Communicating Worlds 2020

ERICSSON

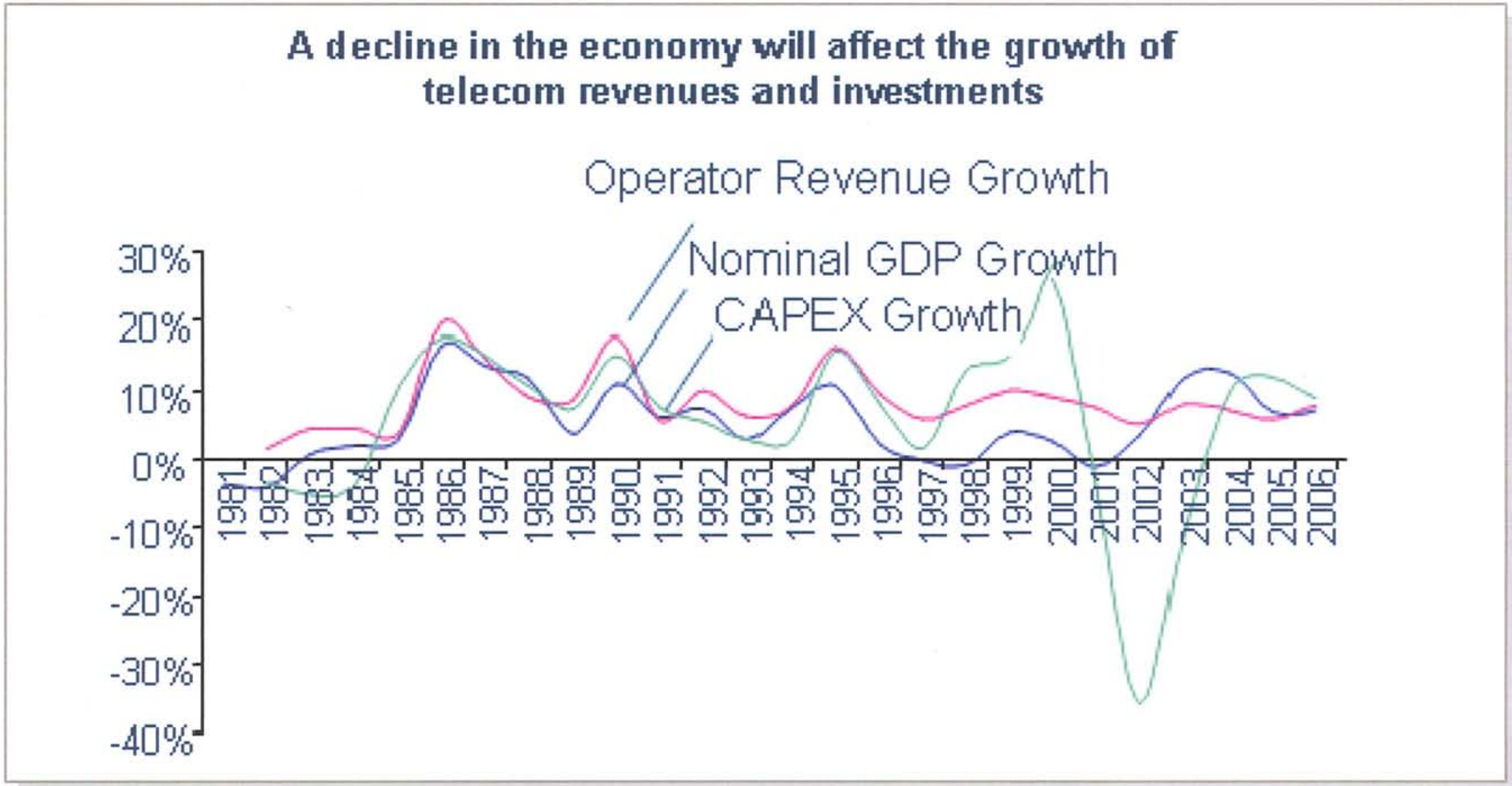
TAKING YOU FORWARD

Ericsson at a glance

- Headquartered in Stockholm, Sweden, and doing business in more than 175 countries

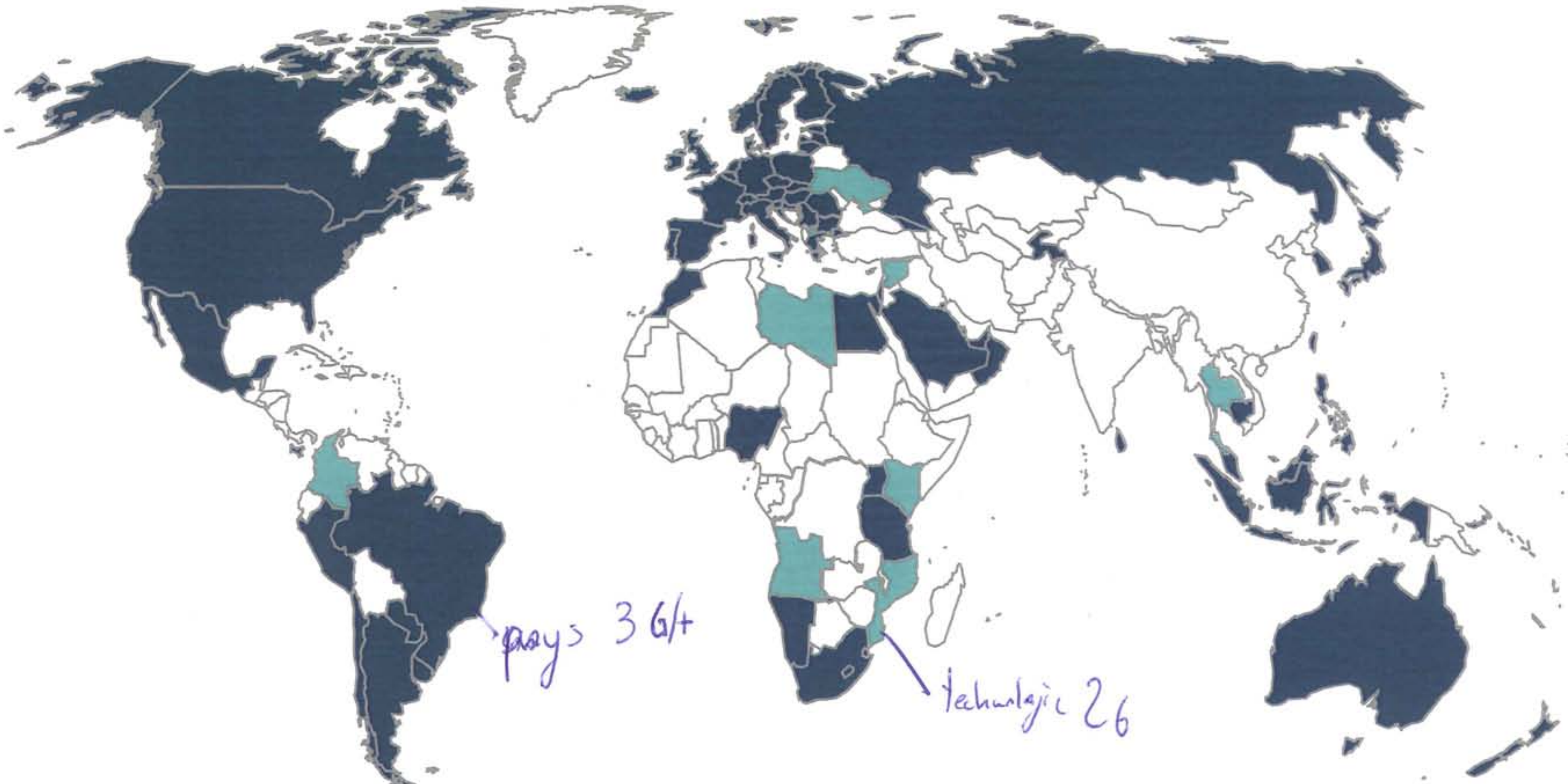
- Leads the market in wireless networks and services sold to operators – strong focus on multimedia solutions
  - 40 % of all mobile traffic travels through our systems
- Net sales 2007 = SEK 187.8 billion
  - Net sales H1 2008 = SEK 92.7 billion
- Employs 75,800 people around the world

Telecom correlation with GDP



Major global economic risks; surge in property and bond prices in many countries, massive US external deficit….

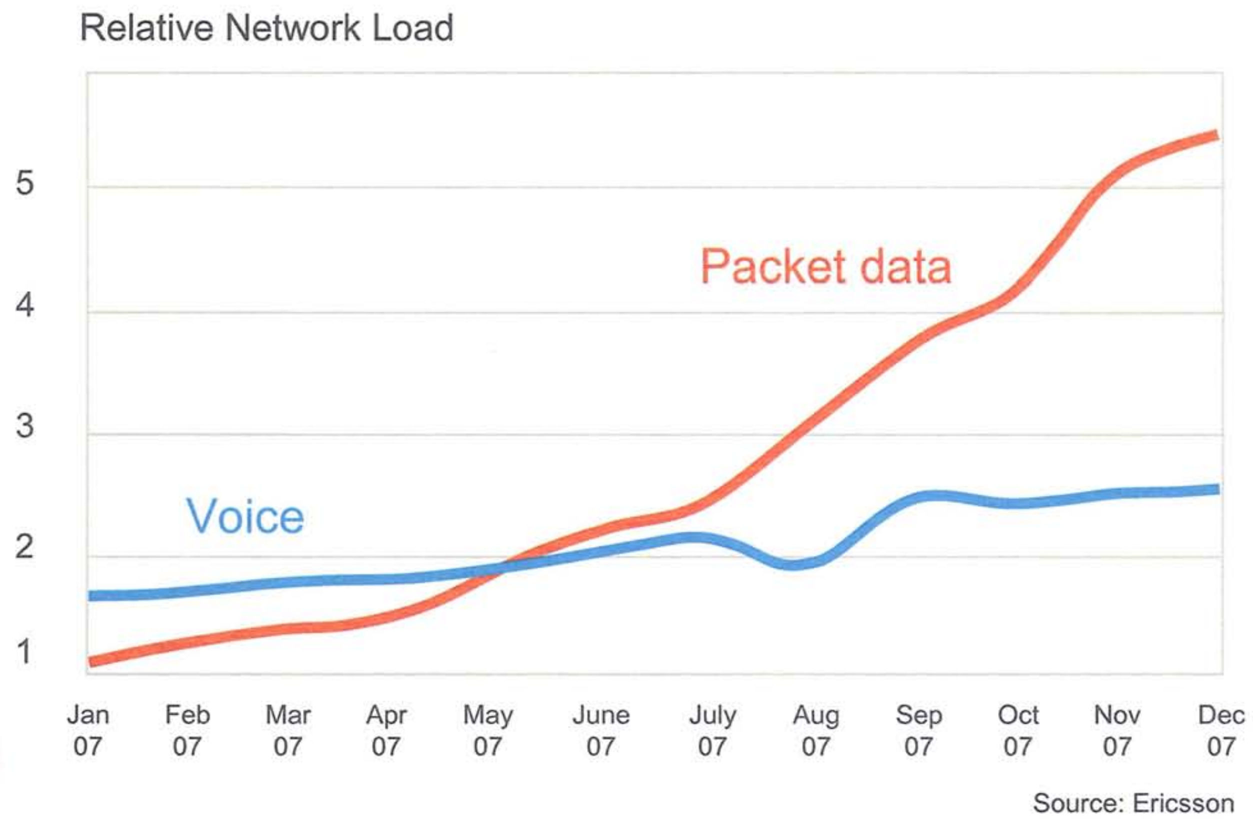
Breakthrough for mobile broadband



185 Mobile Broadband (HSPA) networks are now live in 80 countries
32 million users worldwide - 10 times increase 2007 to 2008

Strong growth in data traffic

WCDMA & HSPA world average



Packet data outgrows voice traffic

Agenda

- Why Communicating Worlds 2020 ?
- Likely Truths
- Scenarios
- Vision

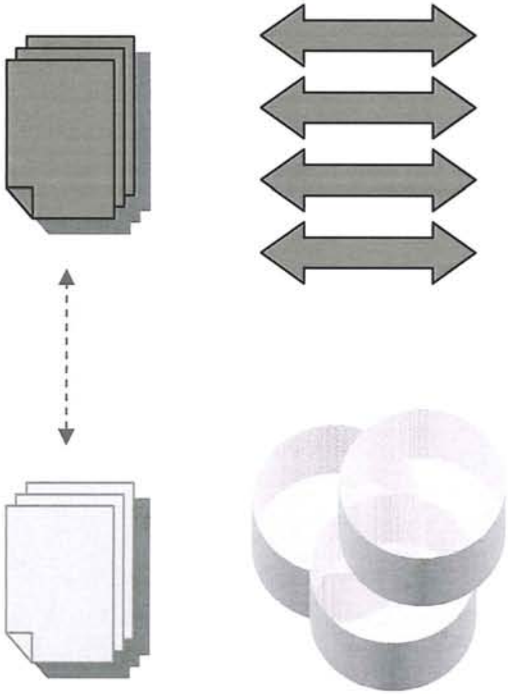
Scenario project overview

GMC 2007 — GMC 2008

I. Scanning

Critical uncertainties

Key scenario dimensions

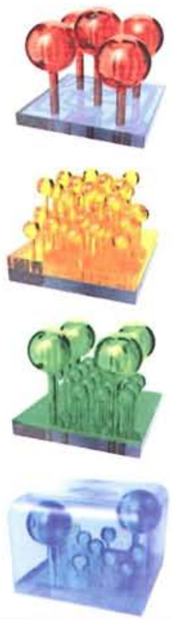


Likely truths

Likely truths clustering

II. Scenarios

Final scenarios



Likely truths story

III. Strategic implications

Strengths & weaknesses

Opportunities & challenges

IV. User stories from 2020

Illustrating life in an *all-communicating world 2020*

The world in 2020

Four scenarios with common likely truths

Brands & pipes

Scenario 1

User choice

Scenario 2

Green shift

Scenario 3

All-inclusive

Scenario 4

Likely truths

- **→ User patterns**
- **→ Industry dynamics**
- **→ Business context**

Strategic implications – choices

Likely truths	Strategic choices that must be considered regardless of scenario
Each of the scenarios	Strategic choices to capture selected opportunities and handle (hedge against) specific challenges

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The world in 2020 – likely truths

Likely truths

User patterns

- Networking, personalization and mobility will radically transform user patterns
- ICT solutions will be increasingly critical for enterprises to secure sustainable competitiveness
- One billion new middle-class consumers will enter the global marketplace, mainly in Asia

Industry dynamics

- Operator consolidation, cross-industry collaboration and low-cost innovation will redefine the industry
- Most user services will be delivered independently of the network provider
- Everything that benefits from a wireless network connection will have one

Business context

- China and India will emerge as economic powers with fundamental global impact
- Sustainability and scarcity of resources will shape political agendas and ignite conflicts
- Societal vulnerabilities will increase dependency on safety and security solutions

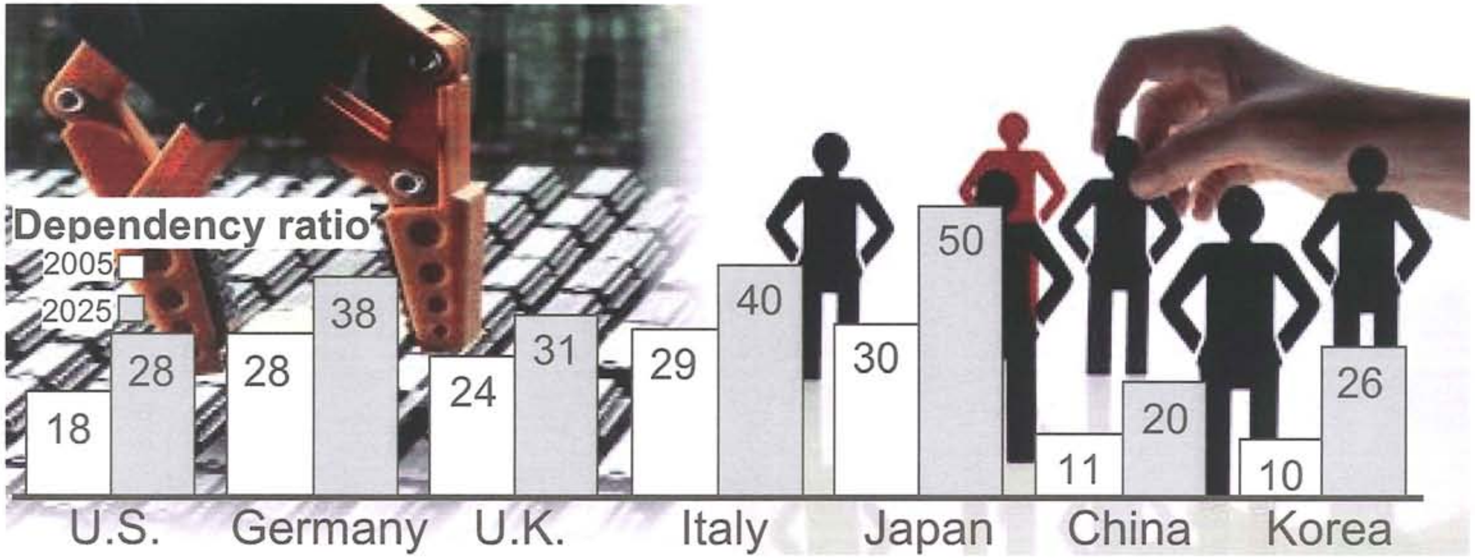
Networking, personalization and mobility will radically transform user patterns

Consumer diversity → Fragmentation
Individualistic lifestyles → Personalization

Mobile, transparent and efficient markets → New communication behaviors, services and tools

Communicating, comparing, producing, sharing and collaborating in social networks

ICT solutions will be critical for enterprises to secure sustainable competitiveness

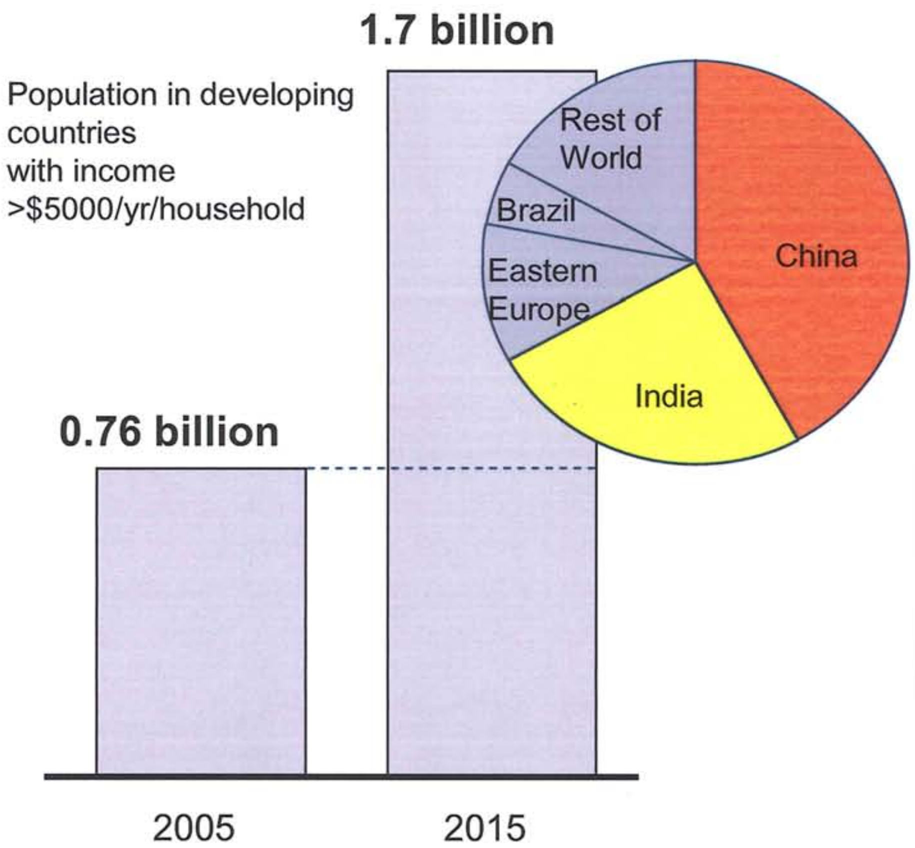


Restrained workforces → Need for productivity improvements

Self service applications, M2M communication and automation will transform business processes

IT budgets directed at knowledge management

One billion new middle-class consumers globally, mainly in Asia



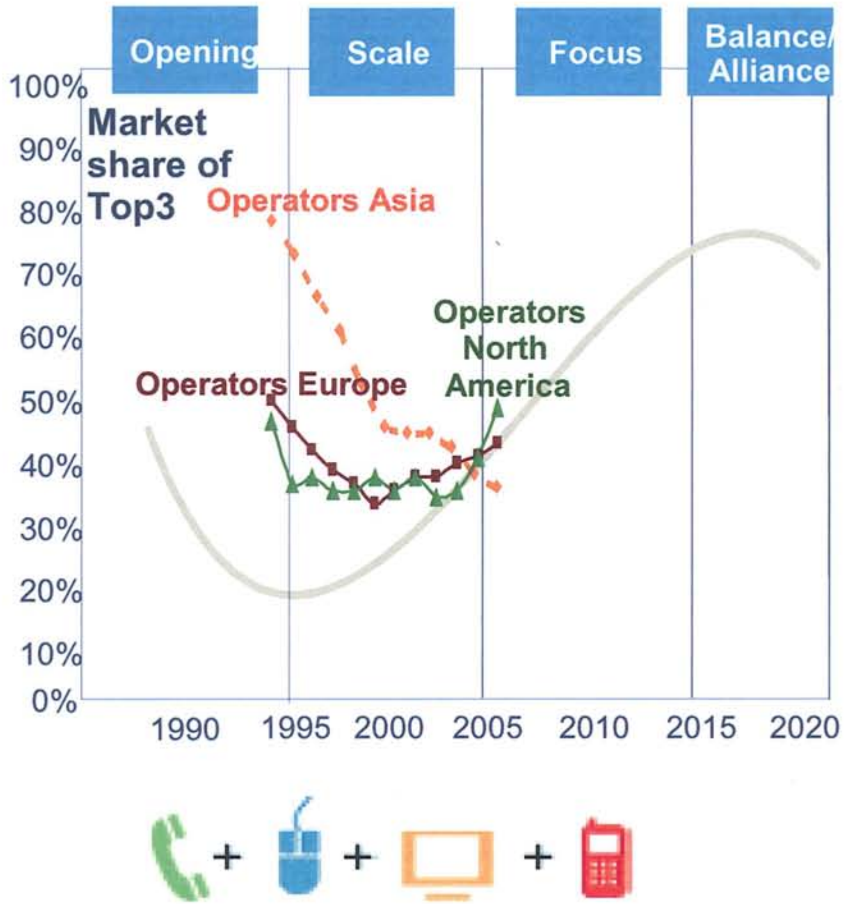
China and India are the main contributors to the one billion new middle-class consumers

Higher average income & demands for low price

→ Preferences of brands and the hierarchy of needs

→ Inequalities and rapid urbanization

Operator consolidation, cross-industry collaboration and low-cost innovation



Consolidation and convergence continues

Services will increasingly be provided across borders

New emerging market multinationals enter the global market place

Technology advancements, competition and commoditization will pressure telecom services

Most user services will be delivered independently of the network provider

COMMUNICATION | **WEB – NETWORK OF PEOPLE** | **CONTENT**

IP - prevailing delivery rule, the vertical dependence bw services and infrastructures gradually disappear

Lower entry barriers and innovation, more new competitive business models

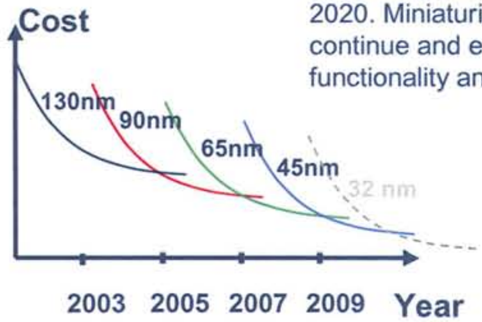
Everything that benefits from a wireless network connection will have one

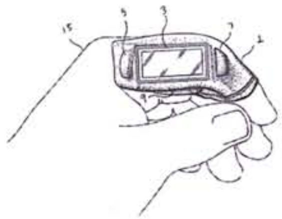
Technology will not be a limiting factor for the diffusion of new products and services

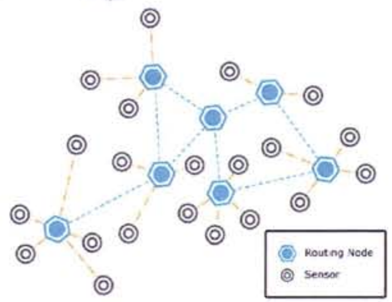
Industries will become increasingly mobilized, also increasing the share of services delivered online

New services in health care, automation, positioning and information management

Moore's Law
Line width in semiconductor technology will reach 14nm by 2020. Miniaturization will continue and enable new functionality and lower cost





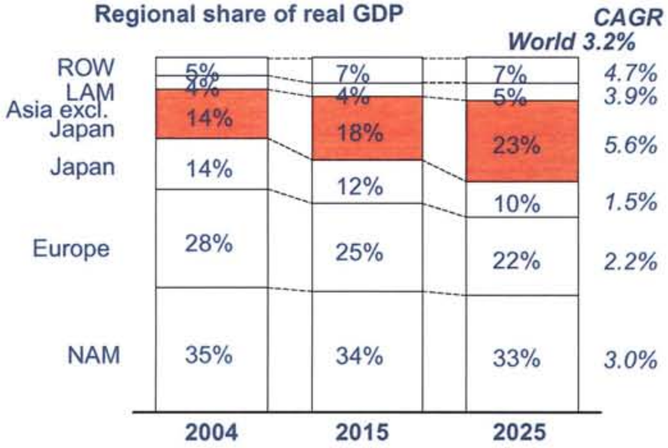


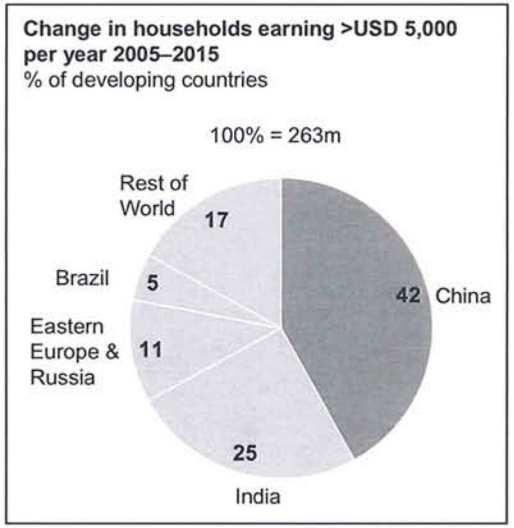
China and India will emerge as economic powers with fundamental global impact

The world economy will be substantially larger

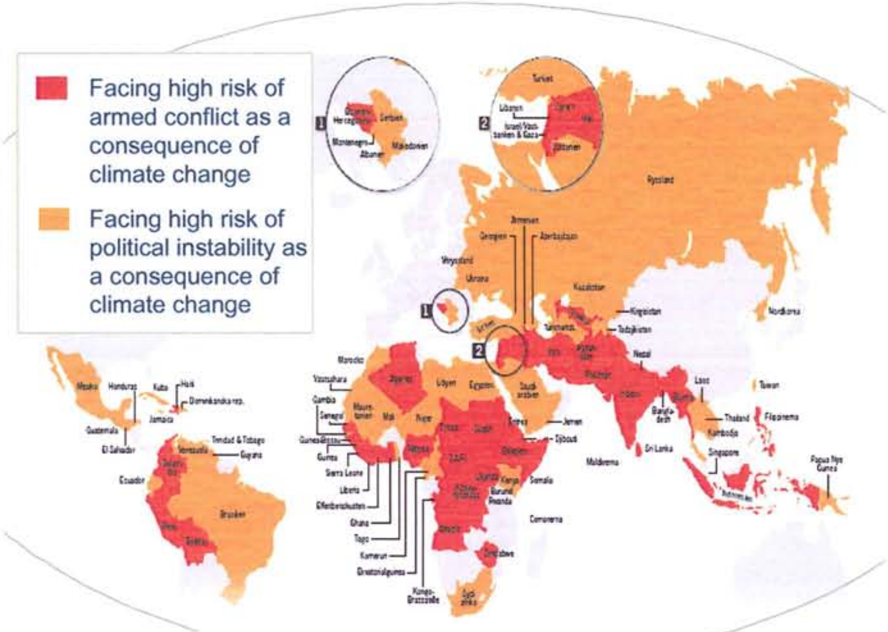
China and India will propel Asia into a more dominant position in the global economy, changing the balance of power

Innovation will flourish in these countries as education reaches higher populations





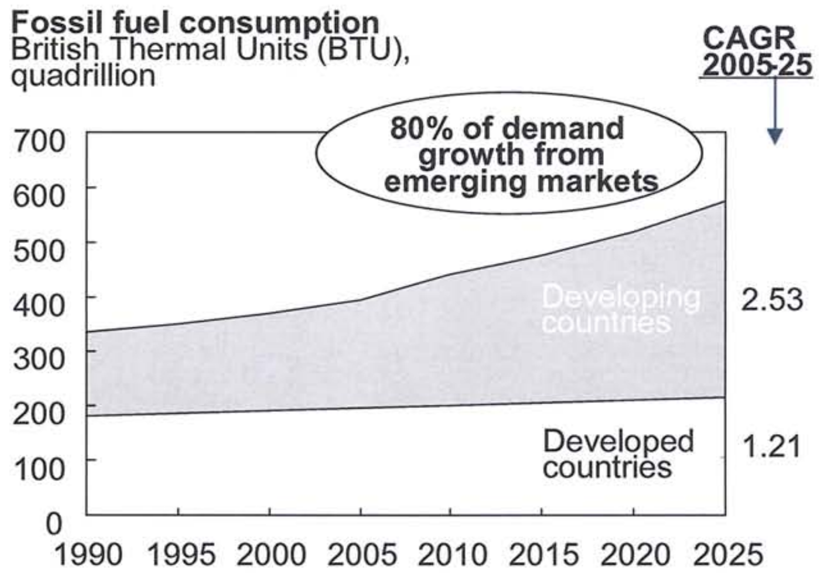
Sustainability and scarcity of resources will shape political agendas and ignite conflicts



The double-headed problem of climate change and armed conflict

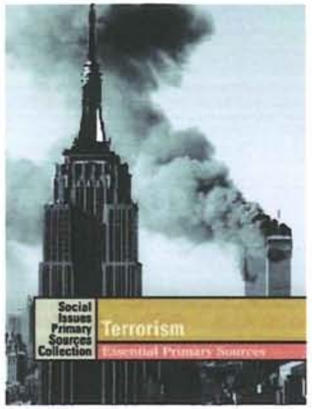
Resources are largely concentrated to unstable regions and climate change adds to the risk of conflict

Competition for natural resources and commodities will intensify



Political instruments will be used to create energy efficiencies and reduce CO_2 emissions

Societal vulnerabilities will increase dependency on safety and security solutions



Global issues will bring new societal vulnerabilities

Dependencies on information and communication systems will increase

Restricted online anonymity and privacy raise integrity concerns

Cyber crime and malware will be increasingly common

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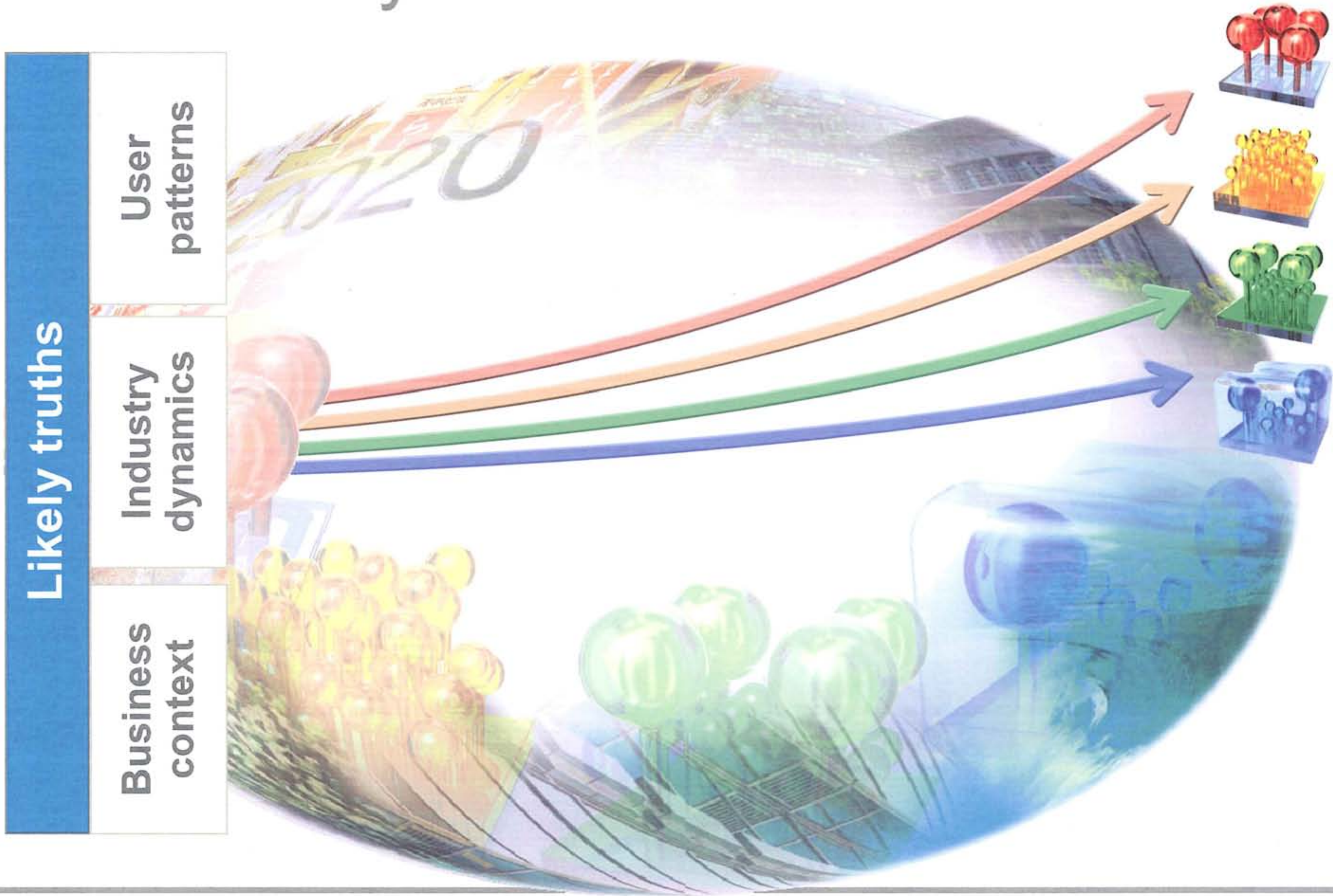
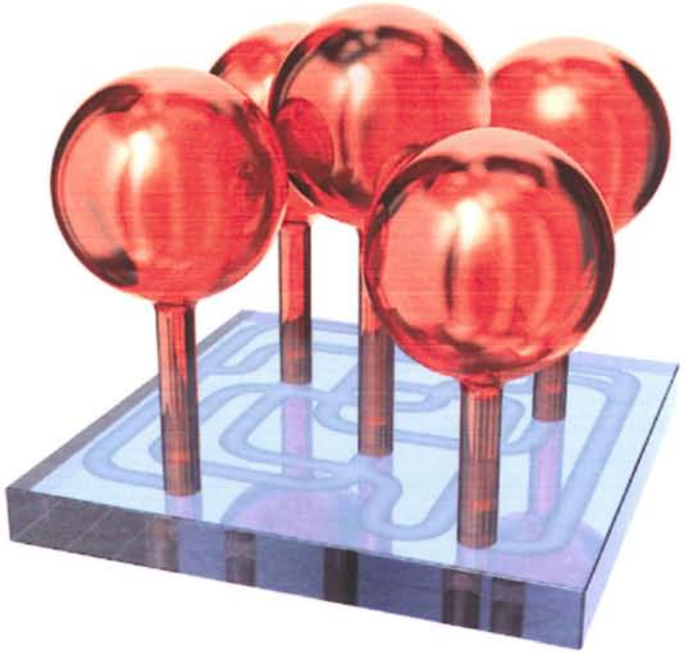
From likely truths to scenarios





Brands & pipes

Large and innovative "branded" providers offer lifestyle services independently of network providers.

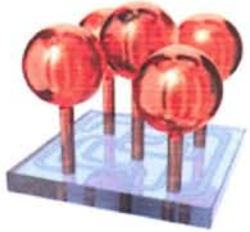
Brands & pipes

At a glance

- New value is mainly created by **large and innovative, branded service providers** who offer convenient and trusted lifestyle and business service packages.
- Online user services are delivered over-the-top, independently of network providers and tightly integrated with devices.
- Most traditional operators end up with **access and transport** refocusing on scale and operational excellence. Only a few operators will manage to become brands.

Brands & pipes

Illustrative chain of events



Tipping-in (today)

Operator walled garden solutions and new business efforts are stalling.

Branded Internet services are increasingly preferred by users.

Internet players develop sophisticated user meta data solutions while offering convenient and secure on-line commerce together with verticals like banks.

2013

Devices specialized for, and integrated with, Internet services are proven successful. Users are offered “complete” bundled and personalized service offerings. Convenience, security, perceived relative simplicity and brand are locking-in the users.

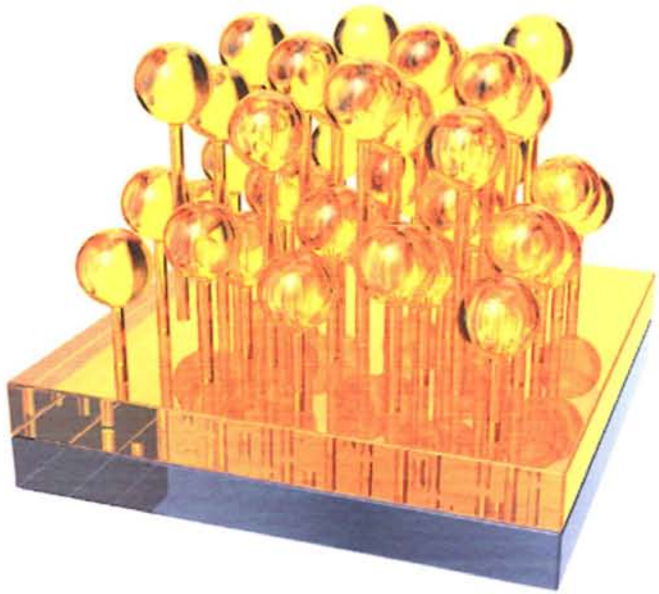
2016

Devices are an integrated part of the total service offer and use the network for connectivity only.

Wholesale business model dominates for many network operators (excl. voice). A ”SIM-only” business.

2020

Services are separated from the network (except for real time and QoS critical apps). In some cases, the two are controlled by the same player.

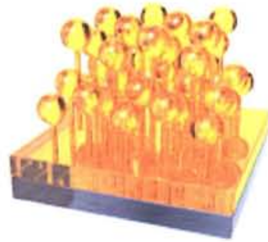


User choice

Many small & innovative players offer an abundance of services using an intelligent "network operating system".

User choice

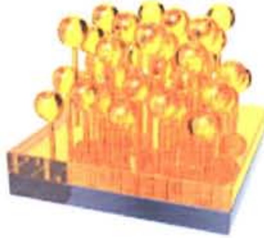
At a glance



- Many **small, innovative players** offer an abundance of services over-the-top, independently of the network operator, serving a multitude of unique user needs.
- Online services are delivered using general purpose devices and a network interface with common service-enabling and support functions – an **intelligent network operating system.**
- Successful network operators will grow by controlling the network operating system or become second tier partners. Defensive operators will fail to capture new revenue streams.

User choice

Illustrative chain of events



Tipping-in (today)

Weak telecom industry growth; mature broadband market. Operators' revenues mainly come from voice and connectivity.

Users favor exploration and freedom of choice before limited branded solutions.

Increasing demand for seamless services and transparent distribution of digital content as well as applications.

2013

Pro-active operators re-focus on wholesale and advanced network functionality. They expand into vertical enterprise network solutions.

Enterprises and public sectors demand integrated telecom and IP/datacom solutions.

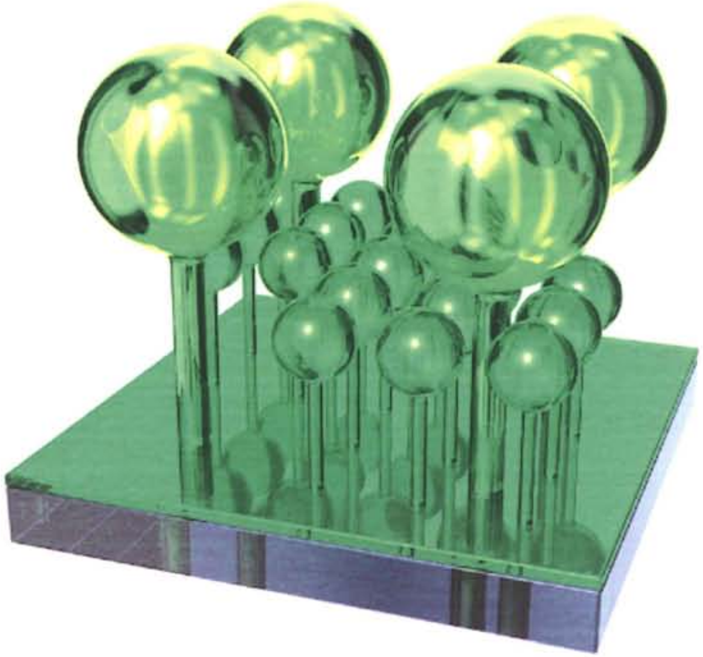
2016

Increasing benefits for operators adding value through an intelligent "network operating system", offering QoS, real time performance, transparency, secure payments, personal security and trust.

Entry barriers are reduced significantly for SME's and innovators with over-the-top business. User services are starting to boom.

2020

Boom in diversified long-tail business innovation by thousands of smaller players serving a multitude of unique user needs.

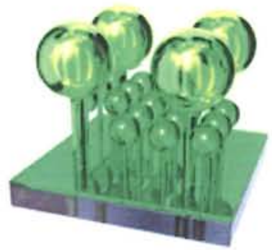


Green shift

Profound political actions on sustainability will change user patterns and demands of people and enterprises.

Green shift

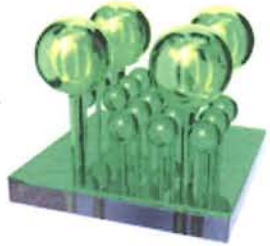
At a glance



- Profound **political actions on sustainability** are decisively changing the priorities of societies, companies and individuals around the world.
- People and enterprises will demand utility and climate smart solutions, such as e-health, telepresence and M2M communications.
- User services are delivered by **trusted utility service providers.** Regulations will drive investments and consolidation of the industry.

Green shift

Illustrative chain of events



Tipping-in (today)	2013	2016	2020
Increased frequency in evidence of global warming, the issue rises on national political agendas.	Enterprise and public sector spending on sustainability solutions and green adaptation happens at the cost of marketing and other investments.	Governments, travel, transportation and logistics industries invest in communications and sensor networks, working with their preferred SI/IT partners.	Sustainability success is highly rewarded by markets and regulators.
Politics and policies around sustainability affects the business climate. Firm action by regulators leads to restrictions and taxation on CO2 emissions.	Consumption focus shift from discretionary items to necessities.		The second, CO2 bottom line; focus on optimizing business processes and on climate smart offerings.

Sustainability becoming business critica

Innovation & energy optimization

Alternative energy sources

ICT critical to low carbon economy

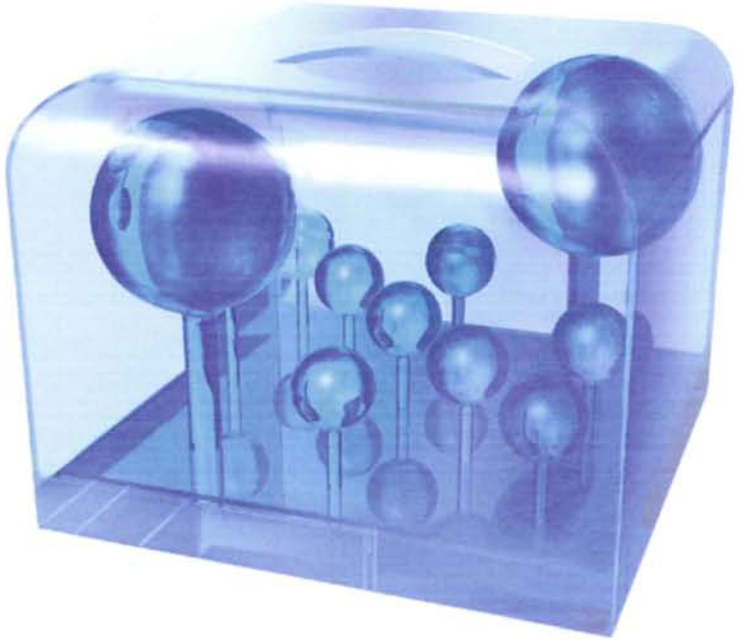
Emits equal amount of CO_2 as

=

1 year mobile telephony
(network & phone life cycle aspects)

1 hour car travel
(fuel aspects only)

ICT - a 10 to 1 lever to reduce global CO_2 emissions.

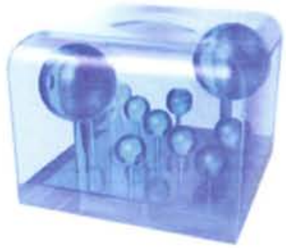


All-inclusive

Large and vertically integrated players will emerge and provide everything from connectivity to content.

All-inclusive

At a glance



- **Large, vertically integrated regional players** will be created through cross-industry M&A across telecom, IT, media, entertainment and electronics (TIME) sectors.
- Driving **convergence**, wealthy all-inclusive providers will seek to lock users in. Users become passive, innovation is slow and entry barriers high.
- Vendors will be largely dependent on the new dominating players. Overall growth will be moderate in a more regionalized economy.

All-inclusive

Illustrative chain of events

Tipping-in (today)	2013	2016	2020
Internet, media and other players trying to access the mobile channel stall due to efficient protection from network operators who continuously defend their position.	Broadening of offerings by operators.	Cross-industry M&A in TIME sectors result in large vertically integrated (and regional) players with stable market positions, but lower growth.	The TIME industry as well as device and consumer electronics has converged heavily.
Telecom operator consolidation accelerates. Economies of scale, key competitive advantage.	Entry barriers for innovations and new solutions are increasing in a push/supply market.		Passive regulators and national agendas have created a regionalized world economy
	Increasing national trade barriers		

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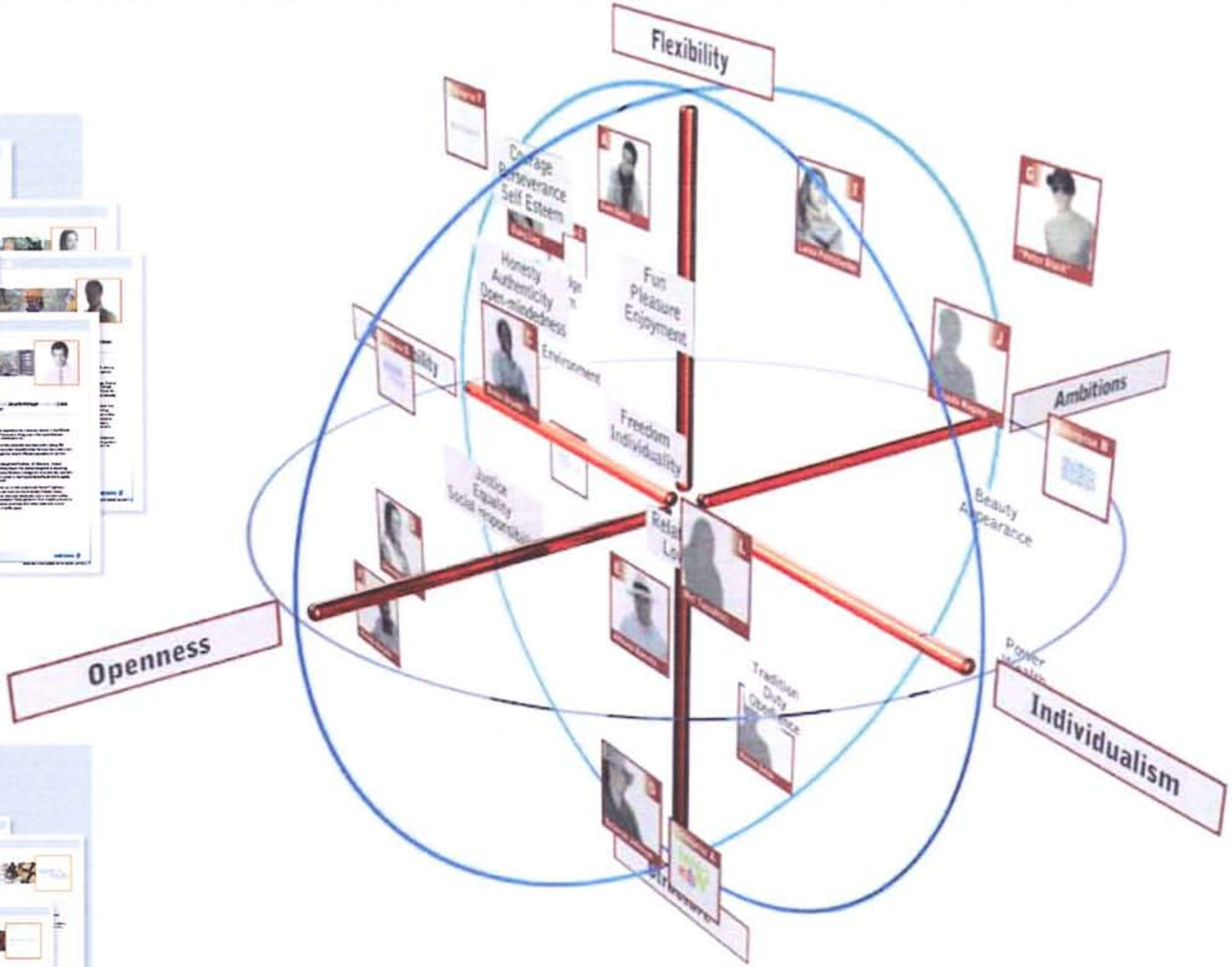
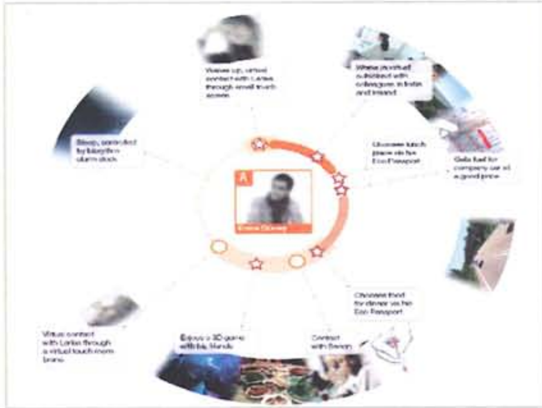
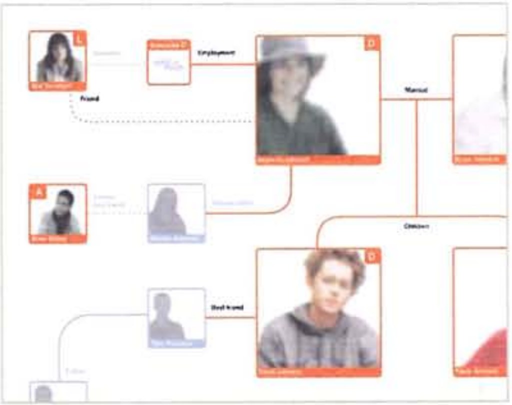
What will create value for users in 2020?

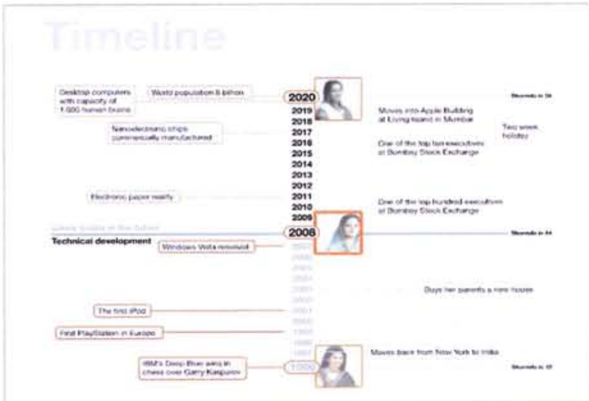


Extended personas

Life story, chronograph, relation tree, timeline, interview







Looking at the bigger picture

Source: The Economist Printed Edition, March 6, 2008.

The first commercial Pico-projectors will probably appear in 2009-10

Touch Membrane

Virtual Cubicland

Eco Passport/Eco Controller

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