is based in heavily taxed Sweden, 83% of its business is foreign. It has established factories where tax breaks are best, and its staff work in countries which have the best levels of personal tax. Operations can be moved virtually overnight as tax rates in countries change."

But the ‘global village will not only be reality for business, it will be true for the personal life too:

Kim & Duncan have a broad network of friends all over the world. Travelling to Australia and the United States is now a common feature of their holiday plans. They make use of their home-based video conferencing facilities to keep in touch with their geographically-dispersed friends. These same technologies also enable them to monitor, on a 24-hour basis, the health condition of Kim’s mother who is now in her 70s and lives in Central Scotland. In fact, Kim orders on-line all of her mother’s shopping needs which on a daily basis, are delivered by her local supermarket. This is much more convenient than having her live with them.

But, as Matathia & Salzman point out, “As the world grows smaller and smaller, we aren’t just becoming more globally aware, we’re also becoming increasingly focused on the hyper-local places and communities we live in, hyper-local ties help us to partition the world into manageable chunks. (The increasing importance of community also mentioned in ESRC report – to counter-balance “singleism” and we will come back to that in Section 4.5.) They continue, “As brands consider the implications of going global, it’s important that they recognise, too, the enormous draw of hyper-local connections.”

They further point out, “In the coming millennium, expect Europeans to apply global-local thinking to language. For functional global communication, English is bound to emerge as the best option. For local, personal and cultural purposes, local languages will continue to be the entrance tickets to parallel worlds.”

The Foresight report Britain towards 2010 anticipates that “Globalisation will lead to an international division of labour with greater global segregation – the under-developed and developed economies; the Islamic and Christian societies; Russia, central Europe and Euroland – but also to the ‘specialisation’ of national economies.”

Jensen foresees the following rough division of the world by cultural boundaries:
- The North Atlantic economies (North America and northern Europe), Australia, New Zealand
- The Latin, or Catholic, economies: Southern Europe and Latin America
- Eastern Europe, Russia, and the Ukraine – the Eastern Orthodox countries
- Countries in East Asia and South East Asia
- The Muslim countries from North Africa to Indonesia
- The Hindu world – especially northern India
- Africa – south of the Sahara Desert.

### 3.3 Environmental Consciousness

A third trend that is anticipated to affect business is an increased environmental consciousness of the consumer. As Matathia & Salzman put it, “As this planet gets more crowded, consumers are recognising their impact on the world, the world’s input on them – and our communal responsibility to future generations. So far, the ‘pure consumer’ has embraced such green products as natural cosmetics, eco-friendly fabrics and organic food. Interest in sustainable architecture – with emphasis on energy conservation, long-life materials, and environmentally building techniques – is on the rise. ... As green thinking migrates from left to centre, consumers will increasingly demand environmental accountability from product and service providers.”

Going into any of the stores of the big supermarket chains one now finds more and more products with the prefix ‘organic’. It started with free range eggs, then free range chicken, and now there is just about everything: milk, yoghurt, bread, flour, pasta, ham, and so on. Washing powder is becoming ‘biodegradable’, and fabric softener products claim to be more environmentally friendly because they come in a plastic bag and not in tetrapack.

The point of my slightly cynical comment is, there is an increasing demand for ecological and environmentally friendly products – and people are willing to pay a premium for it. Companies, knowing that, jump onto the band-wagon without the consumer having the knowledge and insights to evaluate the statements made on the packaging. But because of increased demand from the consumer, governments are starting to take measures.

The authors of *Next?* have observed this too: “On the Continent, organic food is becoming a priority for a growing number of companies and governments.” They continue by quoting from The Times and The Guardian, “1-% of all food in

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9 Interestingly, not only supermarkets have discovered their heart for green issues. Just recently (16 May 2000) I have spotted one of the headline-posters for the Daily Mail in which they attempt to attract customers people to buy its paper with the headline “So which organics are worth it?”
Denmark in 1997 is believed to have been organic’, and ‘The government is revising its goal upwards to 20%; ditto Finland, Sweden and many German provinces” (The Guardian). “Thus far, in the 15 member states of the EU, 63,000 farmers have gone organic, representing 0.75% of all farmers and 1.1% of farmed land” (The Times).

However, a visit to the supermarket also brings home the point that organically grown food is quite a bit more expensive, and so the question is, will it be organic for those who can afford it and GM food for the rest?²

3.4 Ageing

According to Matathia & Salzman, “In the US the age group of over 85s is expected to double in size by 2025 (using 1999 as starting point) and increase fivefold by 2050. By 2030, approximately 20% of the US population will be over 65. That’s 69 million people.” They continue by predicting that “Our ageing population promises to influence everything from financial planning and home design to the way products are made and sold.”

At the same time they also point out, “It used to be that people over 50 were old, and people under 30 were young. Mick Jagger turned 50 and continued to strut his stuff on-stage, and our entire theory of ageing had to be revamped. Today, ‘midlife crises’ occur not on one’s 35th birthday, but on one’s 45th, 55th or even later. Men and women in their 70s and 80s are remaining physically (even sexually) active, travelling the world, and are sometimes even involved in running companies – and countries.”¹¹ But, they conclude, the definition of age has changed beyond the above, old is who has not adapted to new technologies, who has, is young, independent from the actual age.

The Design In Business Week 1999 publication identifies the following issue from ageing,

- There will be a growing number of retired people with fewer in the workforce to support them which is likely to cause problems with funding of pensions and healthcare;
- Provision of housing and amenities will have to be adapted;
- Restructuring of work to accommodate needs of older people – types of work and work environment;

¹⁰ In this context it is interesting to note the Iceland has announced in June 2000 that it will use exclusively organic vegetables, without any increase in price – which is an amazing development considering that, so far, companies have argued that organically grown produce has to be sold at a, sometimes considerably, higher price.
¹¹ I particularly like the ‘even involved in running…’! Probably no longer that 50-60 years ago, the involvement of the oldest and wisest would have been expected. What has changed, in my view, is that the ‘oldest and wisest’ are no longer 60 or 70 but 70 or 80.
• There will be a need to recognise and utilise the unique resources of older people such as experience, knowledge and wisdom;

• With travel and global mobility threatening the closeness of the traditional family unit, social exclusion amongst older people is a real possibility;

• We live in a cult of youth so there is a social stigma attached to ageing and products targeting older people, in spite of the over 50s considerable wealth and savings.

Rachel's personal insurance plan covers the potential risks incorporated in her future plans, including unemployment and long life expectancy. She is paying fairly high premiums because of newly-introduced government requirements as well as the stipulations of insurance companies. The government insists that following the phasing out of state pensions (except for a minority of low earners) all others should take out compulsory personal pensions. Her premiums are particularly high because the insurance company calculated that, given her genetic background and very healthy lifestyle, she is likely to be retired for at least 30 years and to live until her late 80s.

Scase, 1999

The Foresight report sees the shift in age distribution of the population as positive: “Future growth opportunities are likely to arise from the life-styles and spending preferences of the middle-aged.” Continuing, “Middle age is no longer the beginning of the end but the beginning of a thirty-year period of personal enjoyment and self-indulgence.

Below a scenario as envisaged by Barwise & Hammond, 1998

**Scenario – Communication in old age**

Lisa and Tim’s grandmother, Dora, belongs to several chat groups and also contributes to a bulletin board and newsletter for skin-cancer suffers. The skin-cancer awareness newsletter (SCAN) is emailed to her once a week. Dora does not have an H-COM but her cable TV has a set-top box with a card reader and an infrared keyboard, so she can shop online and (most important) send and receive email. Dora logs onto the Net at least twice every day. First thing each morning she checks her email. She ahs many friends and relatives around the world and locally (but not nears enough to visit her very often). Much of the morning is taken up with reading email messages and checking bulletin boards. Today she has seven messages including a long one from her friend Lilien about a recent holiday in Italy, together with video stills of Lilien with the grandchildren. Another is from her neighbour saying he has lots of spare tomatoes from his garden and he’ll be around with them at 3.00 pm – Dora will not open her front door unless she is expecting someone.

Barwise & Hammond, 1998
3.5 Dream Society

You may have already noticed, that I have borrowed the title for my last megatrend from Rolf Jensen, the director of The Copenhagen Institute for Future Studies. Accordingly, a lot of what follows in this Section is based on his insights.

Where are we now and what is the Dream Society?

Our thinking today is very much influenced by the consequences of the Industrial and Information Society. The Industrial Society has given us the belief that progress – the expectation that things develop along an even path leading ever onward and upward – means that the future is bound to be much better than the present. One core concept of the Information Society is that what ever can be automated will be automated.

Jensen sees this to be reflected in the three waves of the electronics industry. “The first wave was hardware. The second wave was software (where we are now). The third wave will be content; that is, profit will be generated by the product itself, not by the instrument conveying it to the consumer.” He continues, “The Information Society assumes: numbers are better than words because they are concrete; they reflect measurable, physical realities. Pictures – possibly our most effective means of communications – are not allowed in books of learning. Pictures are not considered appropriate.”

After the Agricultural Society, the Industrial Society – which is generally considered to have started with the Industrial Revolution in the 18th century – and the Information-based Society – which started about 20-40 year ago – Rolf Jensen expects a new area to follow, the Dream Society. He anticipates a new society “in which businesses, communities, and people as individuals will thrive on the basis of their stories, not just on data and information. Opinions and values are now permitted.” He believes that “In a century where society is marked by science and rationalism, by analysis and pragmatism, where symbol analysts hold the highest positions of society – this is precisely where the emotions, the stories and narratives, the values all return to the scene.”

So, in a way, the Dream Society is a reaction to having moved more and more towards one extreme – rationalism – and represents a swing of the pendulum in the opposite direction. While Jensen dedicates his entire book to this particular

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12 Is it pure chance that the author of the, in my view, most positive and optimistic outlook of the future is a Danish national whereas the Anglo-American anticipation of the future seem much more bleak and negative? I mean, most of the latter foresee the future society as one of egocentrics whereas Jensen focuses on inter-personal aspects and community. Are not, according to Hofstede, the UK and US described as individualistic societies whereas Denmark is said to be more group oriented?

13 However, in the context of new product development and innovation, I believe that companies have already become increasingly aware of the value of pictures, metaphors, prototypes, which one could describe as 3-dimensional pictures.
scenario, most other future scenarios have also a component of this, more often than not described as an “increased importance of community” – something that was also highlighted by many groups at the Innovation Exchange event at the Dome.

What does this mean for companies? Well, tell stories about yourself, stories that give the consumers an idea who you are and what you are about, stories that give you a face and a personality. This will allow consumers to form a positive emotional relationship with you - and this is likely to result in loyalty and probably even willingness to except a premium price.
4.0 Impact of Trends on Different Aspects of Our Live

I believe that the 5 megatrends will not lead to one single scenario of the future but to a range of different, often each other contradicting, ones. As Matathia & Salzman put it, “The concept of work is changing, and today two diametrically opposed views exist alongside each other”. Some people are proud to announce that they do not take any holidays and that they work around the clock, others are appalled by such a scenario and are possibly even happy to forego progression at work in order to achieve a good balance between work and home life.

Each trend has the potential for positive as well as negative implications. For example, remote technology (computer, phone) allows people to work from home – but at the same time may isolate them and cut them off from face-to-face interactions. But implications of technology go beyond where we work, Grulke believes, “In the new global economy, the lines between home and the workplace, between occupation and recreation, between time-zones and international borders, have been blurred beyond recognition. Work is no longer where you go. Work is what you do.”

Another fear going alongside change and the introduction of new technologies is: how many jobs will be taken away? But Jensen points out that “History teaches us that any transformation – say, from agriculture to industry – creates new jobs to replace the ones automated, new jobs were generated in offices, in the Information Society.”

What are the characteristics of the society of the future? In his report Britain towards 2010 Scase lists the following:

- **Individuality**
  Traditional family forms will no longer be the ‘foundation; of society. More of the population will live alone in single person households. This trend will affect both lifestyles and work patterns. It will also have consequences for health and welfare systems, housing and retaining.

- **Choice**
  With declining family obligations, individuals will exercise greater choices in terms of where and how they live and work. This will lead to a greater diversity of personal lifestyles. Traditional marketing categories based on income and age differences will be less relevant.

- **Mobility**
  Individuals will be more mobile in all spheres of life including work and employment, personal relations and residence. Future lifestyles will be based upon mobility rather than stability.

- **Identity**
  Personal identities will be more ‘fluid’ as a result of increased mobility and the more transient and temporary nature of work, leisure and personal relations.
- **Independence**
  Individuals, freed from traditional obligations and enjoying greater mobility, will value their personal independence. This will lead to more self-centred, self-indulgent and hedonistic psychologies.

- **Anxiety and risk**
  Individuals, in a more unstructured and rootless society, will feel more insecure. They will experience greater uncertainties and perceive society as high risk and often threatening. Others will find this more exciting and challenging.

- **Creativity**
  A focus upon self-interest and individuality will encourage personal creativity. This will generate a more innovative society.

Just before I move to look at the different aspects of life, let me introduce the Jacksons (you have already met grandmother Dora in Section 3.4). I have ‘borrowed’ them from Paddy Barwise and Kathy Hammond’s book *Predictions – Media* where the Jackson family is introduced to illustrate how life in the future might be like. So in each of the following sections you will encounter one or other of the family: parents Pete and Marion, children Lisa and Tim, and grandmother Dora and H-COM Bob, their personalised intelligent agent.

### 4.1 Work

So, generally, what will work be like? Presentation by the Dome event’s participants suggested a better balance between work and leisure time – not necessarily at any one particular time but they envisaged that there will be periods of hard work and periods of ‘hard non-work’. Participants also believed that people will be looking more for fulfilment at work. This is supported by the Coopers & Lybrand International Student Survey which states that “Students ranked their own personal growth and development as more important to them than building a career.” Similar the GQ Magazine which reports that “An impressive 55% were of the opinion that the most important thing was ‘getting satisfaction/enrichment from the job.’”

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<th>Participants ie Anniversary Celebration</th>
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<td>People will be looking for more fulfilment in work.</td>
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<td>There will be times for very intensive work, but also times where work is less important and each individual has the flexibility to decide ‘what time it is’.</td>
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<tr>
<td>The value of work is measured in output and not based on time.</td>
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<tr>
<td>People will live life working from the heart, and being at home from the heart.</td>
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<td>Life now is about money and cars. Life in the future it will be more about being about nature, about working and enjoying life in a creative environment.</td>
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Jensen is in that camp too when he says, “Work will become hard fun: motivating, creative, and engrossing. No longer will the company be a satellite orbiting the family, providing it with a livelihood. In future, our lives will have two social nuclei: the home and the company. For some, the home and family will be most important; for others the corporation will take precedence. A lucky few will attain the coveted balance between career and family.” Well, companies can contribute to achieving this balance, so for example Ernst & Young who have instituted a telecommunications ban on weekends. But what are specific trends?

Working from home

- According to the 1997 Olsten Forum on Managing Workplace Technology (http://www.Olsten.com), 51% of North American companies now permit employees to telecommute through pilot and ongoing schemes, with 74% expecting their use of telecommuting to increase. (Matathia & Salzman)

- Research firm Gartner Group says that 80% of US companies will have implemented some telecommuting for about half their work force. That means these people will use some alternative form of office arrangement, including working at home. Gartner believes that 137m users worldwide will engage in at least part-time telecommuting by 2003. (in Grulke)

- Another example is telecommunications giant British Telecom (BT)’s plan to save millions of pounds by persuading a tenth of its 100,000-strong UK work force to operate from home. By 2003 BT wants to reduce the number of office work stations in London from 10,000 to 3,000. (in Grulke)

The Scase report states that “By far the greatest number of jobs created over the next decade will take the form of “non-standard employment”, i.e. part-time work, flexi-hours or self-employment. But what dose that mean? These new ways of working require different – psychological and other – contracts between employer and employee. Supervisors are no longer breathing down people’s neck, a relationship of trust has to be established if the new ways or working are to work. With it will come a shift from time-based work to result-based work, payment will be for results, not for hours spent. This means that it is the individual’s responsibility to schedule work and leisure time, to ensure that the work gets done on time, and so on.

Most of the time Rachel worked from her flat in downtown New York. She only went to the office for strategic briefings, team meetings or to meet clients. Otherwise, all of her work was done on a network basis. She worked always on short-time assignments which is how business is generally conducted. No-one worked for the partnership for more than five or six years as they were expected then to move on.

Scase, 1999
Says Danie Maritz, CEO of Randburg-based training, development and transformation firm Productivity Development, “They (workers) must be empowered and remunerated according to their performance and not how many hours they spend in the office.” It might sound a bit scary but Matathia & Salzman provide an example which illustrates that ‘freedom’ pays: “A bank decreased its number of work rules, let employees schedule their own work hours, and instituted a number of family-oriented programmes. The result: supervisors rated by their subordinates as supportive or work-family balance retained employees twice as long as the band average and attracted 7% more retail customers.

Working self-employed/ Entrepreneurship

- In 1996, the self-employed made up 13% of the labour market compared with 9% in 1981.
- Small firms already make up 93% of all enterprises in the EU and account for almost 1/3 of the labour force.

That people are looking for more fulfilment in work and are increasingly happy to work self-employed should make large organisations think – remember Charles Handy’s challenge. Matathia & Salzman quote Warren Bennis (from Rethinking the Future), “What leaders must learn to do is develop a social architecture that encourages incredibly bright people, most of whom have big egos, to work together successfully and to deploy their own creativity.”

Grulke also declares, “Bigger is no longer better. Leaner is meaner. Today’s new graduates are no longer seeking secure, comfortable positions in the mega-corporations. They want to grow quickly and earn big, and they know they can’t achieve this the way their fathers did, by becoming Company Man. Instead, they seek out small, high-growth companies, which in turn can pick and choose from the best young brains in the market. No matter where they may be.”

So attracting and retaining talent will not be an easy task - but one aspect that might help – or hinder – is the office environment.

Although Duncan is self-employed, he has been engaged by the same corporate client for the past seven years.

His company decided to make full use of the capabilities of the rapidly changing information and communication technologies and embarked on a drastic cost – cutting programme. The programme resulted in closure of its large, high rental offices in the centre of London. This office was no longer required since all the employees could work from home. The company kept a small presence in the City mainly for client meetings and colleague brain-storming sessions. But the value of this facility has been queried as most face-to-face contact with customers is now conducted on their own premises. Equally, meetings with colleagues are becoming redundant as everyone is now familiar with using interactive video and voice ICTs.

Scase, 1999
Office environment

I believe that there will be a trend back towards natural light and fresh air, away from ‘boxes’ and air-conditioning. Jensen also comments, “Corporations that are ready to change in order to meet the needs of the new workers may be successful in keeping their workforce, but a growing number of free agents have found that their former employers were hanging on to the cubicles and the windowless office.”

What I don’t believe is that we are ready for the paperless society soon, it will be a while before people are willing to forego their hardcopy on which they can scribble and which they can take with them. Nor do I believe futurists who predict that face-to-face contacts will go out of fashion. Rather the opposite. In a world where people work increasingly in isolation, where relationships are less structured and formal, face-to-face communication will become increasingly important as it is still the best way to assess someone and establish a relationship with him or her. This was also emphasised by Professor Rob Goffee, Director of the Innovation Exchange who at the Dome event highlighted the importance of face-to-face communication for knowledge exchange and innovation.

So what are challenges?

In short, informal networks are in, rigid institutions are out. Jensen predicts that “The company will not be a legal or economic entity. It will be more like a tribe, as defined by the hunter-gatherer society. People hunt collectively and divide the prey according to preset rules. Employees are not under traditional contract; they are participants or members of the tribe. The quarry bagged may vary – tribal survival has supreme priority.”

If the future of business is largely influenced by the ability to attract and retain staff, then, surely, ‘our company’s greatest assets’ have to be accounted for (literally) in a different way? Jensen certainly thinks so. He says, “Traditional methods of accounting, dating back 200 years, will be abandoned. The largest visible item in the accounts – and in status – will become the human production factor, the participant. Intellectual capital will be calculated. Physical assets will become secondary capital. After all, the computer produces nothing itself; it has to be guided. The company or tribe is made up of the sum of its participants.

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14 Last year Ralph Buschow of architects Buschow Henley ran a workshop on The Innovative Workspace for the Innovation Exchange, London Business School. You might want to read up the summary of the workshop, and interviews around the Innovative Workspace, on the Innovation Exchange website, http://iexchange.london.edu, it’s accessible from the editorial page.

Bettina von Stamm

© Innovation Exchange
Regardless of the Information Society, accountants today calculate only a company’s physical assets. The accountant is measuring the company’s capital at night – that is, when all employees have gone home. Nonetheless, many annual reports describe employees as the company’s greatest assets. Yet when you turn to the balance sheets, this asset goes unmentioned. The industrial society’s way of reasoning still remains, long after is has become irrelevant and even downright erroneous. The Swedish insurance giant Skandia has devised a way of summing up intellectual capital and in-house training, entering these into the books as investments. Skandia, by the way, is a highly successful company.” He continues, “Corporate survival will depend more on the ability to create an effective image, on great new ideas, than on worrying about whether the accounting system works to perfection. Future technology will see to that.”

But it is not only the employees that need more individual attention and care, there are the customers too. One approach envisaged is one-to-one marketing. Barwise and Hammond comment, “The trend towards targeting and ‘one-to-one’ (that is, individual) marketing will continue, increasingly based on companies’ records of people’s individual characteristics and especially their previous transactions. For instance, you and your neighbour may both watch the same programme but see different commercials because one of you owns a cat (and buys cat food) and the other is a frequent business-class flyer.”

The importance of image – branding – is seen as increasingly important by many soothsayers. So for example Jeanne Binstock von Rij, MD of Honeycomb Institute, said in 1996, “Brand image is no longer a marginal dimension of business, but the very core of business identity and strategy. With a world culture evolving, customers everywhere respond to images, myths and metaphors that help them define their personal and national identities and relationships within a global context of world culture and product benefits …. Powerful brand identities and corporate branding will be the main engines of continuing international growth.”

Similar Grulke, “Brands have become the subliminal icons that attract consumer bees to the commercial honey. Brand icons such as Virgin, Marks & Spencer and AT&T are being used as front-ends for a range of products and services far outside the scope of their original business. With global information networks and global consumers there is a parallel need for a move from national to global brands.” And he comments, “There is often no time to develop your own so you must acquire access to global brands while they are still affordable.”

So the company about the future will be about appealing to people’s emotions, to have a story to tell that people can associate with. An example of a company who lives on stories is Nike. Nike works from the basic tenet that the issue is not athletic footwear, but the story of youth, success, fame, and triumph.
But what people expect from the company of the future goes beyond emotional appeal. As Jensen also points out, “The world’s leading conglomerates recognise their social as well as political responsibilities. We are rapidly approaching a situation where for-profit-only companies become rarer and where suppliers and customers will be taking such companies to task, asking questions like, “Does your company have no heart, no feelings? Are you nothing but a rationalistic, profiteering machine?”

E-commerce and globalisation have also interesting consequences for taxes and government. For example, when trading internationally via the Net, where is VAT levied and where is a contract is deemed to be concluded? “At present,” so Grulke reports, “when ordering a book from the States neither US sales tax, nor SA Vat or import tariffs are being levied.” He continues, “When a non-tangible service is rendered, policing becomes impossible.” He also observes, “It’s a crazy world where small economies can have major effects. When the collapse of the Russian stock market shook economies world-wide it was worth less than Wall Mart! I believe that today Korea's total market cap is less than Dell's!” And finally he remarks, “As the physical geographic marketplace moves to being a virtual, global and paperless marketspace, the nature of competitiveness is changing fundamentally. National boundaries become almost irrelevant - no more than a nuisance. The primary limits to business performance are those that exist in our minds.”

Before concluding This Section with two scenarios from Barwise & Hammond, let me present you with some “Fields for Future Growth” identified by Matathia & Salzman for personal and business services:

- Online moms
- Online researchers
- Educational consultants
- Babypoofers
- Home security
- Neighbourhood childcare
- Home cooks
- On-site repair services
- Equipment lessors and business sites (renting if and when needed)
- Skills trainers
- Executive coaches

Particularly interesting I found their comment on the ‘corporate philosopher’, referring to an article in Slate (http:www.slate.com/) which says, “The job market for academic philosophers is as desperate as ever, but deep thinkers now have a range of alternative careers. A French outfit, Philocit, offers pricey ‘philosophical consulting’ to companies looking to add Heideggerian heft to their marketing strategies.” I find this concept quite intriguing – but am not the only one, David Firth and co-author Alan Leigh have published a book in 1998 titled The
Corporate Fool about whom they say in the book’s cover “Our organisations are in trouble. Beset on all side by pressures: competitive pressure, market pressure, social pressure, and just plain pressure. As we look at the people in these organisation we see them rotating in a busy, helpless dance – the Jog of Despair – desperately trying to improve they way things are done in the future but constrained by the way things are done now. Now, with the radical advances of technology, with open systems and transparent connectivity, with global interface and network-centricity, there is a feeling that perhaps, just perhaps, things might shift. But this will only happen if we stimulate the dancers to change their steps – to become more open, creative and balanced themselves. This is the essential, wondrous role of a new business professional, the voice of the Third Millennium, the Corporate Fool.”

Below two work-related scenarios of Barwise & Hammond’s Jackson family.

**Scenario – Working on the Train**
It’s Marion’s day for going into the office, unusually for a US lawyer, she goes by train. On the journey she uses her notebook communicator, a lightweight, touch-sensitive screen which opens to A4 size. She uses it mostly for reading and note-taking (with a screen pen). Marion forgot to connect her notebook to the H-COM before she left home, so to get her latest messages and updated personal news service, she connects to Bob through the mobile network. She pays for the connection by authorising a credit card payment. She then selects ‘news’, and then ‘daily personalised information’. There are eight stories on trademarks, her area of work. She reads these first, writing screen notes on three articles.

**Scenario – Working in the Car**
Pete: ‘Bob, please connect me to my work in-tray and read out messages’.
Bob: ‘Pete, message 1, is a voicemail plus document from Jane Maynard on LA. Message follows: “Hi Pete, it looks as though the European deal may be trickier than we’d assumed. I’ve got the figures here. Have a look at them and let me know what you think.” Pete, a three-page document is included – do you want me to read it out?’ Pete: ‘Bob, no, just give me a 10% summary.’ Having listened to the summary Pete says, ‘Bob, call up Jane Maynard, please – her work number.’ Pete talks to Jane, then goes back to his mail, answering some, filing or deleting others. On the way home he dictates his report.
The following morning he is back in the office. The first meeting of the day is a video conference with other regional managers, builders and planners, to discuss the purchase of the site. Everybody has the plans, financial statements and draft reports available on the lower half of their screens. One accountant joins the conference from home (though nobody notices as his video image is backed by his virtual office logo).

Barwise & Hammond, 1998
4.2 Education

“School is still about socialisation and about learning, things which cannot be digitised: the making and breaking of friendships, the meeting and melding – often more than at any other time in a person’s life – of people from different backgrounds, cultures and physical and mental abilities.”

Barwise & Hammond, 1998

Knowledge is the currency of the future. The most successful countries have often the highest labour costs and no natural resources to speak of. Human resources are the key to their success. This will be even more so in future. This means that education – and the acquisition of the right skills – is essential. As Scase puts it, “A major requirement of the education system is that it can provide the intellectual capital upon which corporate creativity and innovation can be developed. It must also produce effective interpersonal skills – a requirement which is driven by greater corporate understanding of the benefits which can result from effective team working.”

A predicted shift in education, also clearly identified by participants in the Dome event, will be from learning when you are young – school, university – to learning throughout your life. As Richard Scase also suggests this when he states in his report, “There will be shift from education as childhood/ teenage experience to life-long learning undertaken formally within institutions – such as colleges and universities – and informally at home and at work through the use of ICTs.”

Participants ie Anniversary Celebration, Groups 3 & 4
- Education will be fragmented, a life-long experience.
- It will take place in a network involving different parts of the community – pubs, corner shop, and so on.
- Everyone will learn from each other: the old with teach, the old will learn, the young will teach, the young will learn.
- And we will all be getting joy out of learning.
- Focus in future there will be much more on health, sport, art, science and computer skills

To achieve both teaching the right skills and enabling life-long learning, education as we know it today will have to change. The following extract from Matathia & Salzman alludes to a potential problem: “Already Japanese employers are complaining that university graduates are not up to speed for today’s workplace” However, how this can be remedied seems to be less clear. Matathia & Salzman report, “Division Young & Rubicam (DY&R) Tokyo thinks the country is likely to see greater emphasis on teaching analytical skills, with
more attention paid to the personal development of children, while in China, DY&R Shanghai forecasts that education will become ‘more focused on guiding children, bringing out their potential instead on forcing them to memorize everything that they may not even understand’.

One way to motivate children to learn, and to learn differently, is though play. So, Matathia & Salzman observe, “To make sure their children receive every educational advantage, more and more parents are purchasing ‘edutainment’ products that combine learning and fun.”

While Lord David Sainsbury indicated in his speech at the Millennium Dome that his daughter, now at Cambridge, studies and learns just the way he did ‘quite some years ago’, this will not be likely to be the case in the future. Universities will change, the way knowledge is transferred from teacher to pupil and student will change. Duncan & Kim have only one child. He is ten years old. He attends the local secondary school where all the children are expected to have their own PCs. For the small number of under privileged pupils there are scholarships enabling them to buy their own computers. PCs are now at the very core of the pupils’ learning process. More time is spent working on projects at home and attendance at school is more flexible. In this particular education area, unlike those in the more deprived parts of the country, the school has become a learning resource centre with teachers able to work with pupils on an individual basis. In collaboration with parents, teachers develop personal learning portfolios, much of which pupils pursue at home.

Kim does half of this at her London office and the other half at home. This is convenient for her as she is also studying for a higher degree with Harvard University. She is now on module 7, having completed courses with universities in Australia and the UK. A consortium of transnational universities offer courses on the internet and accredit her studies. Kim enjoys collaborating with other students in virtual seminar groups as this allows her to share experiences with students worldwide. She also enjoys the intensive face-to-face contact at the “personal creativity” summer schools that are held at different participating universities. She feels that she learns more and develops her personal knowledge far more effectively than when she was a student in the 1990s.

While kindergarten and school play an important for developing social skills and developing friendships etc. (see the quote from Barwise and Hammond which started this Section), and may – if just for that reason – continue to follow the current pattern, university and education at later stages in life will change. The Open University – or any other distance learning facility – may be a taste of what is to come. Scase paints the following scenario:
Rachel, unlike her parents who were students in the early 1980s, did not go to university except for a couple of self-development and personal creativity courses. Instead, she studied from home while working part-time in a supermarket. Using the internet, she took a portfolio of courses, selected from some of the most prestigious universities in the world. Most universities operate as virtual organisations. If they have a residential component, it is for short-term "creativity programmes" where students have the opportunity to engage in face-to-face dialogue with tutors – rather like the Open University residential courses of the late 20th century. Rachel’s tutors were the best in their field – leading-edge researchers who regarded their twice a year, four week teaching commitments as a chore and a distraction from research. But developments in information and communication technologies have ended the old fashioned researcher/teacher role. There are far fewer academics than in the early 1990s.

But if I said earlier that kindergarten and school may continue to follow the current pattern, there is no doubt that technology will make its impact felt here too:

### Scenario – Homework and School
Lisa is in her bedroom doing a school assignment on Stalin’s purges. She uses paper and pencil to plan it and scribble notes, and a couple of textbooks as her main source. She wants some background music, so she presses her palm against the teleputer screen in her room. It displays her menu and Bob (the computer) says, ‘Hi Lisa’. She asks for her favourite radio station and then asks Bob to turn the volume down. She then asks for material on Stalin’s purges and after a few minutes finds a good summary from Encyclopaedia Britannica which she downloads and prints out for easier reading and note-taking. She is also able to draw on material assembled by her teacher on the school’s website, including film footage, maps and photos. Finally, she writes her assignment using a mixture of dictation and the keyboard, and incorporating – with attribution – pictures and text from several sources. When the assignment is complete, she submits it by email.

Barwise & Hammond, 1998

However, the strong reliance on computer and other IT also causes problems. Those who cannot afford a computer will not be able to acquire the currency of the future. Scase refers to the potential problem in his scenario of Craig and Maria:

Teachers are concerned about Maria’s children. They have little interest in school and cannot use the computers. They are among the few children that do not have access to PCs at home and this is affecting their performance in many of subject areas. They have been carefully monitored for any emotional and psychological problems since the school’s information system put them in the “at risk” category.
4.3 Medicine & Healthcare

Bio-technology will be one of the big drivers of advancement in the medical field, it is anticipated to cure and prevent Aids, double human life expectancy and enable disease-free fruit and vegetables. As Scase puts it, “These (bio-technologies) have the potential to transform century-old patterns of reproduction and health as well as of psychological and physical health. The challenge will be to address the moral and ethical values associated with these.”

This is even more true for gene-technology. It will provide valuable insights into causes of illnesses – they seem to discover a new gene every other day – but there is also the rather more uncomfortable area of gene-manipulation and gene-selection. What is morally and ethically acceptable what is not?

Improved medical care also means that people live longer. And, as older people generally need more medical attention, it also means that the cost of medical provision and, hence, insurances will go up. Most likely, everyone will have to take out a private health insurance if they want medical care beyond the bare standard.

The bathroom is a medical centre and incorporates a variety of equipment for monitoring personal health. This ranges from blood pressure levels to psychological states. Duncan and Kim organise their daily work routines according to this information. It is also important to feed the data into the household database because this is used by their insurance company to determine their premiums.

Rachel’s insurance company insists that she has regular health checks. These are generally unnecessary since she has a number of self-monitoring devices that allow her to gauge her mental and physical state.

High cost for medical are also likely to lead to greater emphasis on prevention – rather than curing, and a greater health-consciousness of people.

Participants ie Anniversary Celebration, Groups 5 & 6
- Now it is quite bad as the technology and the human side seem to be separated. In future we will be able to combine the best of the two worlds.
- Good news: the power will shift from the doctor to the consumer, the consumer will have access to money and information – we are forever young.
- On the other hand, there will be a deeper divide between rich and poor, and for the poor the future is not so rosy, they will have to make due with conventional medicine as we know it today.
While technology and science are opening up ever more possibilities and opportunities, Matathia & Salzman make an interesting observation, “Asia Inc. reports that after years of using modern medicines, Asian executives are returning to ancient healing techniques, including massage and acupuncture.” But not only in Asia. They continue, “In the health and beauty industry, the appeal for natural (versus synthetic) cosmetic ingredients is reaping profits for makers of everything from botanical shampoo to herbal toothpaste.” And Jensen comments, “In Germany, therapeutic means such as homeopathy and acupuncture are already considered ‘traditional’ and therefore to a large degree are covered by health insurance.” For me this also indicates a shift from ‘one right - meaning scientific - way only’ to an acceptance and understanding that a holistic approach – which ‘alternative’ medicine generally takes – may either support ‘scientific’ treatment or even successfully replace it.

Another important – and lucrative – field will be health and beauty. Men are becoming more vain – and less embarrassed about it. The cosmetic industry has discovered a growing new market. And it’s not only men, it is also ‘old folk’. While age will be perceived and judged differently – even advertising seems to cotton on to that – there will be a great market for potions, creams, etc. that make people believe that they are doing something to stay young, and that also make them feel that they do something to look after themselves. Scase goes a step further when suggesting that “Increasing singles and a growing pre-occupation with personal appearances will cause a rise in demand for cosmetic surgery”.

As a consequence of an increased occupation with health and beauty Matathia & Salzman foresee, “As the health field grows ever more technical, and as patients choices continue to expand, expect to see a growing cadre of ‘medical advocates’ – professionals hired to guide individuals through the jungle of medical literature, ‘alternative’ medicines and medical options.” And Jensen predicts, “A digital household physician will monitor the family’s state of health, offer diagnosis, and even suggest possible cures.”

Before giving Barwise & Hammond a chance to state how they envisage the future of health care a interesting bit of news I found in Matathia & Salzman: “A team supervised by Lars Olov Bygren surveyed more than 12,000 people about their lifestyles in 1982, 1983 and 1991 and discovered that those who regularly attended movies, concerts, plays, and other artistic events – or rooted for their local sports team – were half as likely to be among the 850 or so subjects who died during the period of the study.” If that is not an incentive to make more of an effort to go to see a play or concert!
Scenario – The Remote Doctor
Dora, after reading and replying to her email, goes to the SCAN (skin-cancer awareness newsletter) Website. She is going for a skin-cancer check soon; she will go to her local community health practice for this, but will be examined and questioned remotely by a specialist in Boston. Dora has not had this type of examination before, so she wants to see if SCAN has an information page on remote health consultations.

Scenario – Remote Health Monitoring
This morning Pete is working from home. One reason for working from home this morning is that Pete’s medical check is due. He had a minor heart attack last year and has regular checks. A watch monitor logs his pulse and blood pressure. Once a week he connects to his clinic to transmit this information. If there is any cause for concern a health worker can call him on his video phone and, if necessary, he can chat to his doctor or arrange a personal visit.

Barwise & Hammond, 1998

4.4 Shopping
“All the goods for sale in the world will be available for you to examine, compare and, often, customise. When you want to buy something you’ll be able to tell the computer to find it for you at the best price offered by any acceptable source. Servers distributed world-wide will accept bids, resolve offers into completed transactions, control authentication and security, and handle all other aspects of the marketplace, including the transfer of finds … It will be a shopper’s heaven.”

Bill Gates, in Barwise & Hammond, 1998

Participants ie Anniversary Celebration, Groups 7 & 8
- Shopping in the future will be influenced by technology, i.e. the internet. It will be delivered to where ever you want - home, office – to a secure, refrigerated area.
- There will be a new consumer paradigm as people will start buying from all over the world.
- Shopping is the life style of the future, that is what people do, that is their entertainment.
- You will have both, the internet and small, individual shops.
- Advertising is key.
- There will also be larger class separations (organically grown for the rich, cheap, genetically engineered for the poor).

While all the above focuses on technology, a splinter group suggested the following,
- The new world will not be about computers, it will be about people; about people doing things, having fun, communicating, sharing experiences, they will be outside, not in front of computers.
Shopping via the Internet is, as we have seen in Section 3.1, not something to anticipate in the future, it is here already. As Grulke reports, “Christmas shopping 1998 on the net alone appears to have amounted to $1.2 billion.” What does shopping on the Internet mean? Grulke comments on it as follows, “With the advent of GATT and other similar agreements the world is becoming a global supermarket of products – all sourced globally. The customer chooses on quality, cost and convenience. Time and distance no longer appear to add cost. Customers only judge on value. Furthermore, almost every global product is in itself the product of many different countries – perhaps manufactured in Malaysia, by a Japanese company with capital provided by a German bank!”

An interesting side effect of the round-the-clock, round-the-globe shopping is noted by Scase who says, “Retailing is a key driver in longer working hours as seven day shopping has knock-on effects for transportation and distribution, delivery systems, communications, catering and entertainment.”

What are the drivers for shopping? I believe that speed and quality are essential, as Matathia & Salzman are also observing, “Consumers are placing renewed emphasis on quality and freshness and manufacturers and governments are responding.”

Does this mean the exodus of shops as we know them? I could imagine two different markets operating successfully alongside each other:

1. **Internet shopping**: products purchased frequently and in large amounts (e.g. food, office materials etc.), electronic consumer goods that can be easily compared and for which technical product information and picture are sufficient to determine whether the product on screen is the one you are looking for; and also products for which one can rely on the brand name to guarantee a known level of quality – such products are purchased on the web and delivered to the door. Shopping is about efficiency.

2. **Small, individualistic shops**: shopping as pastime; wondering about, meeting with people, talking to people, things you want to touch and feel before purchasing, the ‘not necessary but nice to have’ products, clothing [even though standard clothing might also be ordered over the computer, taking your measure from a picture provided, delivering it, made to measure, to your door]. Shopping is a social event. So too seems to think German Futurologist Günther Rosenberger who concludes: “Shopping will become a form of exploration and entertainment, increasingly detached from need. Consumption will rival work as a means to self-realisation and identity.” (in Jensen)

Kim only shops for clothes. The basics are ordered on-line and delivered to her apartment. The secure storage containers for food-store delivery are now commonplace, particularly in the large cities where most single, professional people now choose to live. City life is very different from twenty years ago.

Scase, 1999
Who I believe will lose out is the middle ground, the out of town, megastores – they generally hold the products that are easily – or shall I say less painfully (have you been shopping on a Saturday morning recently?) - bought over the Net.

This leads me on to an interesting point Jensen touches on when he asks, “Do we do our shopping using our hearts or our brains?” He continues, “This question has in fact been posed to consumers. The answer when only the decision makers – the heroes of the Information Society – were asked was that ordinary consumers do their shopping with their brains. When the same ordinary consumers were themselves asked, however, the answer was the opposite: we buy groceries with our hearts.” I can only speak for myself, but I am certainly one of those who shops with her heart. And I consider the ability to do so as part of my quality of life – I think I am beyond what Jensen observes: we consumers buy with our hearts and rationalise with our heads afterwards” – I don’t even attempt to rationalise!

In terms of what types of products sell in the future, well, for one we have already heard that in future people will be more sensitive towards environmental friendliness and ecological soundness. And, interestingly, both Jensen and Matathia & Salzman see a trend towards what Jensen calls ‘retroproducts’. He says, “Consumers want what could be called ‘retroproducts; they desire eggs to be produced under the technology and methods of our grandparents – the old-fashioned way. This means that the eggs become more expensive – more labour intensive – but consumers are happy to pay an additional 15-20% – for the story behind the egg.” And Matathia & Salzman comment, “We’ll see that the most effective marketing strategies meld the essence of nostalgia (reliability, quality, beauty, familiarity) with the positive elements of futurism (functionality, convenience, versatility).”

Some other interesting thoughts on how shopping will be like in future:

- Matathia & Salzman predict the automatic, personalised shopper: A growing number of companies will offer personal shopping – in advance. Customers will fill out a form at the beginning of each year, indicating what should be sent to whom. (no more forgetting about birthdays!)

- They also envisage these personal shoppers to migrate from department stores to supermarkets, retained by busy consumers to plan a week’s worth of meals and deliver the necessary combination of raw ingredients, frozen food and prepared meals.

- An alternative is suggested by Jensen, “In the future, buying the daily groceries will be outsourced through home shopping. You will order groceries seated comfortably at home in from of the TV set or the computer. Overnight, it will be delivered to a box at your home.” Alternatively, “Big corporations like Xerox, HP, and Marriott are already offering to shop and handle dry cleaning for headquarters employees.”
As to the impact of an ageing population, Scase predicts, “Growing numbers of time rich and cash rich older consumers will bring a re-orientation of corporate marketing, selling and retailing strategies.”

**Scenario - Shopping**

Pete turns on the kitchen H-COM teleputer. He uses the menu system to select ‘shopping’, then ‘weekly grocery list’. The Jackson’s have a home-shopping account with their local supermarket, since they are not within the catchment area of any of the specialist online grocery warehouses. Pete calls up the weekly list and scans through it, deleting a few items with a screen pen. The beer he usually buys is unavailable, so he checks the suggested alternative. Bob (the computer) lists some relevant special offers. The store brand of laundry detergent is being offered as three packs for the price of two. Pete checks ‘yes’. He’s asked whether he wishes to cancel his usual detergent order. He checks ‘yes’ again. Pete then selects ‘browse’ and then ‘fruit and vegetables’. He chooses two ripe avocados and some multivitamin tablets from the healthcare section. The home shopping option adds $5 to the grocery bill and the boxed goods can be collected from the store or delivered to any address within ten miles. Pete decides on home delivery this week. It costs an additional $5 if the groceries are delivered Monday to Thursday (8.30am-5.00pm), $8 for Friday to Sunday or between 5.00pm and 11.00pm any evening. The total delivery will be charged to the Jackson’s H-COM account.

Barwise & Hammond, 1998
4.5 Home/Family

Now, how will all this impact on home and family? What we have found out about work, education, medical and healthcare, and shopping all has aspects that impact on home life and family. We already know that skilled workers are demanding a better balance between their personal and work life, that a lot of education and exchange with educational institutions as well as medical analysis and consulting might take place on-line over the Internet, as will shopping. Does that mean we are spending our lives locked away inside? Concerns about potential isolation have certainly been raised by people looking at teleworking.

Matathia & Salzman suggest that “In response to an increased sense of isolation, a disconnectedness from the natural world, Westerners are turning for solace and insights to the mysticism and spirituality of Eastern and New Age religions.” They also predict that “Simple pleasures: sewing, quilting bees and other activities from times past will emerge as an antidote to today’s chaotic lifestyles. Hobbyist cooking too, in a time where staying at home to prepare a full meal will no longer be a customary practice in many households, cooking will be seen as more of a hobby. There may also be groups of neighbours who will form ‘dinner clubs’ with each household being responsible for providing one dinner a week for all other participating families.”

For people like Maria, life is not much different than twenty years earlier. Despite the government’s attempts to portray Britain as a dynamic 21st century, information economy, the routines of her life are much the same as those of her mother.

Scase, 1999

Kim enjoys the variety and mobility of her life. This is as apparent in her personal life as in her work. She feels in control. But sometimes she longs for the stability and the security of her childhood. Her parents have now been married for more than 30 years. This is uncommon for most couples. But it does make her think about the meaning of life and whether she really knows who she is and what she wants to be. Would religion or philosophy offer an answer?

Scase, 1999

‘Boundarilessness’ on an economic and political scale is likely to lead to an opposite development on a social scale, as Jensen predicts, “The organisation of society will gravitate toward value communities of limited size – in principle, no greater than so as to permit personal contacts.” This seemed to be very much the feeling in groups of participants at the Innovation Exchange Anniversary Celebrations too, many of them emphasised the importance of community.
Matathia & Salzman expect that “The traditional nuclear family is becoming more and more uncommon,” and that, partly as a consequence of this “The issue of how we are raising our children will be a hot topic,” which might lead to “Co-parenting: working parents will seek more assistance in raising their children from childless relatives and friends.”

No children without sex – but what is the future anticipated to be like in this department? Matathia & Salzman suggest, “Silicon sex. In an age in which real-world sex has become risky, to say the least, many are turning to the relatively safe and frequently anonymous world of silicon sex. Options range from cybersex (in which partners – or groups – engage in explicit, real-time online communication, including chat and/or video) to online pornography, from computerised sex toys to the forthcoming ‘sexbot’. The so-called sexbots will have humanlike features and will be soft and pliant, like the latest dolls for children. Vibrators will provide tactile stimulation and sound systems will provide ‘love talk’. Well, I am not sure I am looking forward to that aspect of the future – but at least that way we are not likely to have problems with overpopulation…

At some point Kim will have a child. She is still uncertain whether she wants a boy or a girl. That is something she will discuss with her medical consultant. She would also need advice as to whether she should defer giving birth until her late forties or early fifties. The final decision will probably depend on how well the business does. At least bio-technologies allow her to choose, unlike her mother. She is also undecided whether she would carry on living alone. She enjoys the excitement that independence gives her. At the same time it gives her greater choice in terms of the gene pool for her intended child. Some of her friends have decided to live with somebody and then have children. Often this has not worked out. The offspring have turned out to be less intelligent and not as attractive as could be hoped. By living alone, she could freely decide.

Scase, 1999
What impact has technology on our home?

Matathia & Salzman envisage “Intelligent fabrics, including wallpaper, will turn every flat surface into an art gallery one moment, a TV/computer screen the next.” Our homes will become automated, according to Matathia & Salzman “Consumers typically choose to automate their home for one or more of four reasons: convenience, energy saving, security and comfort. We will control lights, phones, curtains, alarms, media unit, climate etc. with the touch of a button – and we’ll soon take it for granted.” Or all this may be controlled via a remote device, e.g. phone. One of Jensen’s prediction seems particularly desirable to me “On the horizon is the vacuum cleaner programmed to navigate the house by itself, finding its own way around all the nooks and crannies and parking itself when the cleaning is done.”

And again, to conclude this section, two more little sketches featuring the Jacksons:

**Scenario – Bills and Statements**
Dora’s bills also come by email – an electricity bill and a bank statement today. Dora has difficulty seeing fine print, but with email she can have every message displayed in large type on her TV screen.

**Scenario – The Automated Home**
Pete’s car has a personalised locking and ignition system which as he touches the door recognises the wallet PC; the car requires the presence of the wallet PC and Pete’s hand on the door to open, making it very difficult for any unauthorised person to open or start the vehicle. The garage opens up for him, he drives out and the garage closes after him. He slots his wallet computer on to the dashboard and presses ‘on’. Bob makes contact with the car’s voice-activated onboard system. Also from the car Pete asks Bob to set the house alarm system and to set the house heating on low.

Scase, 1999

Barwise & Hammond, 1998
4.6 Leisure

Finally, Leisure. Scase believes that “The increase in single persons will lead to changes in the leisure and entertainment industries which at present focus upon ‘families’ and couples. Introduction agencies are likely to flourish with service providers segmenting themselves as they focus upon specific age, occupation, and lifestyle categories.” Similarly, Matathia & Salzman predict the emergence of ‘Companionship clubs’.

I find it quite interesting that Scase predicts on the one hand that there will be more singles, but at the same time these singles seem to want to team up and find ‘the right person’ through dating agencies. But I guess that is not necessarily a contradiction, people are looking for company and companionship without the hard work (but also the rewards) a long-term relationship involves.

We have hard about a likely demand for nostalgia and traditionalism – a similar trend is also predicted for the leisure industry. For example, Matathia & Salzman believe that “For many North Americans and Europeans, ‘getting away from it all’ now means turning the calendar back to what they perceived as a simpler time. Rather than adopt the electronic sound of ‘techno’ music and other high-tech trends, nostalgic youth are embracing entertainment options made popular in their parents’ and grandparents’ youth. ‘Cocktail chick’ is now all the range in a number of cities.”

Participants ie Anniversary Celebration Groups 11 & 12

- Technology isolates people, leisure is about meeting people, also offering tranquillity, relaxation and natural things.
- We will go on virtual safari one day and experience virtual bungy-jumping the next.
- Playing on the compute, including watching downloaded films, will rake a large part of our leisure time.

Rachel has established a wide network of friends through the internet and this gives her contacts so that she frequently travels cheaply around the world. As a student, she had an email directory of at least 2000 names located in 48 different countries.

Scase, 1999
On the other hand, modern technology allows us to go on virtual exploration of the Munich Oktoberfest (http://www.oktoberfest-guides.com) or on a safari in Africa (http://www.safaris.com/baobab). One advantage of such ‘travel’ is that it is quite inexpensive. Another is that it is very safe. Again, we have two opposing trends: safety on the one hand, excitement and risk on the other (bungey-jumping, wild-water rafting etc.). The recent opening of the world’s first ice-climbing part in Colorado, where climbers of all ages to participate in the wintertime version of rock-climbing, but without such dangers as unstable ice, falls into the first category.

Other potential themes for travel are suggested by Jensen:

- Political tourism
- Social slumming
- Imagine the future
- Revert to childhood
- Relive great battles of history
- Robinson Crusoe
- Take a vacation to Mexico – but be a Mexican
- Wild nature will be a scarce amenity that we all want to visit

If technology enables virtual travel, it also changes the way we select and book our holiday. Grulke comments, “Today as an individual I can get access to a whole world of travel information directly on the Internet; I can see the destinations and ‘meet’ the hotel staff; I can reserve the specific room I want. I can personally book the plane seat I want and the exact hire car I want. If I can do all of this myself, from my personal computer, what value does the travel agent add? Just sending me my ticket is not enough to justify the 15% or more in commission and related costs contained in the ticket price. New intermediaries have started appearing on the Internet (including some airlines) and they are taking the travel agent out of the loop and passing on many benefits directly to the customer.”

Before taking a final look at the Jackson family something Jensen has spotted and that, in my view, combines nostalgia with the need for meaning and community: In France, there currently exist about 50 Cafes-philos – places where a philosopher will raise a question for debate and preside over the ensuing discussion about, say, the relationship between good and evil, eternity as a concept, or people’s relationships to nature.
**Scenario – After School**

Tim Jackson has finished his schoolwork. Some friends come over and they decide to watch an old movie, *Lethal Weapon*. In the family room there is a large flat screen on one wall. Tim presses his palm against the bottom right corner of the screen. It displays a picture of the Mars space probe and a menu with ‘Tim’ written in the centre. Bob’s voice says: ‘Hello Tim’.

Bob: ‘Tim, *Lethal Weapon* is R-rated. I’m afraid you do not have permission to watch this film.’
Tim: ‘Bob, movies, please: *Space 2000* or something.’
Bob: ‘Tim, is your chosen film *2001: A Space Odyssey*?’
Tim: ‘Yes, that’s it, Bob, yes.’
Bob: ‘Tim, this film has a parental guidance rating, it is a Classic Movie, costs 99 cents. Please confirm when you are ready to start.’

Tim is allowed to watch parental guidance films and he has more than 99 cents left to spend this month in his personal H-COM account (Bob knows this already). He confirms his choice: ‘OK, Bob’. As the movie starts, a visitor from today would be struck by the wide, bright, sharp picture and – even more – the superb sound quality.

Barwise & Hammond, 1998
5.0 A Final Word

*If we limit ourselves to thinking in terms of realities, facts, and knowledge, we have got the future all wrong, because it is made, not of certainties, but of dreams. Behind every technological breakthrough there lies a dream. Behind every new product there lies a dream. Dreams create realities – through hard work.*

Jensen

I’d like to go back to where I started, to my observation that many future scenarios seem quite grim or even revolting to me – the scenarios presented in the Scase report for example. I would summarise them in: in future it is everyone for themselves – please welcome the era of the egocentric, emotionally crippled individual. No sociability – one of the two dimensions Rob & his colleague Gareth Jones use for defining corporate culture (solidarity is the other). I admit, it is a possibility and there have always been, and always will be, people like that. But I refuse to see mankind’s future as black as that. While the majority of futurologists seem to have a quite cynical outlook on where we are headed, I prefer to follow Rolf Jensen and the thoughts he has put down in his book ‘The Dream Society’, community is important and to repeat Charles Handy’s insight, the future is not happening to us, we are making it happen.

Lord Sainsbury drew his speech at the Innovation Exchange’s First Anniversary Celebration at the Millennium Dome to a conclusion, quoting the French philosopher who had talked about the ‘gales of creative destruction’, saying that we seem to be in the eye of the cyclone at present! He then concluded with the quote from another French who said, “The future is not what is used to be”.

Bettina von Stamm

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Appendix I Selected Books & Websites

A Publications (in alphabetical order)

• Britain towards 2010: the changing business environment; Richard Scase, Report for the Foresight initiative, published by the dti, August 1999; see also http://www.foresight.gov.uk/

• The Future in Focus, a summary of national foresight programmes; Office of Science and Technology, dti, 1998

• Vision 2010 – a report on the future of purchasing and supply; published by Partnership Sourcing (non-profit organisation set-up by the DTI and CBI); contact details: Partnership Sourcing Limited, CBI, Centre Point, 103 New Oxford Street, London WC1A 1DU, Tel. 020-7395 8228, Fax 020-7836 4168; Website: www.splcbi.com; Email: enquiries@pslcbi.com

• The Dream Society, how the coming shift from information to imagination will transform your business by Rolf Jensen, the Director of the Copenhagen Institute for Future Studies (1999, New York: McGraw-Hill). Jensen suggests that “The Information Age has rendered much of yesterday’s work obsolete through technology, but the Dream Society offers us the limitless world of human potential an dreams”.


• Predictions – Media; by Patrick Barwise and Kathy Hammond; Phoenix, 1998; this little booklet is part of “a series of 24 short books in which some of the world’s most distinguished academics and writers in their particular fields attempt to forecast the future, over the next 50 years, across a range of social, economic, political, geographical and technological subject areas. Professor Barwise and Dr Hammond direct the Future Media Research Programme at London Business School

• I believe that Hare Brain Tortoise Mind, Why Intelligence Increases When You Think Less by Guy Claxton (1997. London, UK: Fourth Estate) is relevant because it explains why different ways of thinking are appropriate for different tasks – ‘analytical thinking’ (hare brain) for the straight forward, logical, mathematical and ‘pondering’ and ‘mulling over’ (tortoise mind) for the ambiguous, unknown, fuzzy. Particularly in business we tend to rely on the hare brain but it seems to me that anticipating the future is rather a task of Claxton’s second category.
I would also like to mention *The Corporate Fool* by David Firth and Alan Leigh (1998 Oxford, UK: Capstone) as it related to the increase in demand for corporate philosophers mentioned in *Next?* The book suggests that in times were organizations are ‘desperately trying to improve the way thing are done in the future but [are] constrained by the way things are done now’ a Corporate Fool is called for.

Last but not least, Neil Postman’s *Technopoly, the Surrender of Culture to Technology* (1993, New York: Vintage Books) is the oldest book in my list but I still think its message is worth thinking about. To quote from the back-cover: “We live in a time when physical well-being is determined by CAT scan results. Facts need the substantiation of statistical study. The human mind needs ‘deprogramming’ while computers catch devastating ‘viruses’. We live, then, in Technopoly – a self-justifying, self-perpetuating system wherein technology of every kind is cheerfully granted sovereignty over social institutions and national life.”

### Websites

- For future trends you may also want to look at an ESRC document on 2010 scenarios on their website ([http://www.esrc.ac.uk/2010/docs/britain.html](http://www.esrc.ac.uk/2010/docs/britain.html)).
- You may also want to have a look at [www.futureworld.co.za](http://www.futureworld.co.za). The scenarios focus primarily on the impact of e-commerce
  - BOSSES can check how their company rates against its rivals in terms of readiness for the future by filling in a questionnaire on the Internet.
  - The "information age scorecard" from consulting company Futureworld allows companies to assess how ready they are to compete in a global economy which is undergoing dramatic changes.
  - The scorecard takes 30 minutes to complete, and checks perceptions about the current situation in a company and its goals for the future.
  - Futureworld assesses the replies, ranking them against business rules which its consultants believe are vital for survival.
  - The results are also ranked against replies from other firms and international organisations to give an idea of its comparative readiness. The company reveals only its size and area of activity, so no corporate data is at risk.
  - The idea arose when businessmen attending Futureworld seminars asked how they compared against the consultants’ criteria for survival, said Grulke.
  - So far more than 350 companies have used the questionnaire at [www.futureworld.co.za](http://www.futureworld.co.za).
- The website of the World Future Society, ‘a non-profit educational and scientific organisation for people interested in how social and technological developments are shaping the future’ can be found on [http://www.wfs.org](http://www.wfs.org). They also present 3 scenarios called ‘Market World’, ‘Fortress World’, and ‘Transformed World’.
The Website http://members.aol.com/symantici/futot.html provides links to a wide range websites. Below a list (without live-links) of websites listed under the titles (I am afraid you have to go to the above website to click through to the pages listed below)

(a) Future scenarios and/or timelines
(b) Future markets/socio-economics links

A Future scenarios and/or timelines

- The Signposts Timeline offers as many 'hard science' citations to back up its core speculations as I've been able to muster so far in years of effort. The Signposts Timeline is an entire illustrated book online, offering an in-depth look at what I regard to be the most likely long term scenario ahead for us in terms of technology and social change. I've so far spent roughly ten years doing research related to this work. Major updates to the site typically are made every 3-6 months.
- The Second Coming is about what could happen when (not if) a reliable, fast acting, and painless suicide pill becomes available to the masses (this is an old piece I wrote years ago under the pseudonym S.C. Summers, during research for the timeline).
- The Rest of Our Lives; What It'll Be Like focuses on the next 30 years or so (this is an old piece I wrote years ago under the pseudonym S.C. Summers, during research for the timeline).
- Which World: Scenarios for the 21st Century, by Allen Hammond is a a pretty neat site!
- The Chronicle of the Future is a GREAT future scenario site, that goes up to 2050 or so! Don't miss it! My only beef with it is its use of frames, which screws up site navigation sometimes and also prevents you from easily sending a specific page URL to a friend.
- Is the ongoing population explosion a problem? I personally don't agree with many that increasing global population is going to be a major problem for us in the long term future-- indeed, I worry we may not have enough people by a certain point. My reasoning? It's getting easier and cheaper for us to (accidentally or purposely) wipe ourselves out or kill off a substantial fraction of ourselves, with each passing day. Just the religious and cult differences alone (link#1, link#2, link#3, and link#4 (religious stats and geography)) offer more than enough motivations, as of the late 20th century. Plus there's the fact that Mother Nature herself frequently kills off animals on the top of the food chain like us, and could do so again anytime (remember the dinosaurs?). Heck, just an updated version of the 1918 flu in an age of mass airline travel and subway use could kill off a billion of us easy before we got a handle on it. On the flip side of all this, we're discovering new techno-economic opportunities every day, and our expectations for the creature comforts we can enjoy down the road just keep escalating-- but if we run short of people (inducing labor shortages) we can't pursue all those fabulous new opportunities, and won't get all the new toys we want as fast as we want them (labor shortages inadequately
addressed by improvements in productivity will inevitably slow down economic development and technological innovation). YUCK! Who’d want that? Of course, I guess one’s perspective on population growth largely depends on if you think the average person in the world is a net positive for everyone else, or a net negative. Me, I bet on the positive. Most others seem to be betting the other way though. And yet, that one extra child might turn out to be the economic equivalent of an Einstein who figures out exactly how we can turn the Earth into a paradise for us all...

- World Population Statistics is supposed to show the latest population tallies.
- Predictions for the world of 2088
- Sustainable Development Timeline sort of rates as a futures-related link, as environmental concerns are sure to increase over coming decades.
- The Next 75 Years (medical info)
- A Profile of Predictions may be a sampling of a survey of regular folks about their ideas of the future (if I'm not mistaken).
- The Fourth Turning seems to be a companion web site to a book about the past AND future of America. The main concept seems to be repeating generational cycles in politics and economics over time, in the USA.
- Future History (David Cary)
- Mario’s Scenarios
- GBN Scenarios
- Timeline of the Future to 2030: this seems to be something like a cyberpunk timeline.

B Future markets/socio-economics links
- Dave Winer (of Scripting News) and others are saying The Cathedral and the Bazaar seems a great manifesto in regards to issues concerning freeware, shareware, open systems, and more for the future. 2-13-99 UPDATE: I finally got the time to read this piece and some related articles myself, and I must agree it is intriguing and insightful regarding future possibilities for technology and society. Other related links may include League for Programming Freedom (LPF) (a group which seems to support minimizing patent and copyright restrictions on innovation), Open Sources: Voices from the Open Source Revolution, and Open Content (sort of an open source license version of copyrights). PNG (Portable Network Graphics) Home Site is also relevant here because of Unisys' efforts to charge folks for using GIFs on the web. PNG is an alternative to GIFs. Other open source related links include Open Projects and Open-Source Med tech.
- Many aspects of the virtual states predicted in the Signposts Timeline may depend on things like 'uncontrollable/unfindable net servers (Anonymous web publishing)'. Related links (with high redundancy due to the possible importance of this material to future human liberty and well-being) include: firstmonday.dk #1, firstmonday.dk #2, cs.berkeley.edu #1, cs.berkeley.edu #2, www.fitug.de message board thread.
‘ECHELON-- America’s Secret Global Surveillance Network’-- may well be one major reason why anonymous web publishing will be so important in future years. Echelon Watch offers us one channel with which to monitor the monitors.

Open Directory - Society: Change

2048: Privacy, Security and Community in the Next Century

Ideosphere Home Page is a sort of a 'commodities/futures exchange' of ideas. Here people essentially place bets on what they think will or will not happen by a certain date. The 'money' gained or lost in these bets is not real, but only imaginary credits inside the exchange itself.

PredictIt! Can You Predict It?

iexchange.com: Home Page

ExpertCentral.com

Would you like to place friendly bets on which celebrities will rise and which will fall? Try the Rogue Market

MarcoPoly is a virtual stock exchange game.

Virtual Prime Time (bet on nielsen ratings)

Netgrocer.com is grocery shopping over the net-- TODAY.
### 5 Biggest Issues

<table>
<thead>
<tr>
<th>Industry</th>
<th>Issue</th>
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</table>
| Beverages    | - Ability to attract and retain top quality people who are more interested in joining start-ups and smaller, more entrepreneurial businesses who offer share options which are likely to be worth something.  
                          - Internet and e-commerce  
                          - Internet competition  
                          - Lobbyists and do-gooders moving on from tobacco to attack alcohol  
                          - Ability to make decisions fast and change direction quick enough to stay ahead of consumers and entrepreneurs  
                          - Consolidation of retailers and the way people will be doing their shopping  
                          - New ways of working (the "hot" desk & remote working)  
                          - Movement our of central locations and/or smaller central locations  
                          - The mass of information will require improvements / new ways of selective attention |
| Car manufacturer | E-commerce and its implications for our aftermarket business growth.  
                          - The environment and the impact of products which use fossil fuels.  
                          - Should the business continue to manufacture and deliver aftermarket service or should it be knowledge based?  
                          - As a result of industry consolidations, the scale and scope of customer base will change dramatically.  
                          - How to deliver digit earnings growth year on year.  
                          - Business leadership talent of an ageing population/workforce. |
| Communications | - Adapting to e-models for all business.  
                          - Flexible lifestyles with computes/work patterns/contractual relationships.  
                          - Auditing of soft intangible assets as well as tangible assets.  
                          - Transport overload.  
                          - Rich richer, poor poorer. |
Education
- Increasing competition from untraditional sources: publishing companies.
- Career management no longer sequential: iterative and chaotic.
- Age of managers decreasing and responsibility increasing.
- Proliferation/diversity/complexity. How to choose.
- Use of time (similar problem e.g. what to choose)
- Rootlessness/lack of standards for evaluation/no absolutes.
- Building more than we can maintain, e.g. museums and opera houses but more importantly complex IT systems of which LBS is a good example
- Organisational learning as organisations get larger and especially inter-generational learning
- Recruitment of quality staff.
- Retention of quality staff.
- Managing ever rising expectations.
- Maximising the potential of ICT.
- Creating an environment conducive to supporting high performance.

Financial Services
- Deregulation of financial services in our markets (particularly Asia)
- Technology - increasing pace / complexity of change - trying to keep up and innovate
- People - need for fewer, more highly skilled individuals who can cope with the pace of change, particularly on the technology side.
- Cultural awareness - still a big issue, although with the pace of globalisation of information exchange e.g. internet, telecoms may become less of an issue
- Non-traditional competitors e.g. retailers, car manufacturers, other multi-nationals entering FS arena - bringing new business models, strong consumer brands, gaining share and eroding traditional ways of doing business.

FMCGs
- Solutions for individuals.
- Rapidly growing Service Sector.
- Overloading of information.
- Damage to environment.
- Growing health concerns.

Insurance
- Next Epidemic after aids
- Coping with extreme climatic change
- Coping with man-made disasters (pollution, the next Chernobyl etc)
- European pensions & investments (harmonisation of fiscal regimes)
- Global environmental/resource challenges
- Overcoming the inertia in the business to adapt to change.
- Low economic growth and low inflation.
- European pensions
- Genetic engineering advances.
- Greater and faster advances in technology will make competition tougher and could squeeze margins further.
- Political consensus will lead shift to compulsory pensions and saving for all except the poorest.
- More consolidation into fewer larger suppliers.
- More creeping/galloping bureaucracy in work.
- Fresh start (give up paid employment and retire)
- Increased pressure to minimise costs to a level that may be imposed rather than market led.
- Effective competition from unexpected competitors
- Over-regulation (external) and vested interests/bureaucracy (internal)
- Increased customer switching due to loss of company differentiation
- The things we don’t expect - or more importantly the inability of the organisation to adapt at the speed that future challenges demand.

**Pharmaceuticals**
- Threat and opportunity of e-commerce
- Threat of opportunity of industry consolidation and merger of major companies into huge global organisations.
- Expansion of restrictive legislation from continental Europe.
- Engineering of food, reducing the need and benefit for health supplements.
- Managing priorities between global and local Brand development.
**Telecoms**

- Competition for market share
- Global aspirations = less local commitment
- Oligarchic death, leading to federated small businesses.
- Power of the customer as they increase their sophistication and expectations.
- Impact of wide scale automation in all areas of life
- Pressure for security of all forms (physical, information, emotional)
- International competition or physical resources.
- Knowledge management.
- Fundamental re-definition of the role of the corporation in society.

**TV**

- How to manage bandwidth (capacity).
- How to cope with equipment obsolesce (customer's).
- Consumer relationship marketing – how to do well.
- How to structure revenue models.
- How to partner with technology groups.

**TV/Charity**

- The completion of change over to digital broadcasting with the cessation of analogue transmissions in 2010.
- The convergence of technologies – Broadcasting and the digital network will offer comparative services to the world wide web potentially, with the converse being the ability for real time rendered ‘narrowcasting’ opening the potential for direct competition between the world wide web and broadcasting.
- Interactivity capabilities being developed and explored. What will the extent and nature of its use be? What unexplored potentials exist?
- Three dimensional possibility, if so, what changes could this bring and what are its potentials?
- With all this two way stream of Information and date-gathering on the digital super-highway, and technological capabilities that go with it, is ‘big brother’ really watching us!!?
### 5 Most Likely Advances

<table>
<thead>
<tr>
<th>Industry</th>
<th>Issue</th>
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<tbody>
<tr>
<td>Beverages</td>
<td>▪ Different packaging formats</td>
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<tr>
<td></td>
<td>▪ e-commerce</td>
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<td></td>
<td>▪ More interest in ingredients, quality, provenance and craftsmanship</td>
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<td>▪ Closer association with the bar trade</td>
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<td>▪ Ability to go out and consume alcohol/eat/socialise 24 hours</td>
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<td>▪ Internet advertising</td>
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<td>▪ Internet ordering</td>
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<td>▪ New formats</td>
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<td>▪ New delivery systems</td>
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<td></td>
<td>▪ Interactive marketing communications</td>
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<td>Car manufacturer</td>
<td>Our responsiveness to changes in customer demands for products and services.</td>
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<td>▪ Knowledge management – our ability to adapt to changes in leadership style, eg. Virtual teams.</td>
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<td>▪ Innovations in transportation, eg. Fastship concept (Marine sector)</td>
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<td>▪ Decentralised power sources (Energy sector)</td>
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<td>Communications</td>
<td>▪ New ways of motivating company members.</td>
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<td>▪ Higher employment in service sector</td>
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<td>▪ Environmental breakthrough – fear of global warming.</td>
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<td>▪ New model companies – new model co-operatives.</td>
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<td>▪ Medicine and life expectancy.</td>
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Education

- Increasing application of technology to management development processes.
- Increasing application of technology to business (e-commerce and implications for management development ‘content’).
- Branding of knowledge and expertise to increase (trust in brand).
- Remote relationships (including teaching) through Web and videocomms.
- Paperless Journals.
- Experts systems/AI
- Machine translation and speech activated systems (similar technology)
- Intelligent homes and offices (chips in walls and every gadget).
- The extensive use of ICT and Internet.
- Reformed National Curriculum.
- Privatisation of parts of the Education system.
- Greater understanding of the educational process by the general public
- Better forms of measuring school effectiveness.

Financial Services

- Integration of delivery channels branch, telephone, internet, etc. becomes standard i.e. customer can access info and conduct business seamlessly through all channels and across national boundaries. Technology harnessed to provide this offering.
- Mass customisation of product offering – both in terms of pricing, product features, and level of service tailored to individual needs, tastes and ability / acceptance to pay. Technology harnessed to provide this offering.
- Traditional bank branches are scaled down - transactional activities are virtually completely automated with phone or internet based call centres for enquiries / complaints. Personnel in branches act much more in advisory capacity on products / services
- Human resource management in FS in much more sophisticated. Depart from traditional career path structures to more flexible activity / project type roles. Much greater focus on skills, competences, as well as experience. Much less rigidity about office working. More acceptance of career breaks and exposure / secondment to other organisations for periods of time.
- Banks become much more marketing led. Traditional focus on protected organisations with standard product offering gives way to more aggressive branding around image / values / products tailored to particular customer groups. Much greater emphasis on using professional marketers / marketing ideas from other retail industries. Much greater percentage of costs devoted to promotion / advertising.
**FMCGs**
- Instant connections between people working around the world.
- Brands stretching category boundaries.
- Mores sales through Service industry.
- Developing world will contribute more than 50% sales.
- Third party alliances will become a way of life.

**Insurance**
- Emergence of “superpowers” in insurance/investment industry.
- Global shift working e.g. we do day shift for UK and night shift for Australia at the same time and vice versa.
- Availability of products & advice etc, through various media (phones, TV’s, internet, cable, video links to call centres etc.)
- Compulsory insurance/saving for care in old age.
- Product customisation to individual needs.
- The rise of the infomediary
- One on one marketing.
- Digitisation
- Vertical disintegration
- Effective interactive technology will challenge face-to-face delivery channel.
- Confident consumers will demand more real service.
- Development of commoditised products will force suppliers to compete on service.
- Regulation will at least become clear, customer-focused and effective.
- More automation
- More ‘self-servicing’
- Self select and build products - built by customers or advisors
- Increased electronic access - internet, DVD, TV, WAP.
- Improved value networks - closer partnerships with others - including competitors

**Pharmaceuticals**
- Selling via the internet.
- Increased dietary deficiency, due to a faster lifestyle
- Monitoring via diagnostics of levels of vitamin deficiency.
- Increased clinical proof of efficacy of herbal products.

**Telecoms**
- E-knowledge and the need for e-knowledge management.
- Entrepreneurial attitude to product development.
- Less central control
- Power to the internet warriors.
- Virtual HQ and power structures.
- Convergence of computing and telecoms.
- Widespread mobile access to information.
- Globalisation of systems
- Demise of limits (bandwidth, transmission speeds, usability.)
- Integration of content providers with service providers with network providers

**TV**

- Constant connectivity (i.e. never having to log-on or boot up).
- Everything 'on demand' i.e you can get any content when you want it, not when it is broadcast.
- Personal Networks (instead of LAN ones at the office, you can connect to the people and things you are interest in i.e. family
- Broadband (capacity) everywhere.
- Voice activation.

**TV/Charity**

- Video and book libraries available both through digital broadcast and the internet.
- Tele-visual communication through the digital network i.e. video phone network.
- Widespread use of 'virtual shopping' from home.
- Use of digital technology to offer interactive video teaching.
- Communication systems becoming multi-media retail and entertainment 'megastores'
Appendix III “GRASPING THE FUTURE”
Developing Routes to Profitable Growth

OUTLINE APPROACH

OBJECTIVES

The overall objective to explore and set out the potential “Futures” for your industry/sector

At the outset it is important to stress that it is not possible to make an accurate prediction of the future so any process should not aim to achieve spurious accuracy. Rather the intent is to gain a sufficient understanding so that a range of possible and probable pictures can be originated. The work will therefore aim to:

- Generate a range of scenario
- Identify the key drivers for the market and key players
- Set out the likely “Rules of the Game” for successful players
- Hypothesise possible “major interruptions” to normal trends

This output will then enable your company to explore its own range of options and plan its optimum strategy

APPROACH

The process involves pulling together the factual data about the company and its sector and combining this with qualitative thinking and evaluation:

A. Data
   Setting out the data and knowledge in an effective and usable format

B. Process
   Managing the process of management thinking (“Structured Brainstorming”) that will identify key issues and drivers and therefore generate the future scenario

Ideally a Project Team should be set up to champion and implement the exercise. In order to operate effectively it will need a mandate from senior management and the allocation of sufficient time & budget
A ~ Data/Knowledge Sort

Review

The danger is that there is too much information available both in terms of industry data and also in respect of future-ology. The objective is to extract the key data that can underpin the base scenario and identify the main trends or issues that will impact the industry.

Sources

- Industry data/Syndicated Reports/Government data
- Internal sources
- On-Line data bases
- LBS Library (Available through membership of Innovation Exchange)

It may be worth considering a series of structured interviews with appropriate industry experts and “Future Guru’s”.

Output

The data/knowledge can be set out in the following clusters:
[Data formatting driven by nature/extent of company operations and structure of industry: it is important to avoid being too narrow as numbers/trends in associated sectors may be key]]

Global

Sector Data:
- Volume Past 10 Years/Current/Future thro’2010 [Global/Region/Major country]
- Volume/Split/Trends & estimates, where available, for individual segments
  - Retail channels, Packaging, Ingredients
  - Brands, Category segmentation

General Industry Data:
- To put sector into context
- Key Trends: [Highlighting of issues and broad-brush trends for context]
  - Population, Income, other key factors
  - Lifestyle

Major Country Review - Top 10?

Key trends/Key drivers
- Major players
- Pen portrait of Past/Present/Future [1990/2000/2010]
- Possible “Interruptions” e.g. Who might Enter/Exit
Major Players
- Top line summary of business & sphere of operations
- Apparent strategic approach
- Key drivers/key attributes
- Commitment to industry/brands
- Actual/Potential impact on world stage
- Predicted actions = 2010
- What they could look like in 2010
- Those who will/might exit: Why/who will acquire

B ~ Management Thinking/Brainstorming

OVERALL PROCESS
While a great deal can be accomplished in a process involving a central management or strategic team it is judged that the best way of opening up the thinking is through a Workshop. This will also maximise the input from a broader Kirk of parties, stimulate brainstorming as well as ensuring that a team of senior managers within the business contribute to, and understand the output and are broadly aligned with it.

It is envisaged that the thinking process is divided into 3 stages:

Phase I: Preparation & Set Up
Managed by “Future” Team
- Preparation of the data/knowledge
- Sorting of Key Issues/Areas for investigation/discussion
- Preparation & Briefing for the Workshop

Phase II: Workshop
Facilitated as appropriate
- 2 Day Workshop [Detailed schedule to be developed by “Future” Team]: Main sessions will run
  - Data Dump
  - Feedback on selected topics pre-briefed to participants
  - Learning from outside/analogous industries
  - Brainstorm
  - Sort
  - Preparation of range of scenario
- Choice of participants is critical. It is suggested that there should be 12-15 selected from internal and external sources
  Internal
    - “Future” Team ~ 3-4
    - General manager
    - Regional Representatives [Strategic/key role]
    - Sales
    - Finance
    - Marketing/Brand Champion Route to Market Expert ~ 1
    - Production
    - R&D/Technical Expert ~ 1
External
- Industry Expert
- Industry Structure experts [LBS] ~ (1)
- Others: as appropriate

Each participant will prepare input/role-play their forecast for key players/markets/topics

**Phase III: Output**
“Future” Team will
- Write up Workshop
- Prepare Final Report/ Summary/ Presentation for Executive

**TIMING**

In total it will be difficult to accomplish the full process in less than 6-8 weeks

- It will take a minimum of 3-4 weeks to set up, brief and prepare the Workshop
- Output from the Information/Knowledge Sort should be available for the Workshop and this too is likely to take circa 2-3 weeks to pull together
- Write up workshop: 2 weeks
- Prepare final output: 2 weeks