Making life easier for customers: A new agenda for suppliers?

Commission for Communications Regulation
National Conference - "Get Connected"
Royal Hospital Kilmainham
1st October 2003

A <u>personal</u> view from:

Prof. Jim Norton

Independent Director

Former Chief Executive

UK Radiocommunications Agency

Issues to be covered

- **Opportunities from the continuing exponential growth in technological potential.**

- **Post liberalisation - a new agenda for suppliers (and regulators).**

- **The role of affordable broadband in providing ubiquitous access.**

- **Affordable broadband changes perceptions & behaviour - both for SMEs and at home.**

- **Tailoring services to individual customers - and not shoehorning customers into services…**

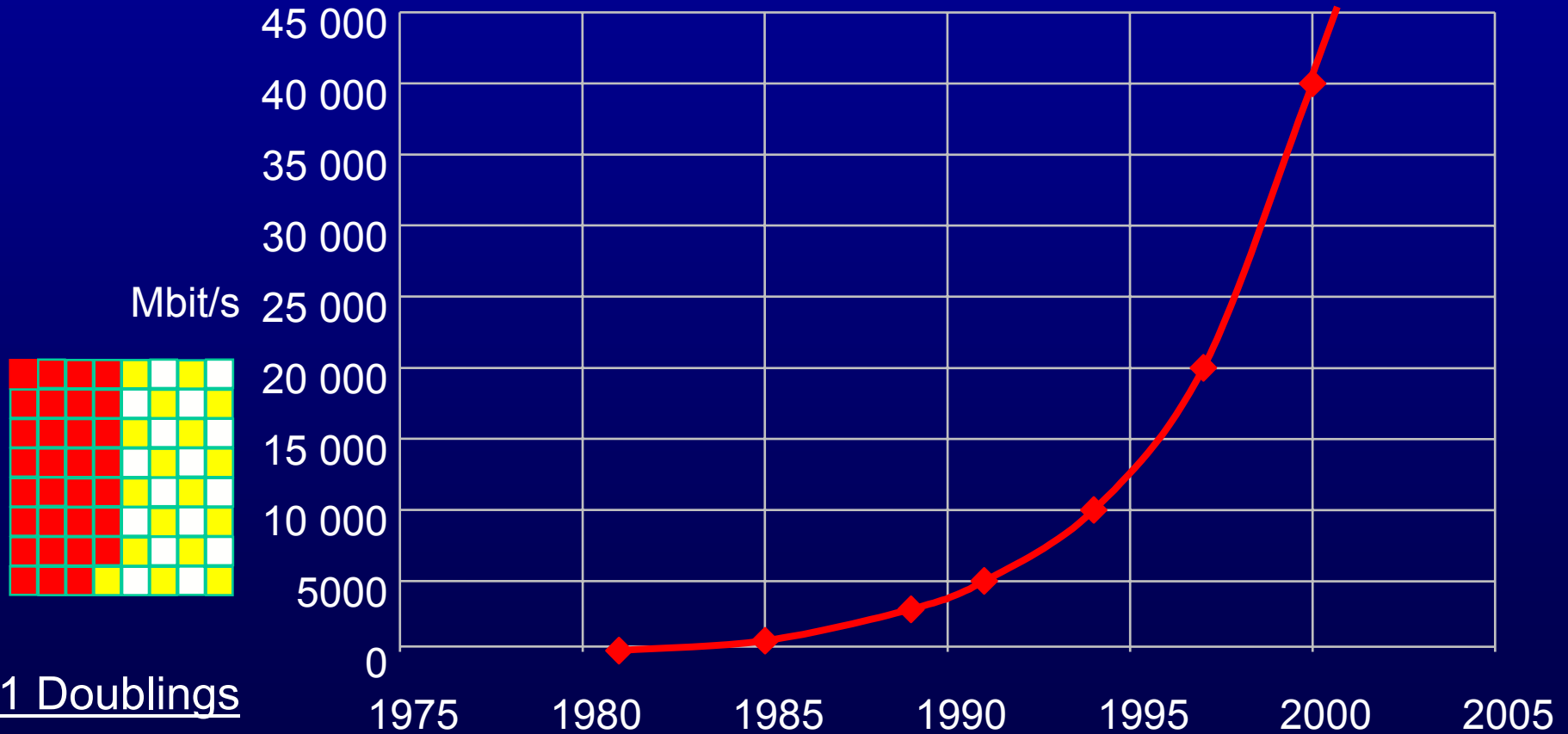- **Final thoughts.**

The second half of the chessboard
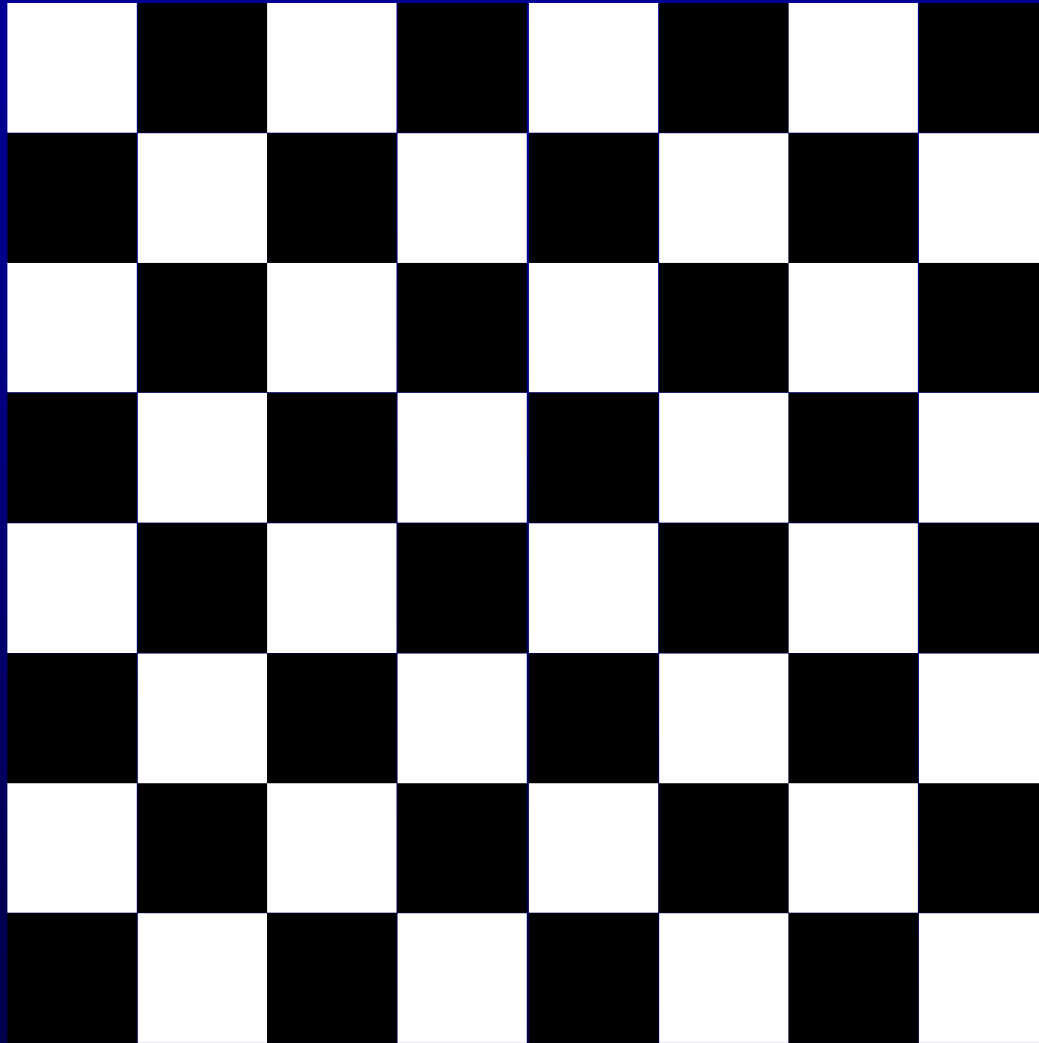
The cost-performance of electronics doubles every 18-24 months (Moore's Law)
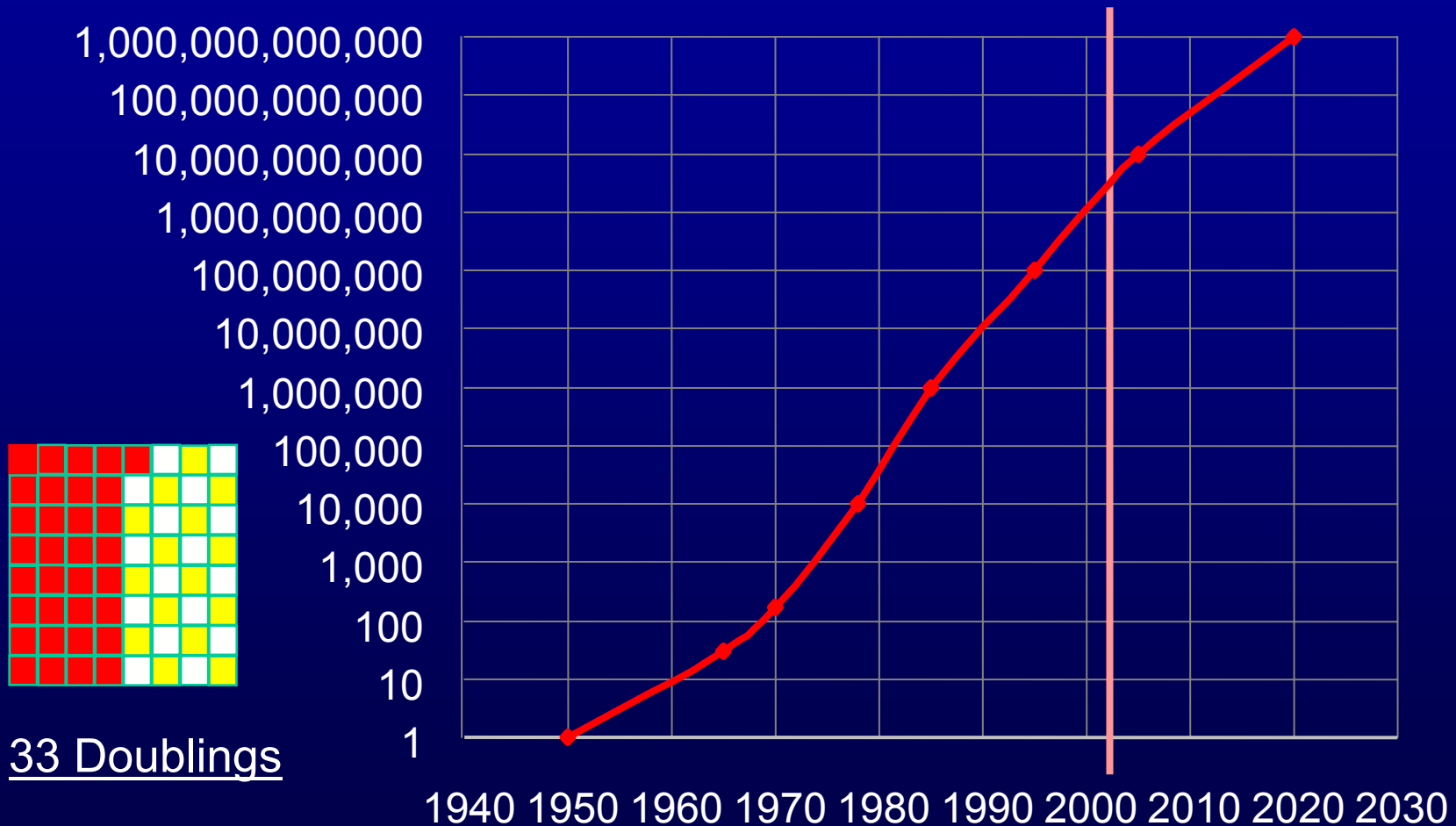
33 Doublings

Opto-electronics follow the same path (Moore's Law operates in telecoms, too)

31 Doublings

Cooper's law for wireless
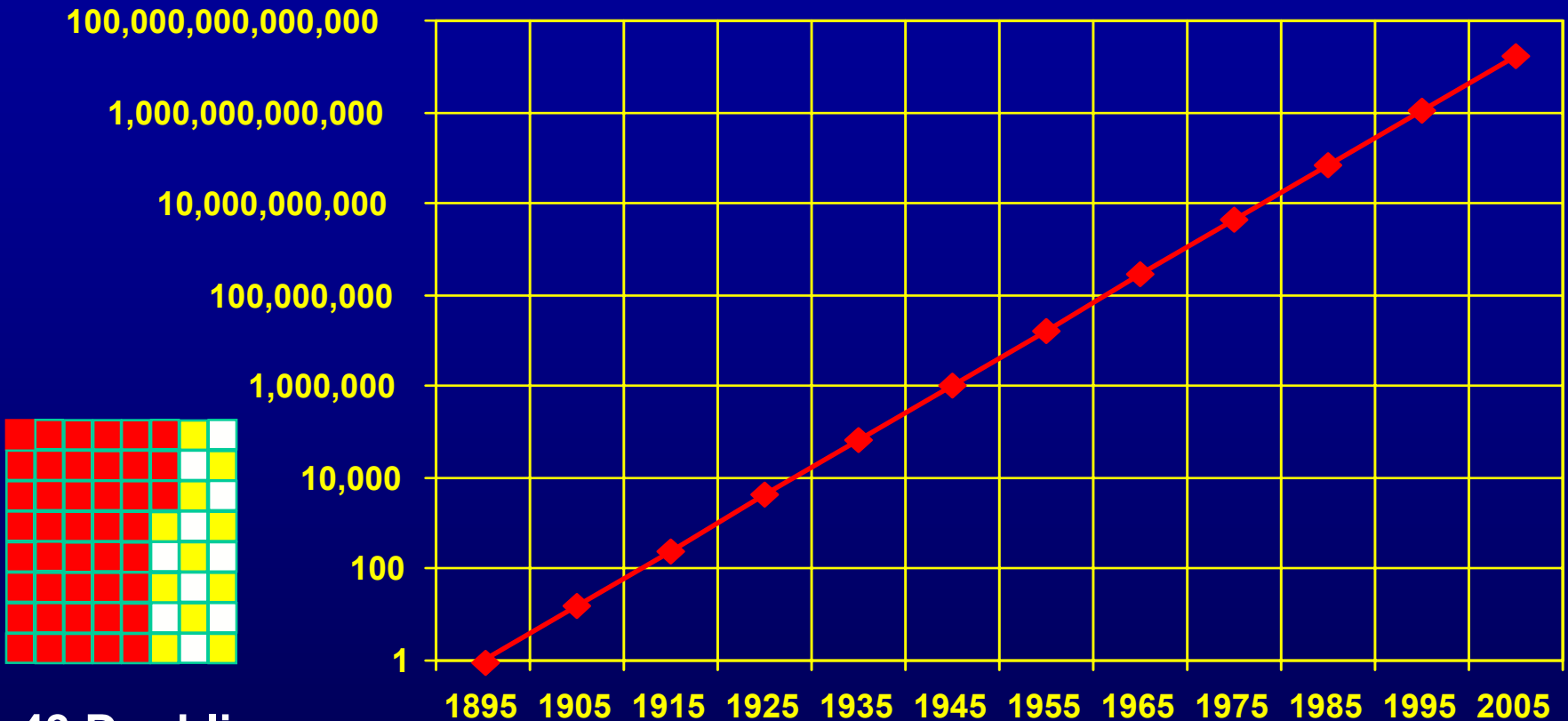
43 Doublings

Cooper's Law, (after ArrayComm Chairman, Martin Cooper), states that the number of conversations (voice and data) conducted over a given area, in all of the useful radio spectrum, has doubled every two and a half years for the last 105 years, ever since Marconi discovered radio in 1895

A new market ethic?

Use the continuing exponential growth in processing and communications (fixed and mobile) capability per unit cost to:

- **Reach <u>all</u> in society (whether literate or illiterate, city dwelling or country dwelling) with services which can be <u>cost effectively</u> adapted to individual need and capability.**
- **Avoid the economic dislocation arising from "information rich" and "information poor" areas.**
- **Build systems which learn individual's behaviours and preferences - adapting automatically.**

Moving from:

Mass marketing " our offering addresses the lowest common denominator of the volume market..."
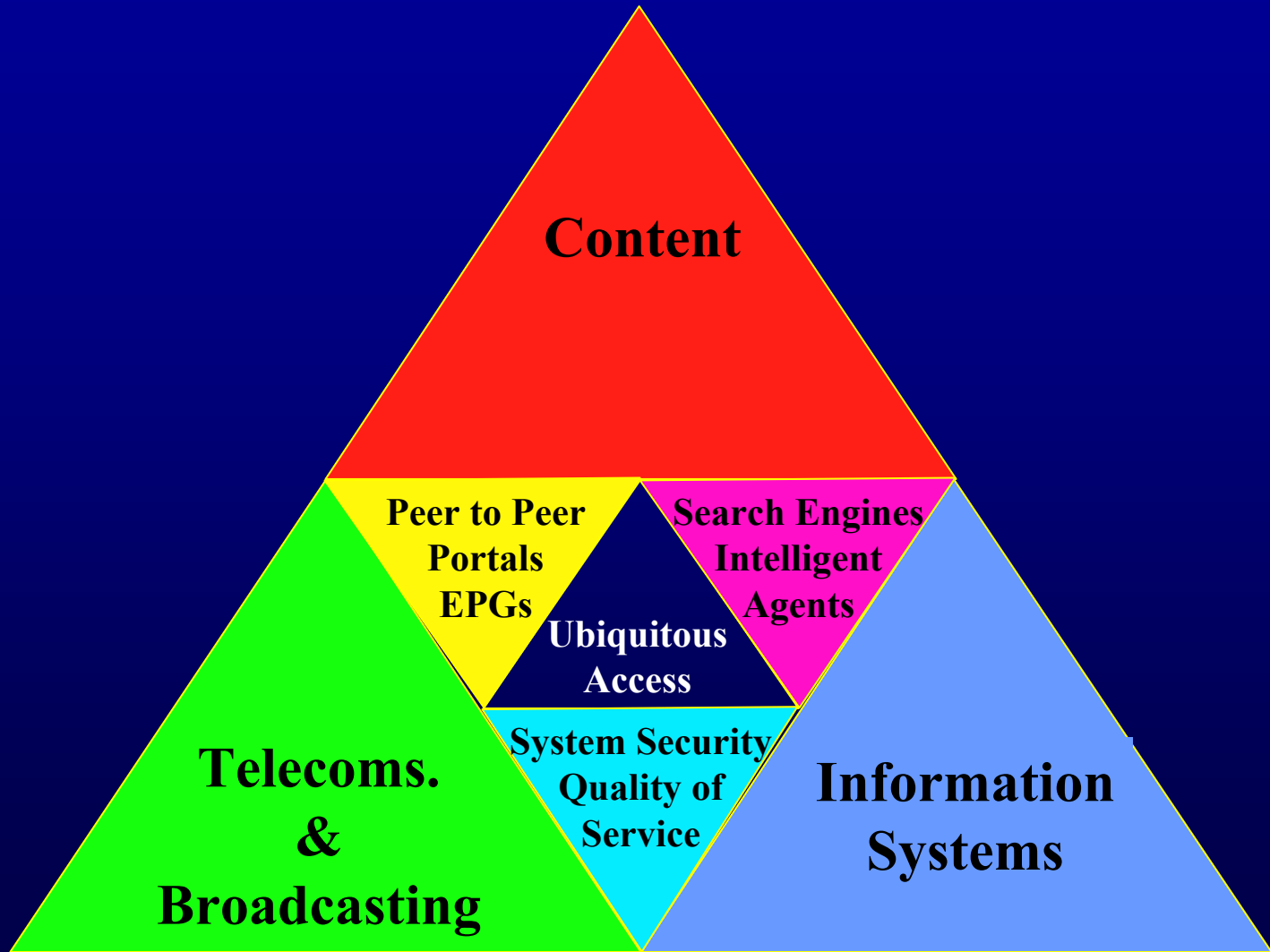
To:

Mass customisation: "meeting <u>your</u> specific need is <u>our</u> key competitive advantage..."

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Mapping the new challenges

Establishing the agenda…

Content

Peer to Peer Portals EPGs

Cross-Media Ownership

Search Engines Intelligent Agents

Customer Ownership Billing

Must Carry Obligations

Location Based Services

Telecommunications & Broadcasting

System Security Quality of Service

Information Systems

Focus today on:

- **Ubiquitous access;**

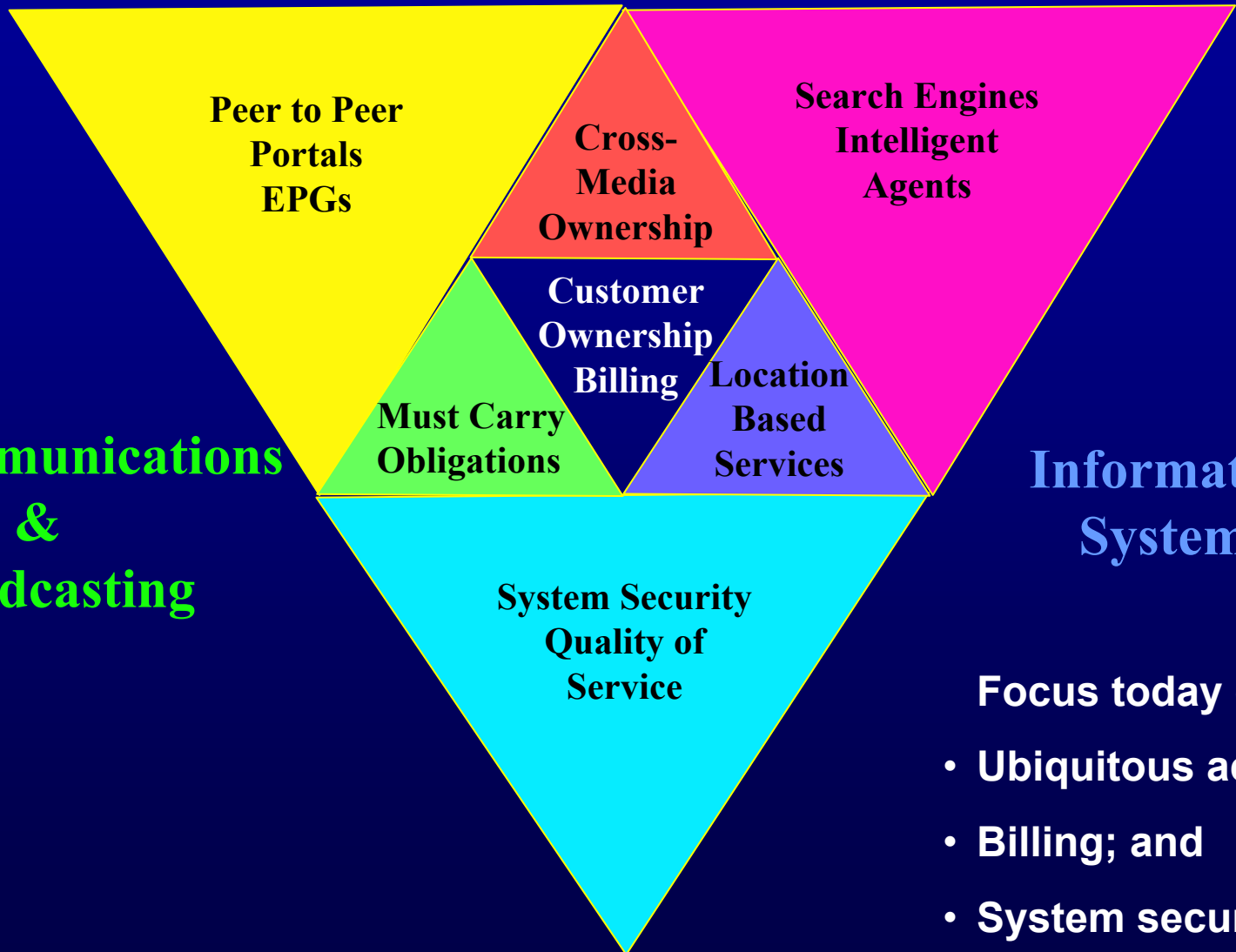- **Billing; and**

- **System security.**

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Affordable broadband access: The challenge for the EU…
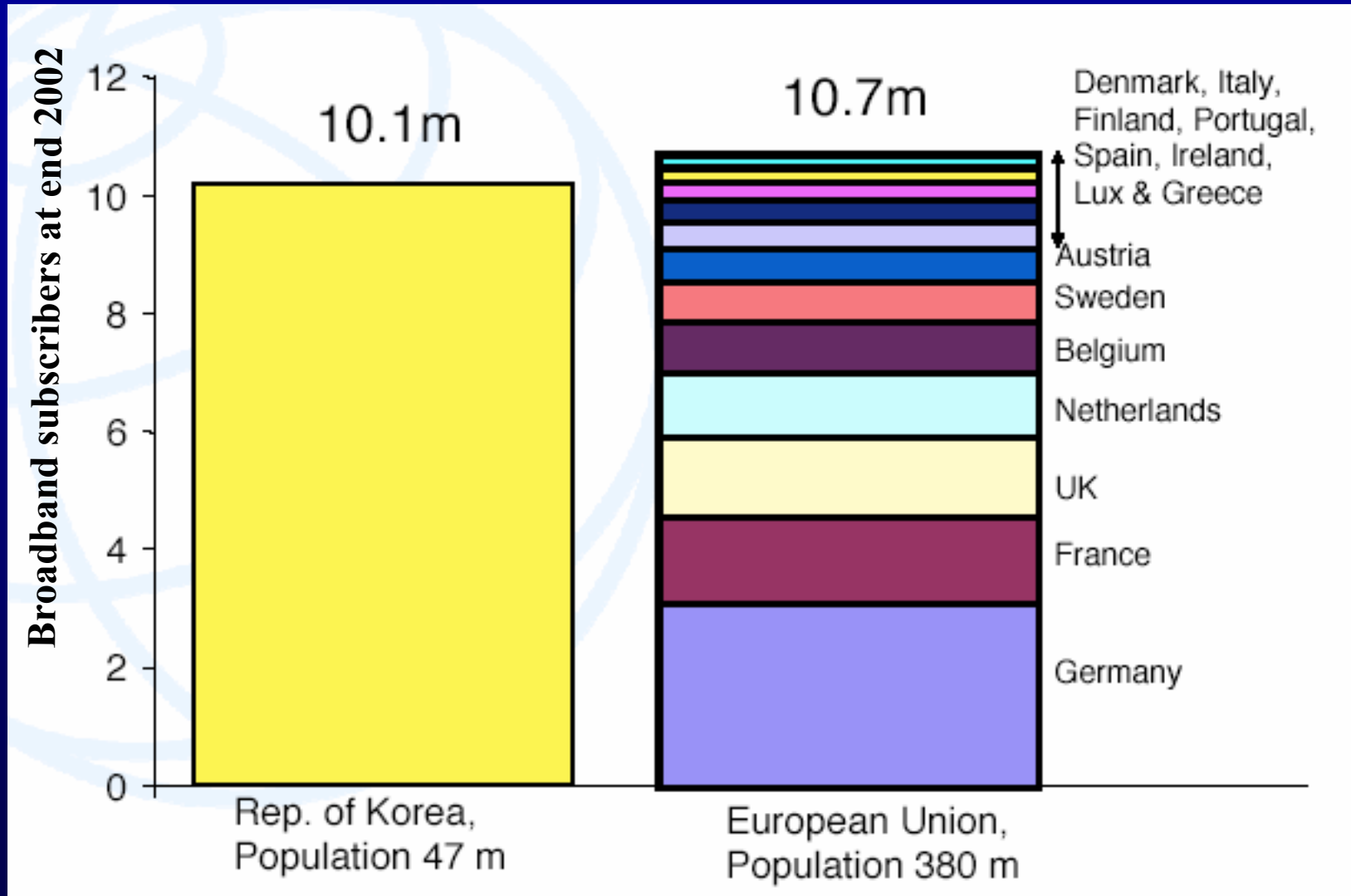
But a following wind: Communications spend as a proportion of household income has been steadily increasing across the OECD countries…

Index: 1990=100

Legend:
- Communications*
- Health
- Education
- Water, electricity and gas
- Recreation and Culture
- Transport
- Restaurants and hotels
- Alcohol, tobacco and narcotics
- Households equipment
- Clothing and footwear
- Food
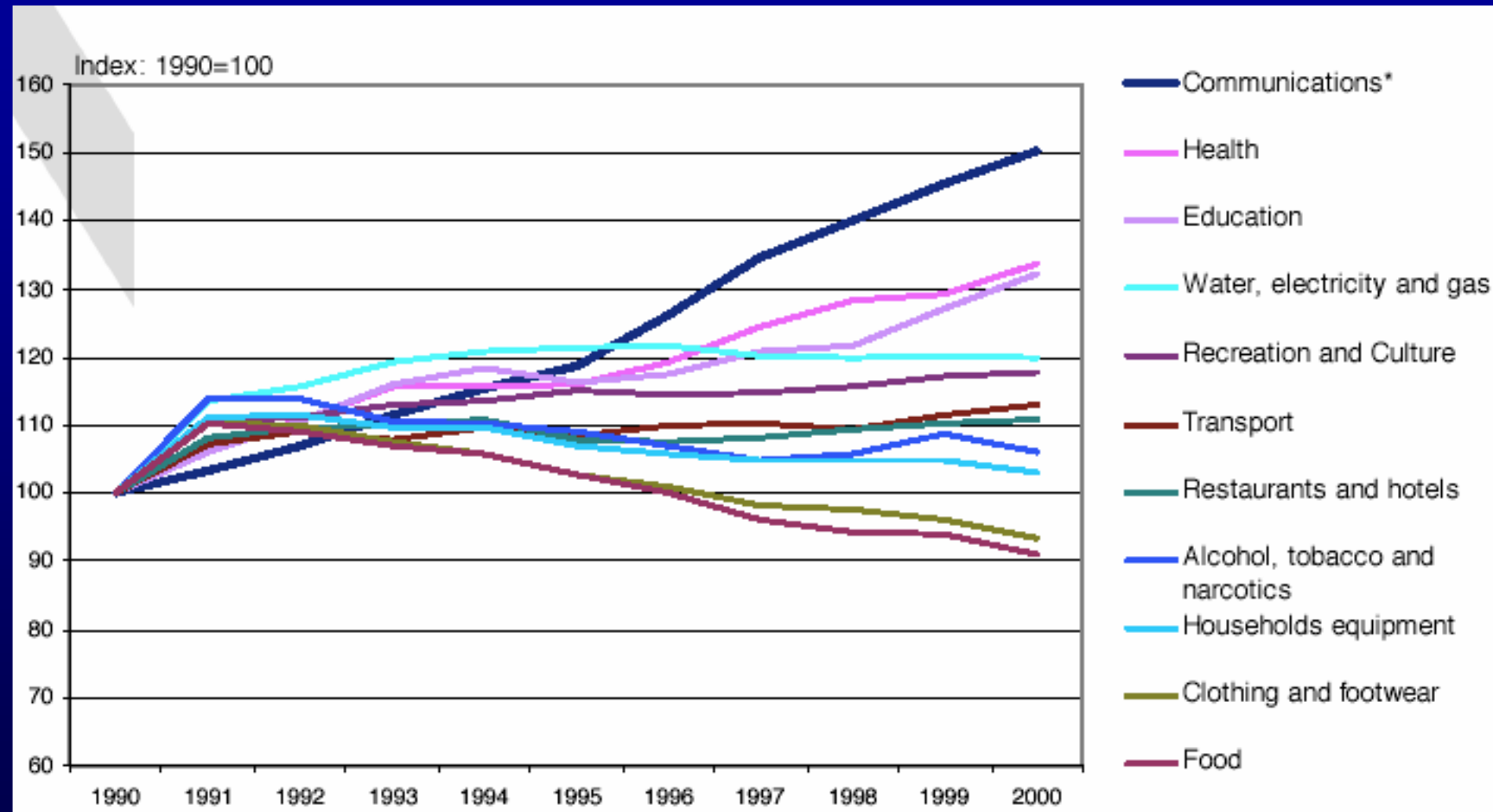
*Communications includes Telecommunications equipment and services and postal services

Hungary, Norway, Slovak Republic, Switzerland and Turkey are not included

Source: OECD
SNA Database

What we mean by 'Broadband'…Speed

<u>Large</u> business has had access to broadband for many years, only mass market, affordable broadband is new…

Mass market broadband is a journey. There is no simple, single definition that holds over time:

Stage	Typical Speed	Typical Application
1st Generation	256kb/s - 2Mb/s	Fast Internet access
2nd Generation	2Mb/s - 5Mb/s	Applic. Serv. Prov.
3rd Generation	5Mb/s - 50Mb/s	Real time video

Broadband services are 'always on' and charged simply by rental or by volume of data shipped not by connected time…

What we mean by 'Broadband'…Technology

There is no single 'magic bullet' technology for the provision of broadband services. Genuine pervasive provision will draw on a range of options including:

- xDSL - delivered over the existing 'copper' local loop used historically for voice services. Wholesale from carriers and retail from a wide range of ISPs (512Kbits/sec to 50Mbits/sec);

- Cable modems - enhancements to existing analogue or digital cable TV systems. Potential for up to 30Mbits/sec per home.;

- Fixed Wireless Access - up to 8Mbits/sec and

- Satellite - available almost universally but with a high connection/terminal equipment charge and long latency…

Many variations of cost, speed, symmetry, contention ratio, and so on…

What we mean by 'Broadband'…Platforms

Conventional telecommunications fixed network platforms are not the only options. Alternatives include:

- **Third generation mobile services at 384 kbit/s and above ;**

- **Interactive digital television with 'return paths' via satellite or telecommunications networks; and**

- **Some five to ten years hence, 'High Altitude Platforms' effectively static dirigibles at 60,000 feet with an enormous coverage area.**

Wide area delivery technologies will also be complemented in homes, shops, offices and campuses by 'local' broadband technologies such as Wireless LANs and Bluetooth.
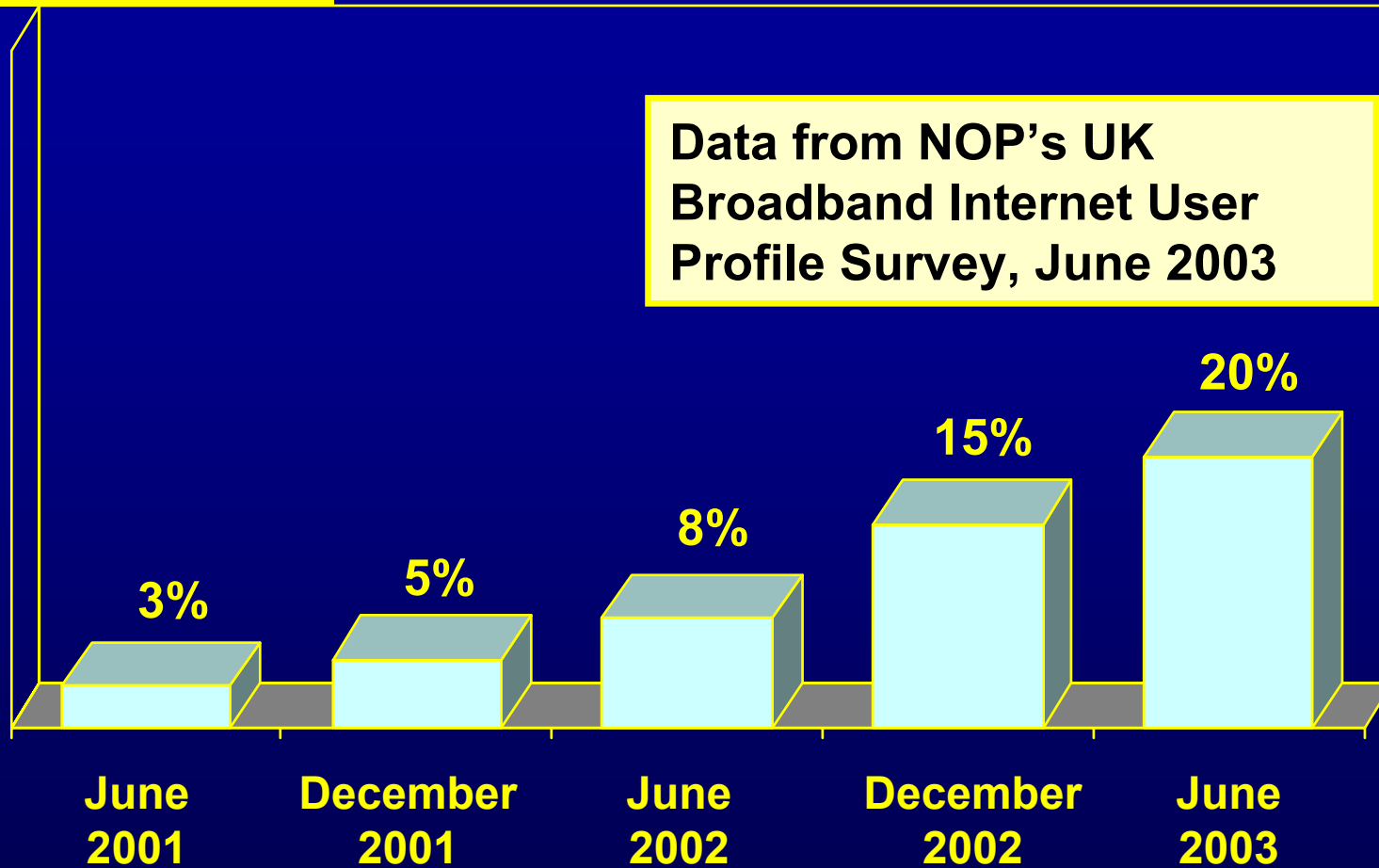
Low altitude platforms are a new option…

- Aerostats held at 3000 metres on fibre optic tethers.

- Use standard 28GHz BFWA technology.

LIBRA Replaces 2,000 Terrestrial Masts
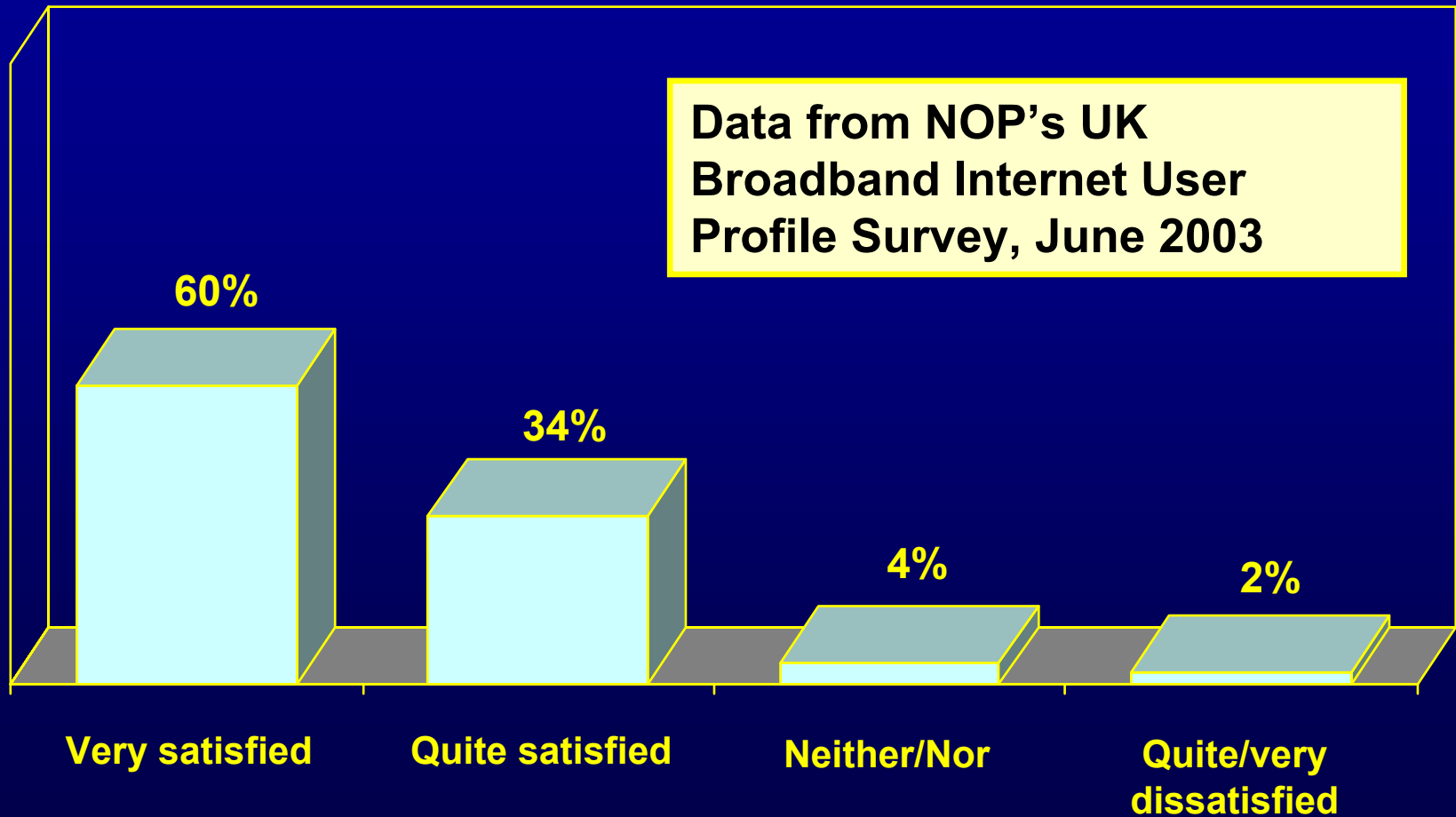
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UK affordable broadband users: The adoption growth curve

Data from NOP's UK Broadband Internet User Profile Survey, June 2003

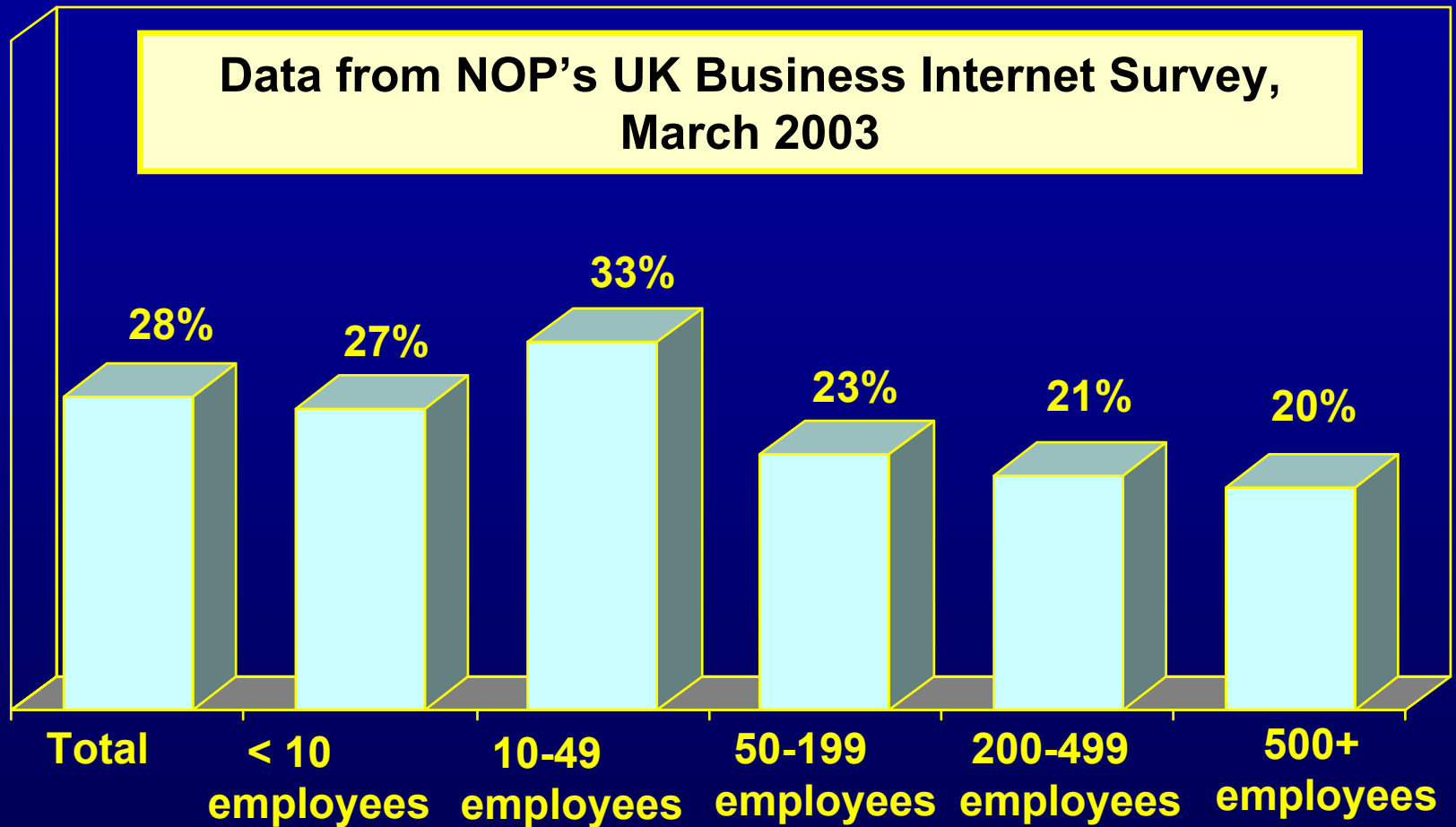| June 2001	December 2001	June 2002	December 2002	June 2003
3%	5%	8%	15%	20%

Ireland is passing the "knee" in its adoption curve and is likely to see similar dramatic growth…

UK affordable broadband users: Exceptional satisfaction scores…

Data from NOP's UK Broadband Internet User Profile Survey, June 2003

60% — Very satisfied
34% — Quite satisfied
4% — Neither/Nor
2% — Quite/very dissatisfied

Source: UK Trade Association Intellect and NOP Sept '03

Affordable broadband: Vendors of choice for UK SMEs

Vendor	Percentage
BT Openworld	53%
Telewest	6%
Demon	6%
NTL	6%
Easynet	6%
UUNET/Pipex	2%
Freeserve	2%
AOL	2%
Plusnet	2%
Tiscali	2%
Blueyonder	2%
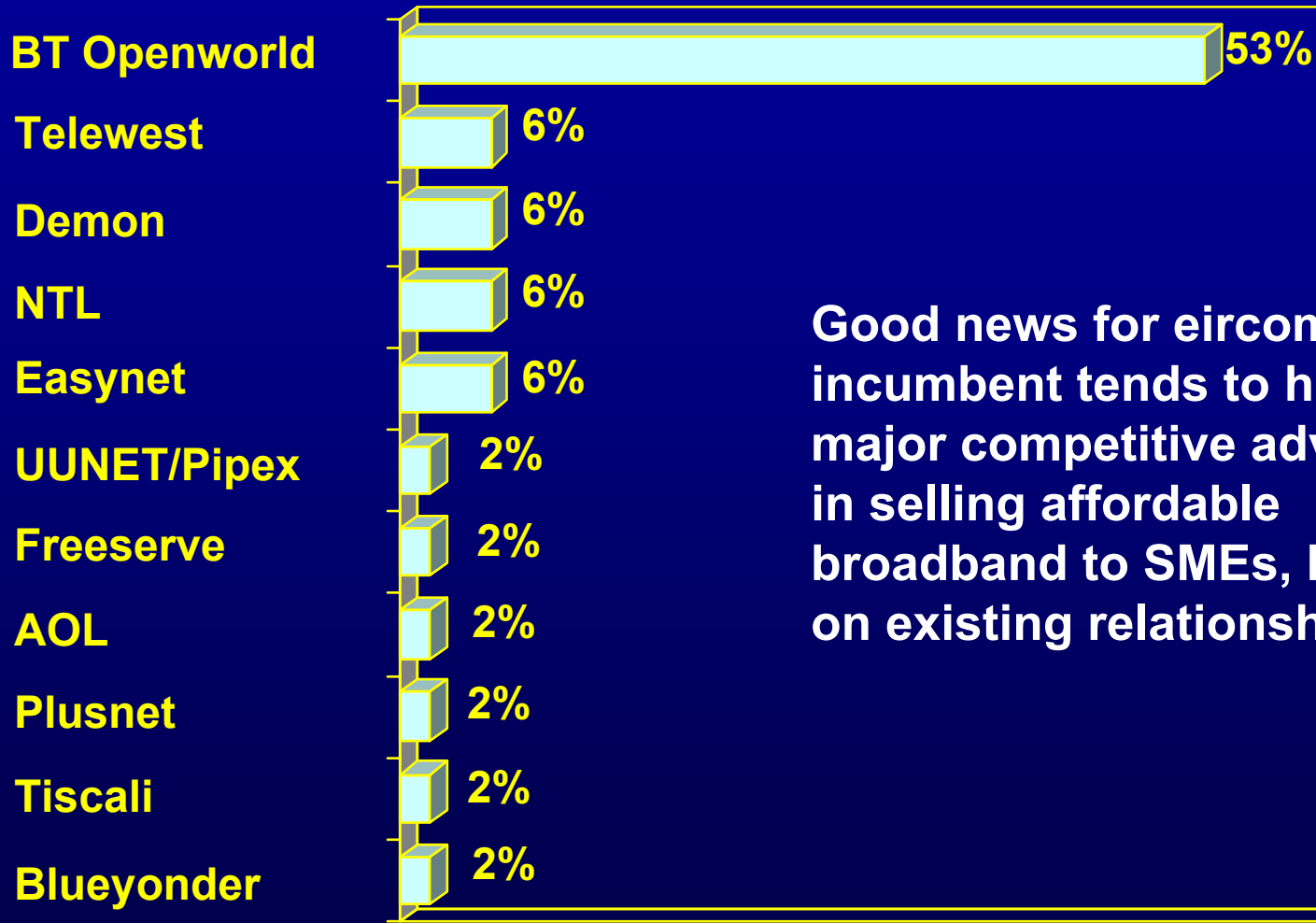
Good news for eircom…the incumbent tends to have a major competitive advantage in selling affordable broadband to SMEs, based on existing relationships.

Data from NOP's UK Business Internet Survey, March 2003

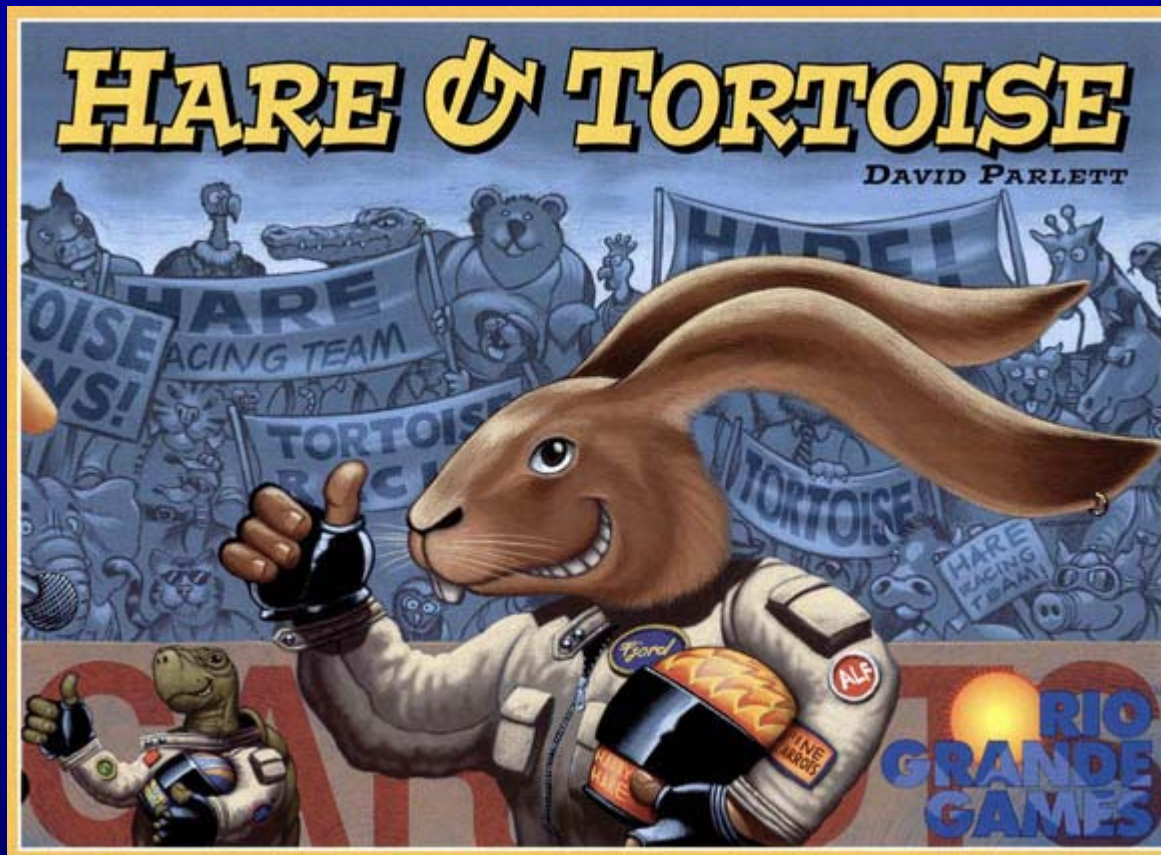# UK ICT Sector SMEs: Affordable broadband access satisfaction & importance

Mean score

Importance of keeping Broadband connection	9.4
Ease of integration into existing IT framework	8.5
Ease of installation	7.8
Effect on staff satisfaction	7.3
Effect on staff productivity	6.8
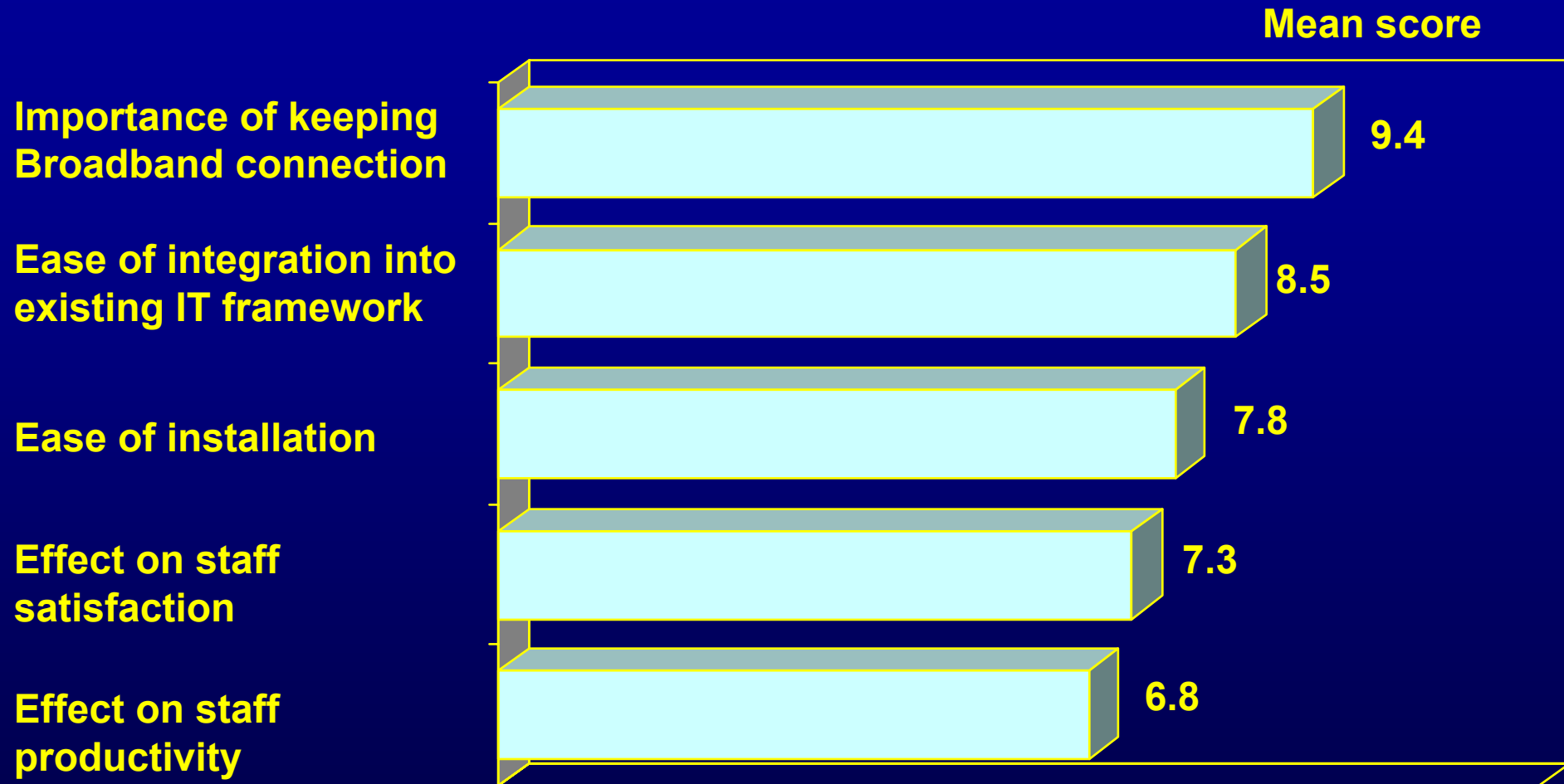
Scale: 1 is negative and 10 is positive

Source: UK Trade Association Intellect and NOP Sept '03

Broadband isn't just about speed…

<u>Broadband can be about</u>
<u>*taking it easy*</u>

Broadband time is different

Dial-up "Anxious Time"

Watched and Counted

Restricts Experiences

Controls the internet user

Broadband "Timeless Time"

Ignored and Assumed

Broadens Experiences

Internet user is in control

Vs.

Experiences

Rushed annoyance

Limited utility and impractical

Periodic & anxious

Experiences

**Relaxed enjoyment**

Realisation of potential

Smooth & reliable

Source: UK Work Foundation - iSociety programme - James Crabtree
http://www.theisociety.net

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- **Final thoughts.**

Technology of course makes an excellent servant but a poor master…
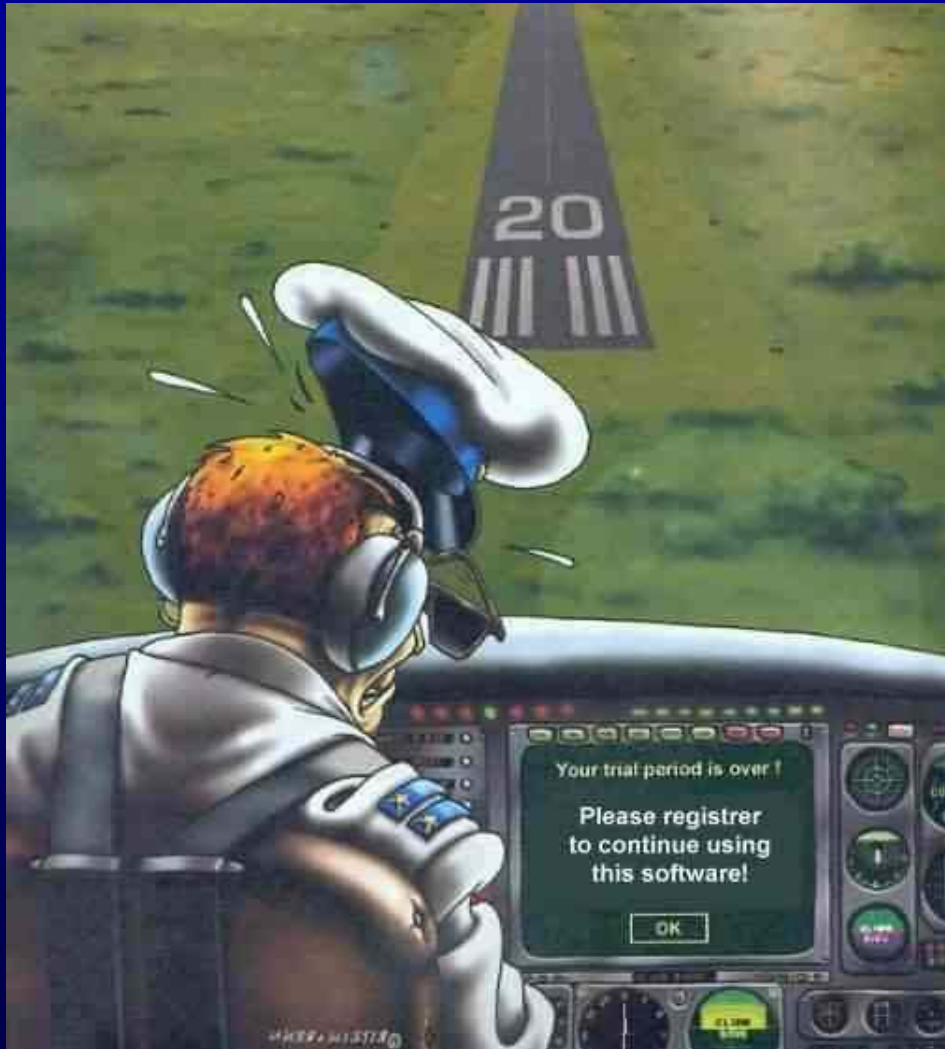
As an engineer and director my strong concern is with the process by which increasingly rapid change in technological capability diffuses out into society and the economy…

Source: Jim Norton, COGS Network Meeting, University of Sheffield, 20/01/03

Use the power of technology to make life easier for customers…

Customers buy __capability__ not technology. My ideal affordable broadband service would provide seamless access in the:

- home - delivered on Wireless LAN (WLAN) for the last twenty metres (but fed by ADSL, Cable or anything else convenient);
- office – again delivered by WLAN fed from the corporate network;
- hotel/airport/rail station – based on WLAN hotspots; and
- train/car through GPRS or 3G mobile services.

I want a single security log-in to all of these services. I want full 128bit security. I want a single bill. I want a discount for aggregate use. I want the process to be simple and transparent…

I do not want to negotiate payment separately on each occasion. I do not want to struggle to input 32 character hexadecimal encryption key sequences. I do not want to carry a range of access devices and adaptors…

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Some final thoughts….

- **Rapid technological change has not gone away with the so called 'dot com' crash. The implications remain both stark and exciting.**

- **Ireland will climb the broadband adoption curve rapidly. New approaches could overcome the divide between town and country.**

- **Widespread availability of fixed (and ultimately mobile) broadband access will have a profound impact, based on extensive exploitation of interactivity.**

- **Interesting business opportunities are arising at the points of service integration: billing, single sign on, security, guaranteeing quality of service, intelligent agents and so on.**

- **A connected global economy is unlikely to allow Ireland (or the UK) the luxury of indulging in management and/or organisational nostalgia for very long…**
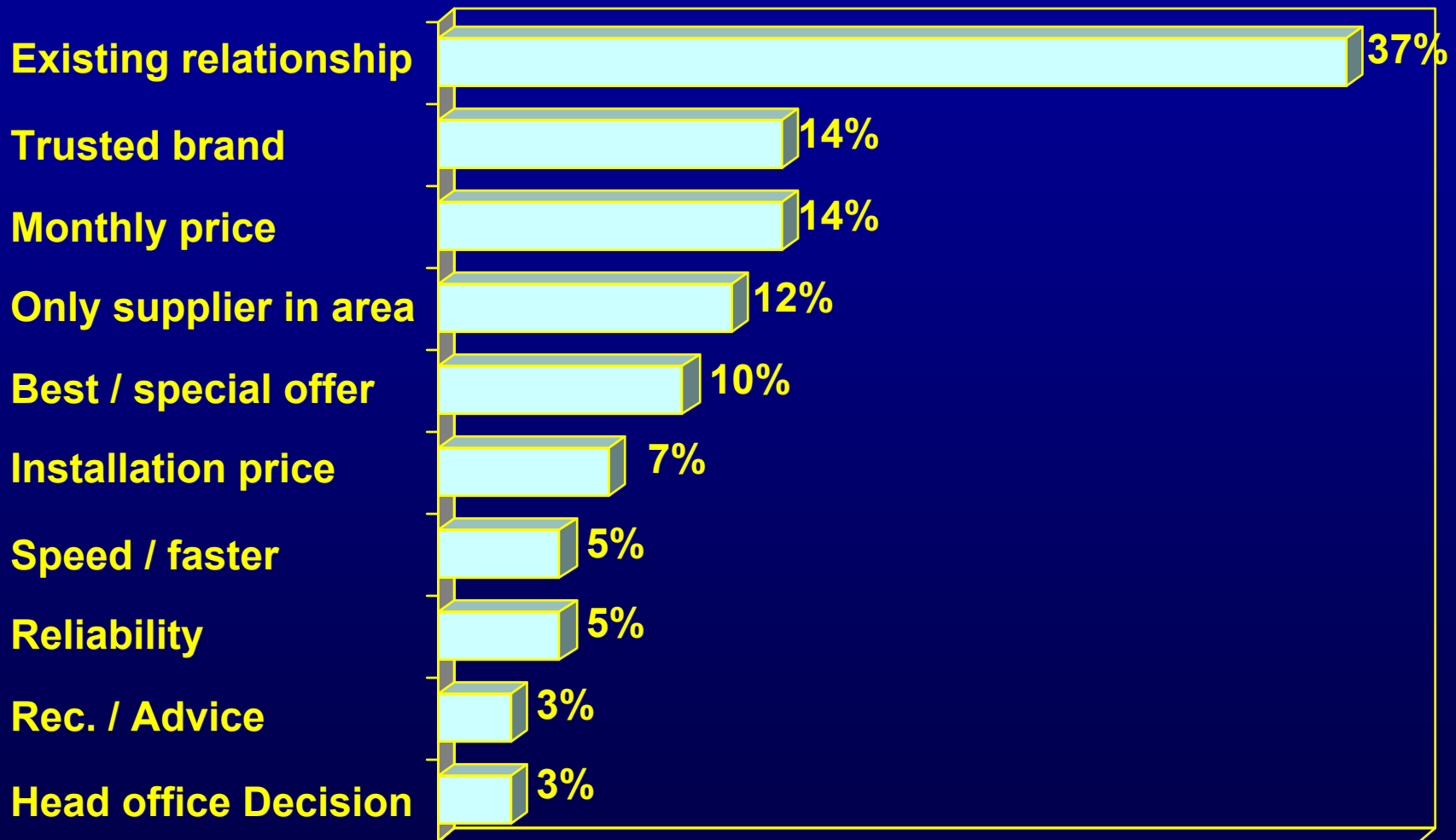
And remember the law of unintended consequences….

Questions & Answers

Backup slides

Affordable broadband: Vendors of choice for UK SMEs - Why choose BT?

Reason	Percentage
Existing relationship	37%
Trusted brand	14%
Monthly price	14%
Only supplier in area	12%
Best / special offer	10%
Installation price	7%
Speed / faster	5%
Reliability	5%
Rec. / Advice	3%
Head office Decision	3%

Data from NOP's UK Business Internet Survey, March 2003

Source: UK Trade Association Intellect and NOP Sept '03