
Future impact of Technology on Business

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CONTEXT (I)

***“They (IT people) will not disappear.
But they may be about to become supporting cast
rather than the superstars
they have been over the last 40 years.”***

Peter Drucker

CONTEXT (II)

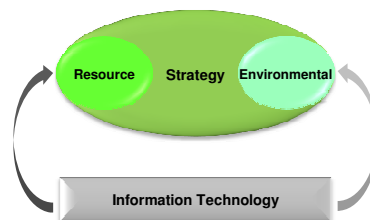
***“We’ve only scratched the surface of what
technology can do for us.”***

Elain Ruben
(One of the pioneers of eCommerce)

CONTEXT (III)

× Technology is impacting upon

- Our business environment (externally)
- Our capabilities as businesses (internally)
- Our products and services
- Our competitors
- Our clients



The indicators of change...

TECHNOLOGY

Five major technological transformations

Perez, 2002:18

Technological transformation (Source)		
1 st	The Industrial Revolution <i>(Britain)</i>	1770-1800
2 nd	The Age of Steam and Railways <i>(Britain, spreading to Europe and the USA)</i>	1830-1850
3 rd	The Age of Steel, Electricity and Heavy Engineering <i>(USA and Germany overtake Britain)</i>	1860-1900
4 th	The Age of Oil, Synthetics and Mass Production <i>(USA, spreading to Europe)</i>	1930-1950
5 th	The Age of Information and Telecommunications <i>(USA, spreading to Europe and Asia)</i>	1980-?

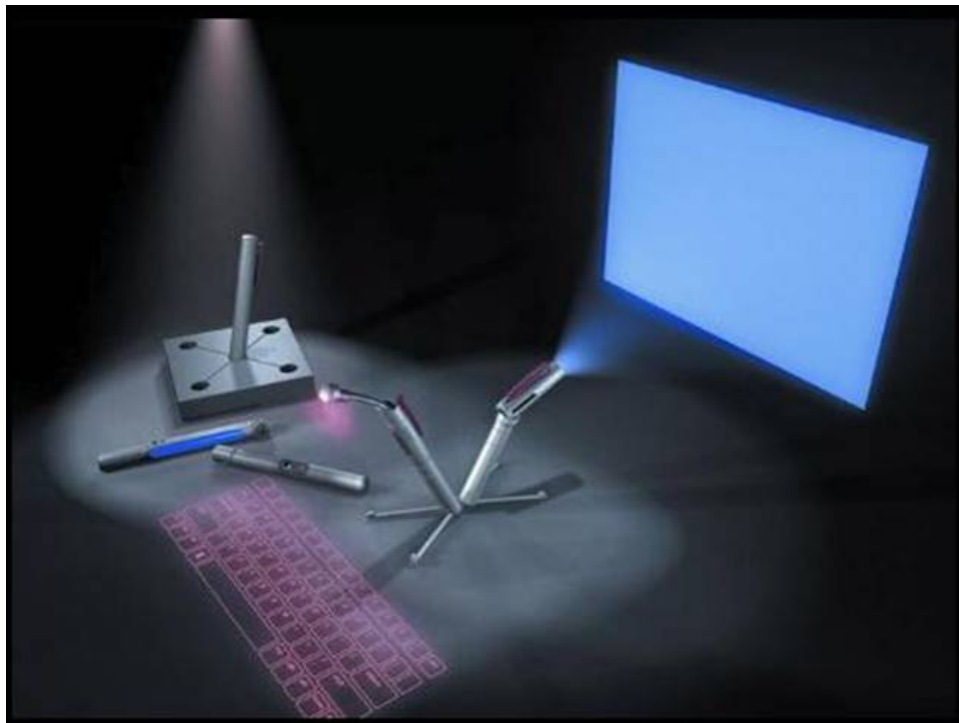
CURRENT TECHNOLOGIES

- × Technological “transformers”
 - **Information technologies:** The convergence of computers and communications
 - **Biotechnology:** New genetics and proteomics
 - **Materials technologies:** Including nanotechnology and nanobiotechnology
 - **Energy technologies:** Efficient use of resources, renewables, nuclear, the hydrogen economy, ...
 - **Transportation:** An ongoing underpinning set of technologies

HARDWARE TRENDS

- × **Convergence** – multifunctional devices
 - Cellphone / PDA / camera
 - TV / Computer / Entertainment / Internet
 - Apple’s iPhone / iTV
- × **Input**
 - Speech recognition / syntheses
 - Digital pen
 - Biometrics (Fingerprint / Brainwaves / ...)
 - Eye movement
 - Touch screens with multiple contacts
- × **Output**
 - Compact printer
 - “Focused” speaker arrays





SOFTWARE TRENDS (I)

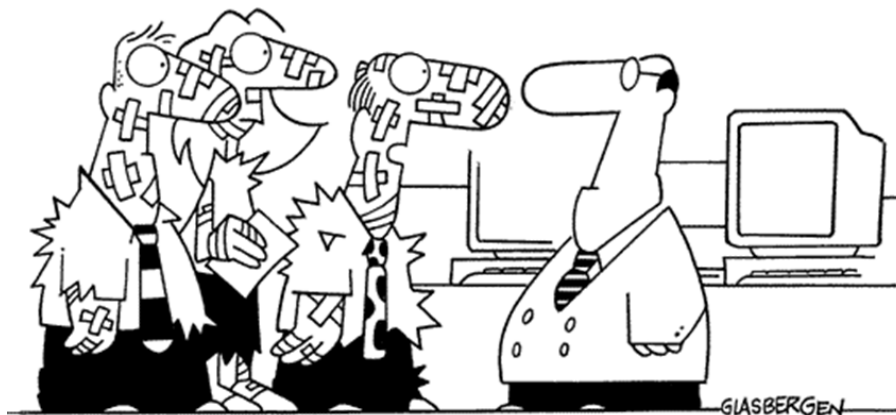
- × Continued move towards **open source software**
 - Business models / cost to dictate decisions (*not emotions!*)
- × Functional and Enterprise **Applications**
 - Caught in a vicious **functionality** ← → **complexity cycle**
 - Increased complexity & functionality ← → **increased risk**
 - They will continue to be sold as **solutions** whilst in actual fact they are **tools**
- × Enterprise software **implementations**
 - **Success rates** will continue to improve
 - Organisation will appreciate the contribution of “soft” issues like **organisation maturity** and **change management**
 - **Integration vs Interfacing**



Linux



THE PRICE OF NEW TECHNOLOGY...

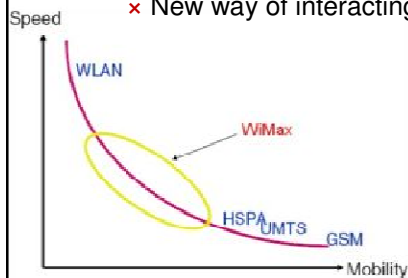


“Frankly sir, we’re tired of being on the cutting edge of technology.”

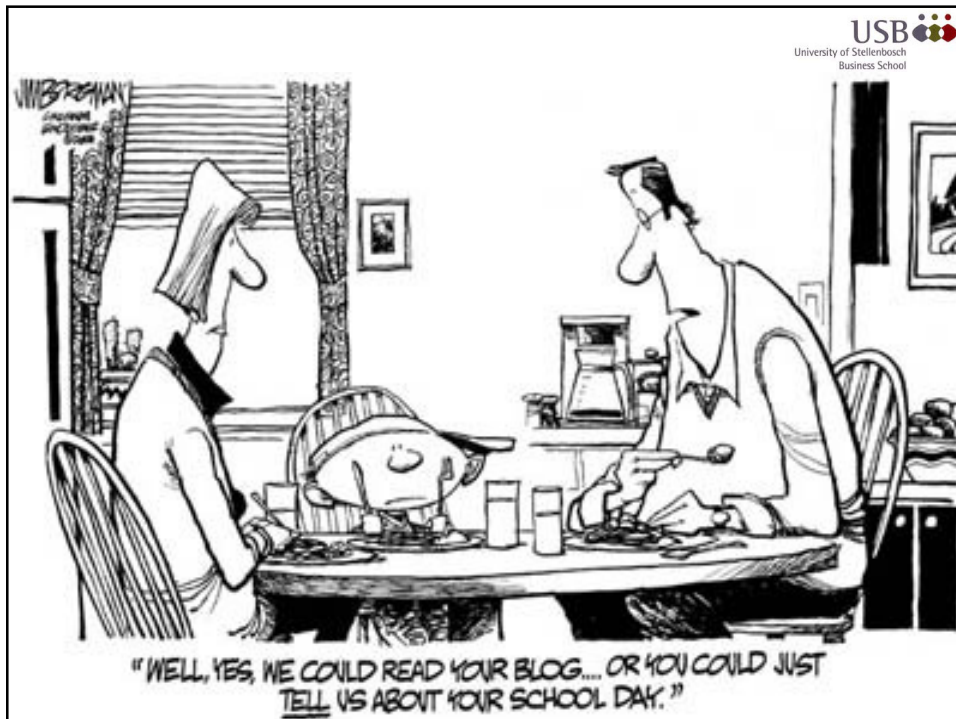
NETWORK TRENDS (I)

× Internet / WWW

- Continued growth and expansion
- Distribution of richer content (Web 2.0)
 - × Blogging, social networks, virtual communities, music and video
 - × Serious impact on available bandwidth
 - × New way of interacting with customers



Wireless age is upon us...



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GLOBALIZATION (I)

The World is flat...

Thomas Friedham

Global Supply Chains

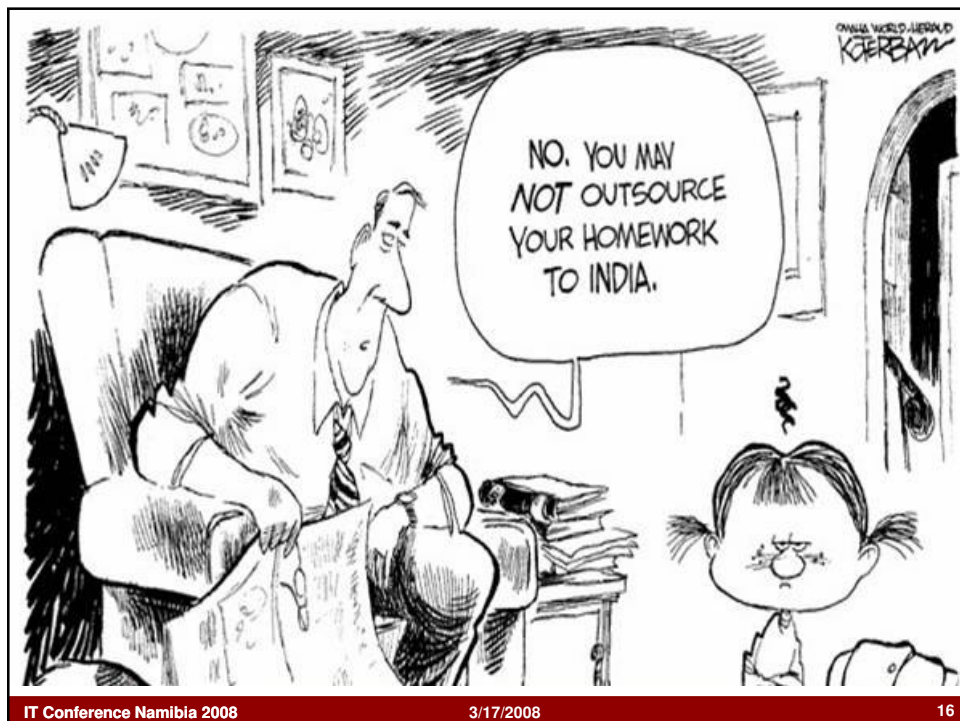
Global websites

Global competition

Global collaboration opportunities

Global systems development

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THE CUSTOMER IS ALWAYS RIGHT?

***“If I had asked my customers
what they wanted,
I would have produced a faster horse...”***

Attributed to Henry Ford

The audience of one

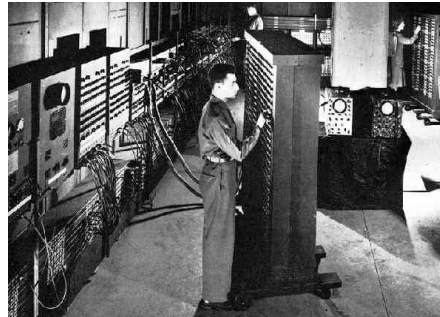
"The next generation is the Internet coming to us instead of us going to the Internet."

Paul Otellini
Intel chief executive

Are you taking your service offering to your customer, or do you expect them to "come and get it"

THE MORE THINGS CHANGE...

- × First computer: ENIAC (1946)
 - Electronic Numerical Integrator and Computer
- × EDSAC (1947)
 - × Electronic Delay Storage Automatic Calculator
- × First commercial computer
 - Leo I (1951)
 - Implemented at Lyons Tea shop in London



"Prior to Leo, we had developed a very efficient clerical system. We knew we could go no further with the existing equipment. We realised we needed something extra."

David Caminer
Systems manager at Lyons in 1951

Economist Intelligence Unit **The Economist**

Great expectations
The changing role of IT in the business



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CHANGING ROLE OF IS

- × Traditional view
 - IT is only an efficiency tool
 - IT cannot add ongoing strategic advantage because everyone has access to the same technology
 - Advantages will be short-lived and focus must be on cost saving
- × Modern view
 - Running infrastructures efficiently is 20% of what IT managers should be doing
 - IT should be involved in business operations and improvements as well as in defining business strategy

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CHANGING ROLE OF IS

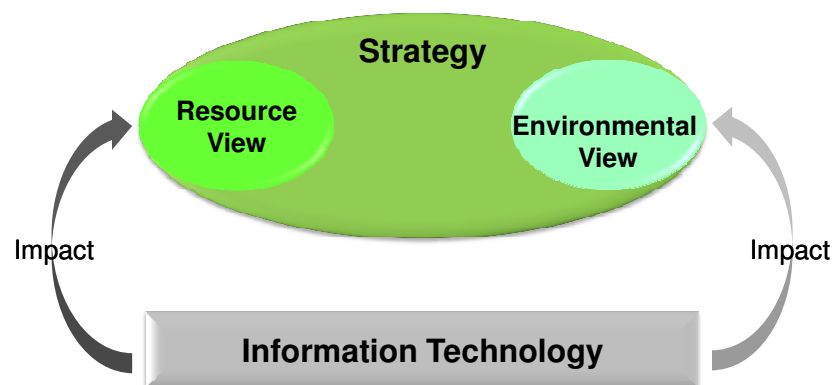
× Reality...

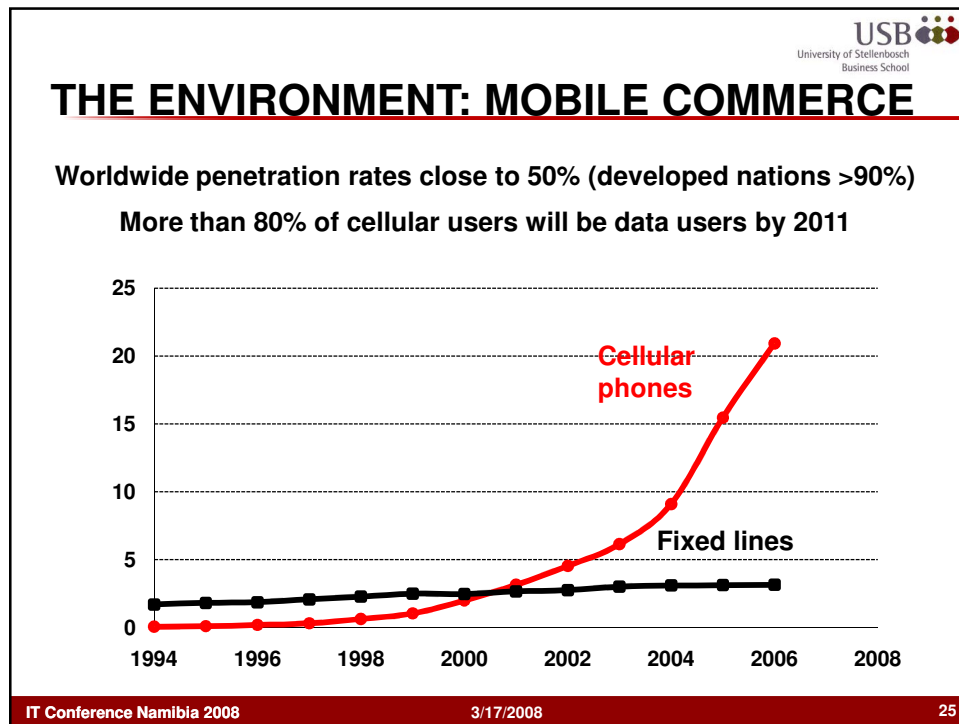
- IT management in general is spending about **75%** of their time at an IT **efficiency** and operations level
- About **23%** of their time is spent responding to business requirements
- A mere **2%** of their time involves giving appropriate leadership

× What should IT's role be?

- Yesterday's answers cannot solve today's problems - the world has moved on
- Focus on the strategic advantage that can be gained

BUSINESS UNUSUAL





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MOBILE COMMERCE

- ✗ Web applications are becoming common...
- ✗ A .mobi domain has been created to help attract mobile users to the Web
- ✗ Handset makes are working on innovative displays
- ✗ SA Mobility 2007 report (Wold Wide Worx)
 - Cellphone banking in SA: 2006 - 8%, 2007 - 17%, forecast 2008 - 41%
 - Acceptance of the channel across all market segments
 - FNB - 1mil transactions / month
 - Aware of the ability to buy via cellphone: 32% in 2006 →58% in 2007

"This does not mean mobile commerce will take off at the same rate as cellphone banking, but the research shows that, if the channel gets it right, the market is ready."

Athur Goldstuck

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BUSINESS UNUSUAL

**The Chinese use two brush strokes
to write the word 'crisis'.
One brush stroke stands for danger;
the other for opportunity.
In a crisis, be aware of the danger –
but recognise the opportunity.**

BUSINESS UNUSUAL

***“Do one thing every day
that scares you.”***

Eleanor Roosevelt