



Sustainability and ICT

Mario Tobias,

BITKOM – German Association for Information Technology
Telecommunications and New Media

Budapest, 25th of November 2004



Sustainability and ICT

*Part of the **Problem** or part of the **Solution** ?*

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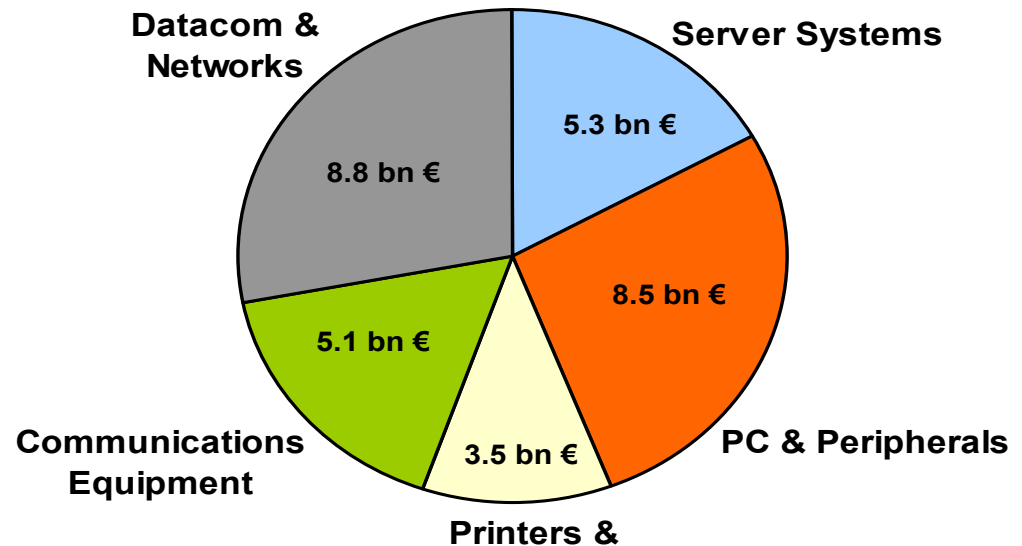
Budapest, 25th of November 2004

- **The European ICT-sector**
- **Sustainability within the ICT-industry**
- **Sustainability through ICT**
- **Best practises**
- **Isn't it all about communication ?**
- **Conclusio**

The European ICT-industry

- **Information technology** – PC, Printers, Servers, Software, Peripherals etc.
- **Telecommunication** – Mobile phones, Telephone sets, ISDN etc.
- **Office Equipment** – Copiers, MFD, Networks, LAN-Hardware etc.
- **Increasingly Consumer Electronics** – (Digital) TV, HiFi, Video etc.

- **Per capita expenditure**
2,300 € a year
- **Expenditure % GDP**
9.1 %



Data 2003
Source: EITO 2004

The European ICT-industry

BITKOM – German Association for Information Technology, Telecommunications and New Media (Berlin & Frankfurt)

Representing:

- 700,000 employers in Germany
- Revenues of 120 billion €
- A total of 700 member-companies, more than 500 SMEs

3M, Acer, Adobe, Alcatel, AOL, Apple, Arcor, Bertelsmann, Brother, Capgemini, Canon, Cherry, Cisco, CSC Ploenzke, Datev, Debitel, Dell, DeTeWe, eBay, E-Plus, Epson, Ericsson, Ernst & Young, Fujitsu-Siemens, Giesecke & Devrient, Hewlett-Packard, Infineon, Intel, IBM, IDS Scheer, Kathrein, Kodak, Konica-Minolta, Kyocera-Mita, Lanier, Lexmark, LG, Lucent, Marconi, Maxdata, Medion, Microsoft, Motorola, NCR, NEC, Nokia, Nortel, NRG, O2, Océ, OKI, Olivetti-Tecnost, Oracle, Panasonic, Philips, Ricoh, Samsung, SAP, SBS, Sharp, Siemens, Sony, Sun, T-Com, T-Mobile, T-Online, T-Systems, Tiscali, Toshiba, Utax, Vodafone D2, Xerox ...

Steering Committee Environmental Affairs and Sustainability

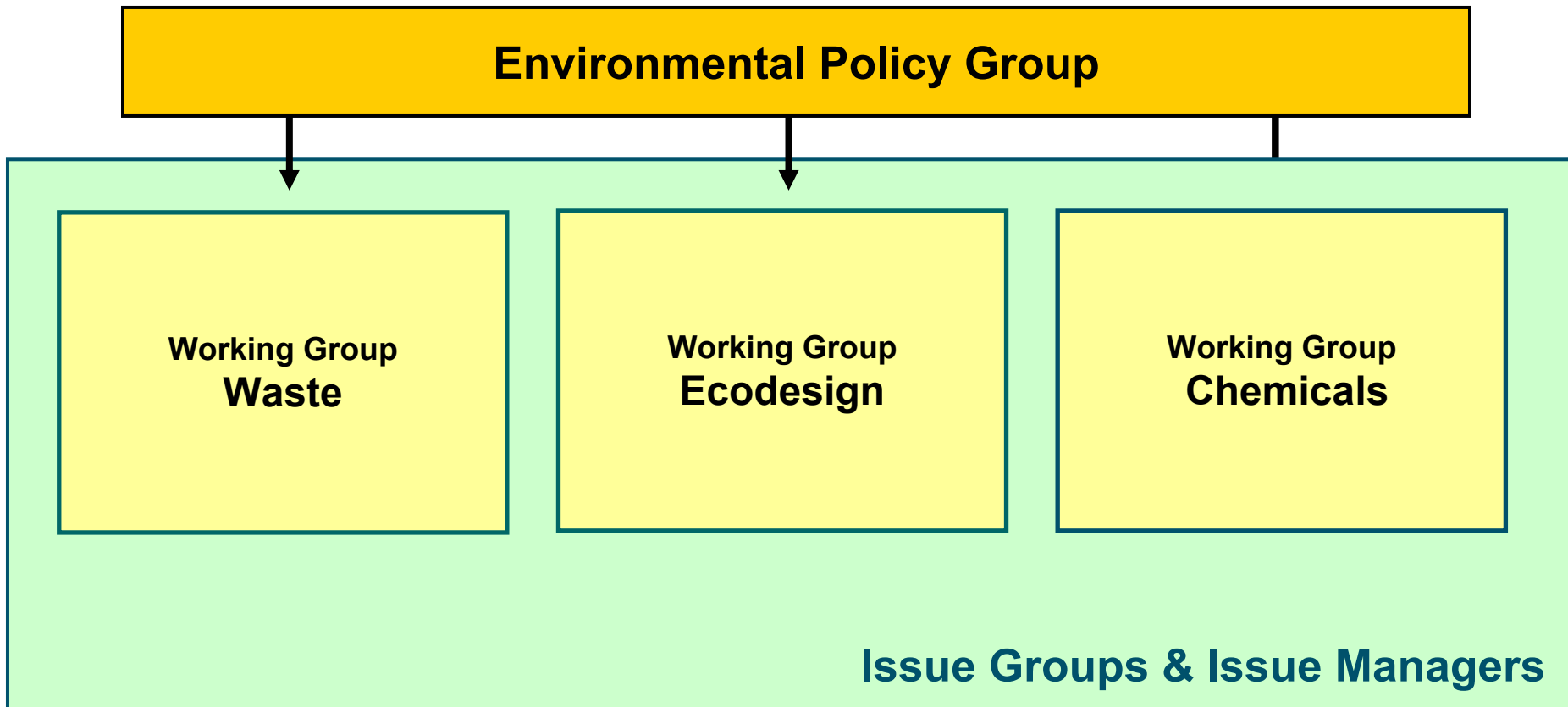
Working Group
„WEEE“

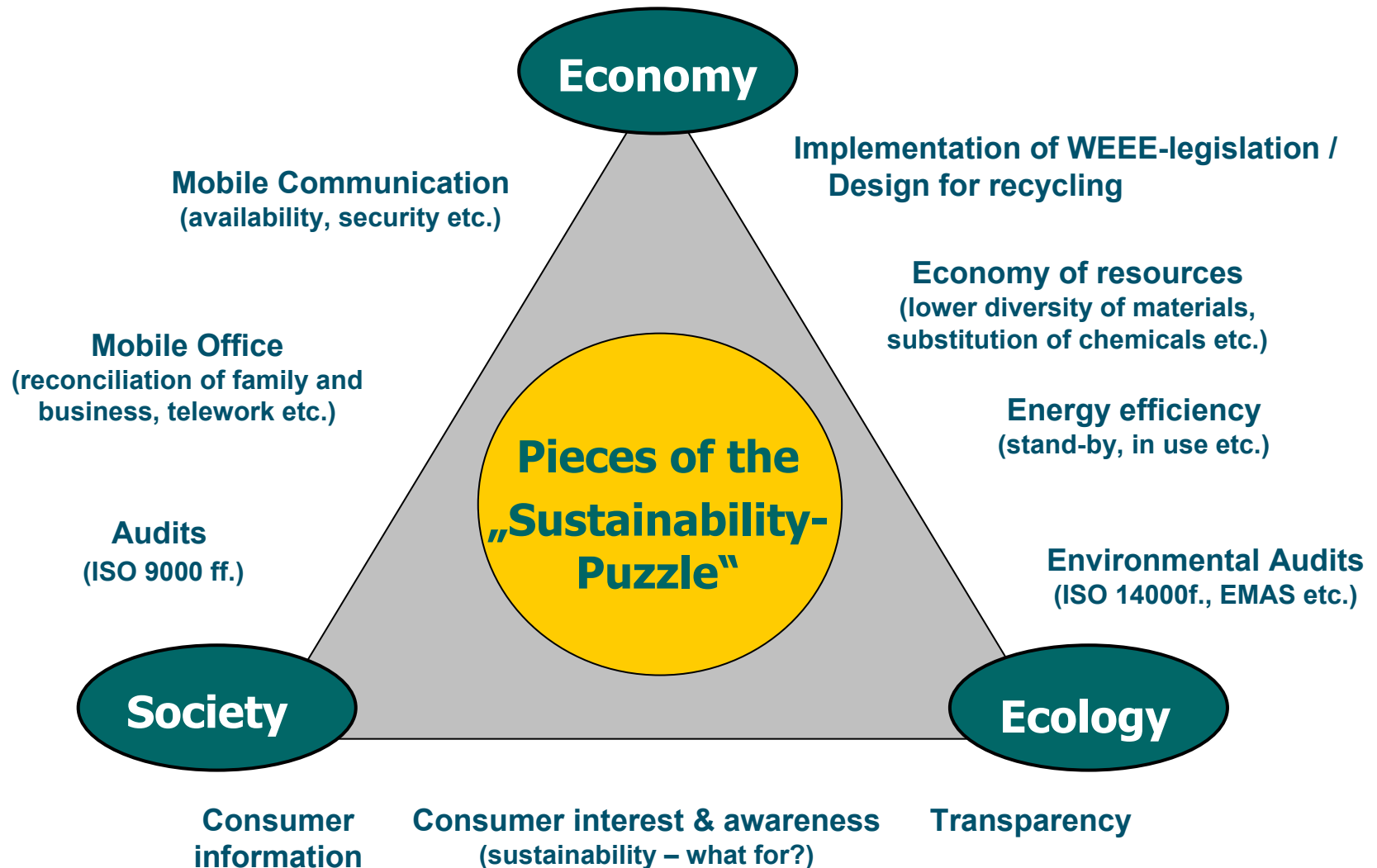
Working Group
Recycling

Working Group
Ecolabels
& Green
Procurement

Working Group
International
Environmental Policy
& Sustainability

Forum Environment





Sustainability within the ICT-industry

- Optimize the reduction of resources
- Substitute hazardous materials
- Care about consumers' fears – e.g. electromagnetic fields
- Make investments into the companies future
- Stand shareholder's demand of short-orientation-courses
- Take responsibility for being a good corporate citizen
- Ensure “clean” supply-chains
 - Child Labor
 - Fair Wages
 - Worker Protection
 - Nature Conservation ...

... is this all done properly already ???

Sustainability and ICT

*Part of the **Problem** or part of the **Solution** ?*

Sustainability and ICT

*Part of the **Problem** !*

Sustainability through ICT

... while doing your own homework ... try to inspire others

- ICTs are 'enabling-technologies'
- ICTs are 'dematerialising-technologies'
- ICTs are 'control-, process- and logistic-technologies'

→ Applying ICT into daily business and life, creates opportunities

- to reduce environmental impacts
- to grow economy and
- to improve the society

Sustainability through ICT

Automation and control:

- **Improve system and process efficiency (more output with fewer resources)**
 - Remote maintenance management (reliability prediction etc.)
 - Supply chain controlling systems (object tracking etc.)
 - Environment and operation condition monitoring (operation temperature, vibration etc.)
 - Facility management
 - Energy management systems
 - Online access, control and accounting systems

→ Reduction of CO₂ emission

Sustainability through ICT

Transportation and Mobility:

■ Improve system capacity

- Driver Assistance Systems
- Automated Parking
- Rear End and Oncoming Traffic Collision Reduction
- Real time transportation capacity available
- Pilot-less freight transportation and modal change
- Traffic monitoring
- Reduction of delivery delays
- Efficient fleet management

→ **Reduction of emissions and accidents** Projected 137 million telecommuters by 2003 would eliminate over 200,000,000 tonnes of air pollution.

18,000 video conferences in 2000 reduced CO2emissions by 540,000 tonnes.

Sustainability through ICT

Personal Care and Health:

■ Ensure cost-efficiency in social welfare systems

- Health cards, electronic patient files
- Full body preventive check up
- Mobile analysis devices
- Remote diagnosis/digital hospital
- Invasive robot-assisted surgery
- Programmable immune system
- Contribution of mobile communication in personal environment (emergency call feature for persons in need of care)

→ Improving standard of living

Sustainability through ICT

Education and assistance:

- **Provide access to information for everybody, support long-life learning,**
 - Virtual teacher and mentor
 - Interactive media
 - Open university
 - Individual navigation with location-dependent services
 - Interactive instruction manuals/guides
 - Net meetings

→ Closing the digital divide and ensure innovation for economic growth

Sustainability through ICT

Economic growth and future prosperity

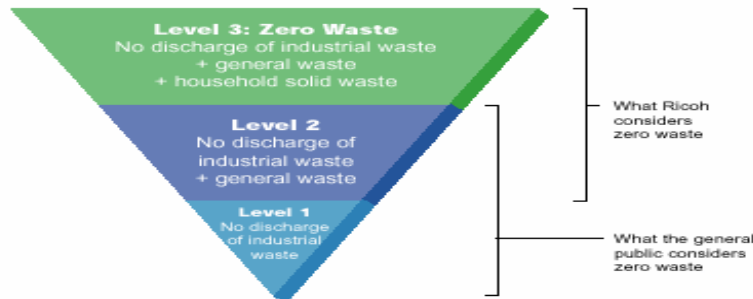
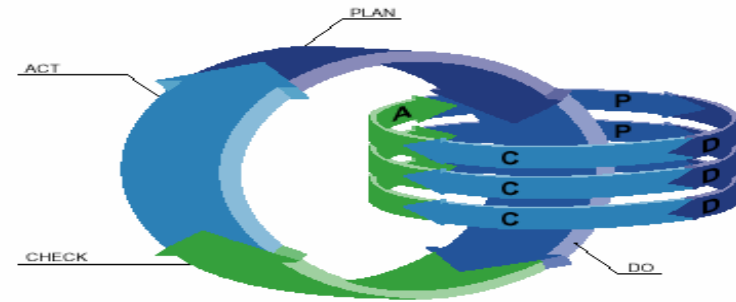
- **Enabling telecommuting and home-offices**
 - Positive effects on reconciling family and profession
 - Continue employment of well-trained (mostly female) specialized personnel after pregnancy
 - **Benefit in equity funds and rankings oriented on sustainability, environment or corporate social responsibility (CSR)**
- ➔ **Closing the digital divide, conquer poverty, ensure innovation for economic growth ...**
- **The six largest “on-line” universities are located in developing countries**

Best practises: Ricoh's 3 steps to sustainability

Step 1: Environmental Management

Global ISO 14001 certification

1. All factories certified globally already
2. Global & E.U. headquarters certified
3. 25 salescompanies certified in March '02



Step 2: Recycling & Zero Waste

Global Zero Waste & Re-circulating

1. 22 production sites achieved zero waste
2. Implemented design for recycling
3. Marketing reconditioned machines, cartridges, drums and PCB

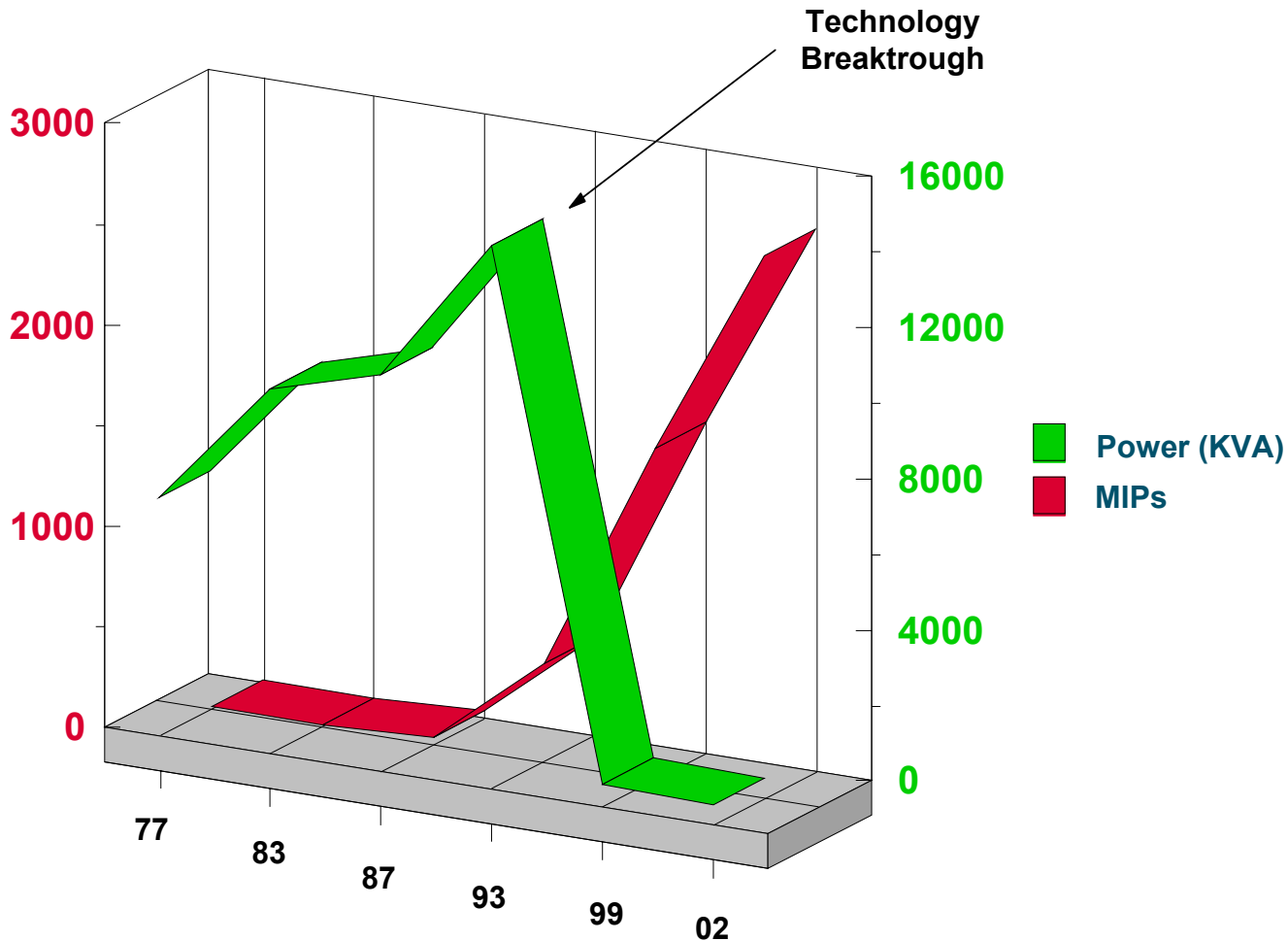
Step 3: Sustainable Technology

Re-circulating resources

1. Sustainable design implemented
2. Standardised NINE sustainable innovations
3. Ban of hazardous materials
4. Contributions to society in Asia, E.U. and U.S.
5. Established green procurement & marketing

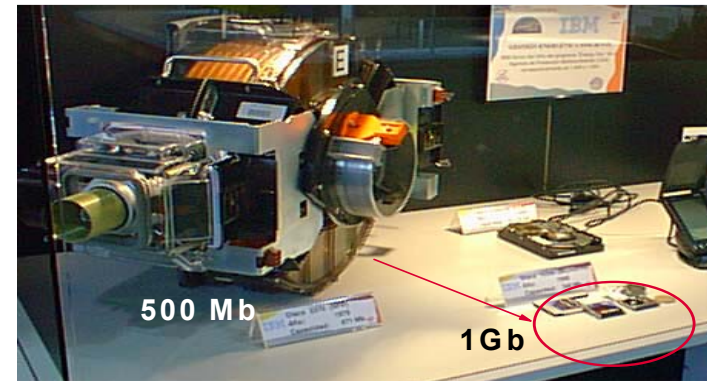
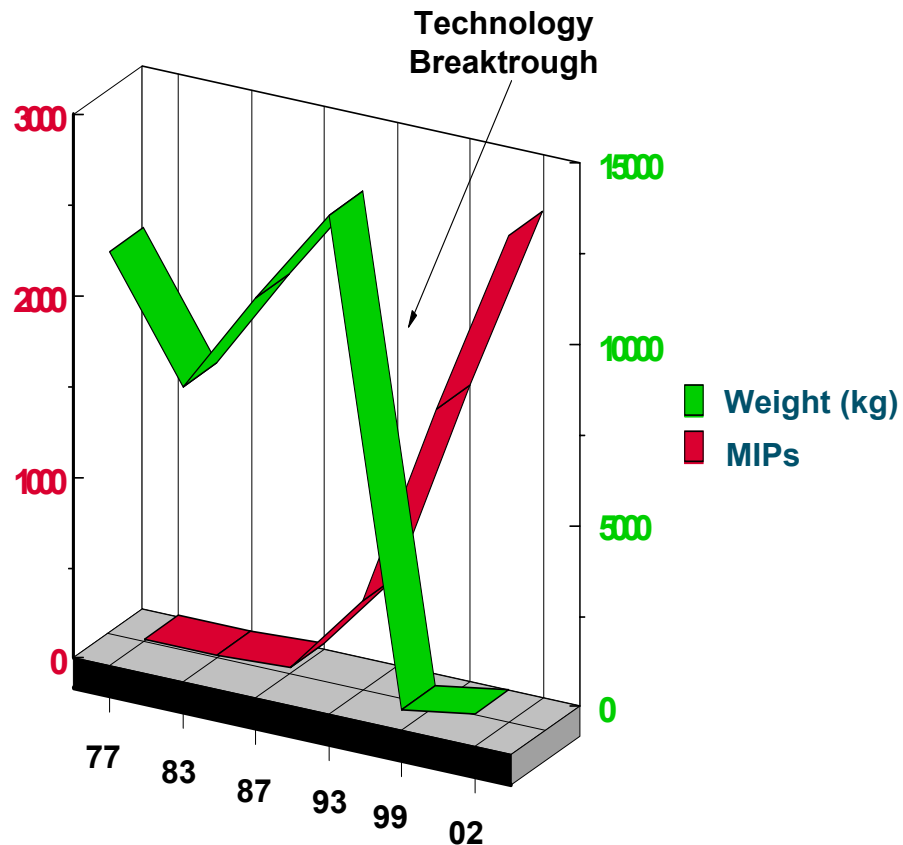


Best practises: IBMs reduction of energy



MIPS = Millions Instructions/Second

Best practises: IBMs reduction of materials

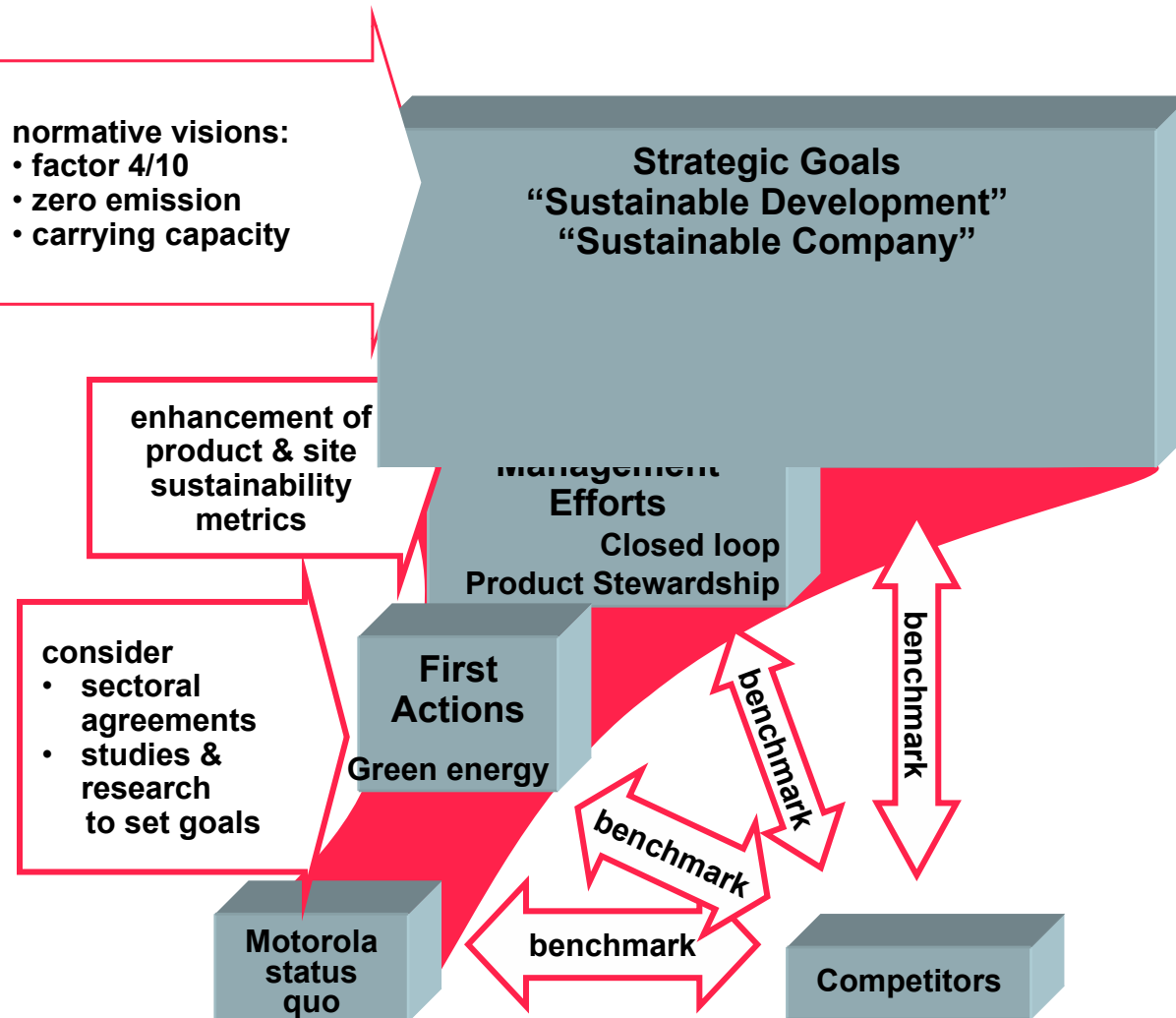


1985

2000



Best practises: Motorolas Strategic Goals



Sustainability and ICT

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Sustainability and ICT

*Part of the **Solution** !*

It's all about Communication

Open questions:

- How can ICT's homework be optimized ?
- How can chances – enabled by ICT – be promoted into other industries and private daily life ?
- How can the gap between being part of the problem while – at the same time – being part of the solution be matched ?

→ It's all about Communication

It's all about Communication

Implementation of new workgroup on “International Environmental Policy and Sustainability”

- “EUP”-Legislation of European Union (Energy-using-products)
- Reach-Legislation of European Union (Chemicals)
- Communication on sustainability
- In close collaboration with workgroup “Ecolabeling and Green Procurement”

Project by the German Federal Ministry for Education and Research on „Sustainability in the ICT-industry“ (NIK)

- Member of workgroups
- Multiplier for BITKOM-members
- Contact for Politics, Science and Media

It's all about Communication

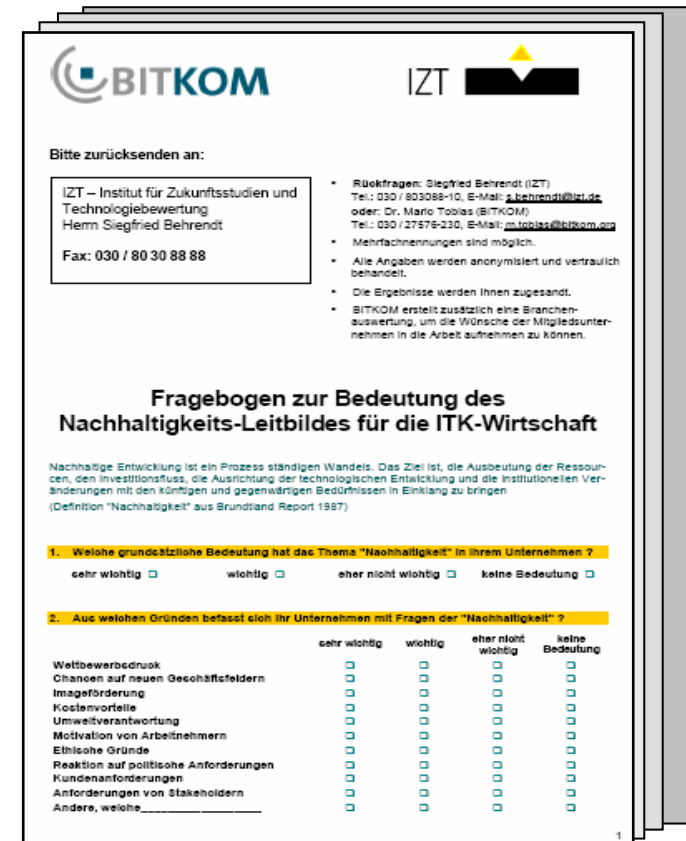
Activities on waste equipment

- Implementation of EU's WEEE-legislation
 - Build-up of register, prepare rules against freeriders and cherry-picking
 - "Collect" companies commitment
 - Communicate with politics, municipalities, recycling-industry etc.
- Voluntary recovery-schemes for used mobile phones
- International UNEP-initiative with world's leading manufacturers



Survey on “SD-Approaches” in ICT-companies in cooperation with Institute for Future Studies and Technology Assessment (IZT)

- Significance of SD within the company
- Use of management-tools and guidelines
- Activities on environmental, social, gender, ethical questions etc.
- Reporting
- Aiding / repressing factors
- SD-conscious procurement
- Corporate Responsibility
- ...
- to be published



BITKOM **IZT**

Bitte zurücksenden an:

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Herrn Siegfried Behrendt
Fax: 030 / 80 30 88 88

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Tel.: 030 / 803088-10, E-Mail: s.behrendt@izt.de
oder: Dr. Mario Tobias (BITKOM)
Tel.: 030 / 27576-230, E-Mail: m.tobias@bitkom.de
- Mehrfachnennungen sind möglich.
- Alle Angaben werden anonymisiert und vertraulich behandelt.
- Die Ergebnisse werden Ihnen zugesandt.
- BITKOM erstellt zusätzlich eine Branchenauswertung, um die Wünsche der Mitgliedsunternehmen in die Arbeit aufnehmen zu können.

Fragebogen zur Bedeutung des Nachhaltigkeits-Leitbildes für die ITK-Wirtschaft

Nachhaltige Entwicklung ist ein Prozess ständigen Wandels. Das Ziel ist, die Ausbeutung der Ressourcen, den Investitionsfluss, die Ausrichtung der technologischen Entwicklung und die institutionellen Veränderungen mit den künftigen und gegenwärtigen Bedürfnissen in Einklang zu bringen.
(Definition "Nachhaltigkeit" aus Brundtland Report 1987)

1. Welche grundsätzliche Bedeutung hat das Thema "Nachhaltigkeit" in Ihrem Unternehmen?

sehr wichtig ☐ wichtig ☐ eher nicht wichtig ☐ keine Bedeutung ☐

2. Aus welchen Gründen befasst sich Ihr Unternehmen mit Fragen der "Nachhaltigkeit"?

	sehr wichtig	wichtig	eher nicht wichtig	keine Bedeutung
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Umweltverantwortung	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Ethische Gründe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reaktion auf politische Anforderungen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kundenanforderungen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anforderungen von Stakeholdern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andere, welche _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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It's all about Communication

Publication of guideline on “Green ICT-Procurement”

- For public and B2B-Procurement
- In German and English
- Free download from website

- Energy-use
- Recycling
- Chemicals
- Emissions
- etc.

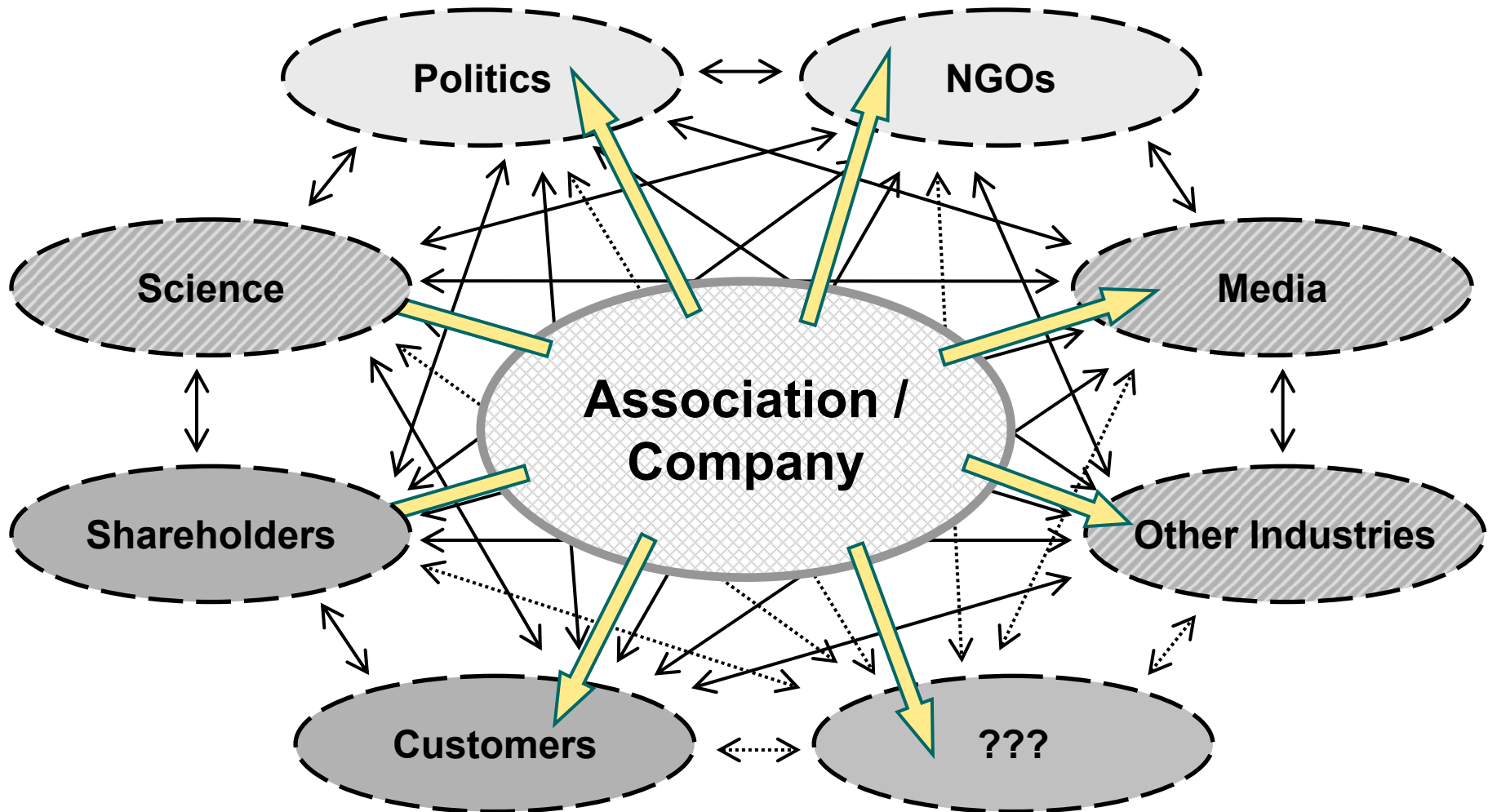


Taking part in Electronic goes green 2004

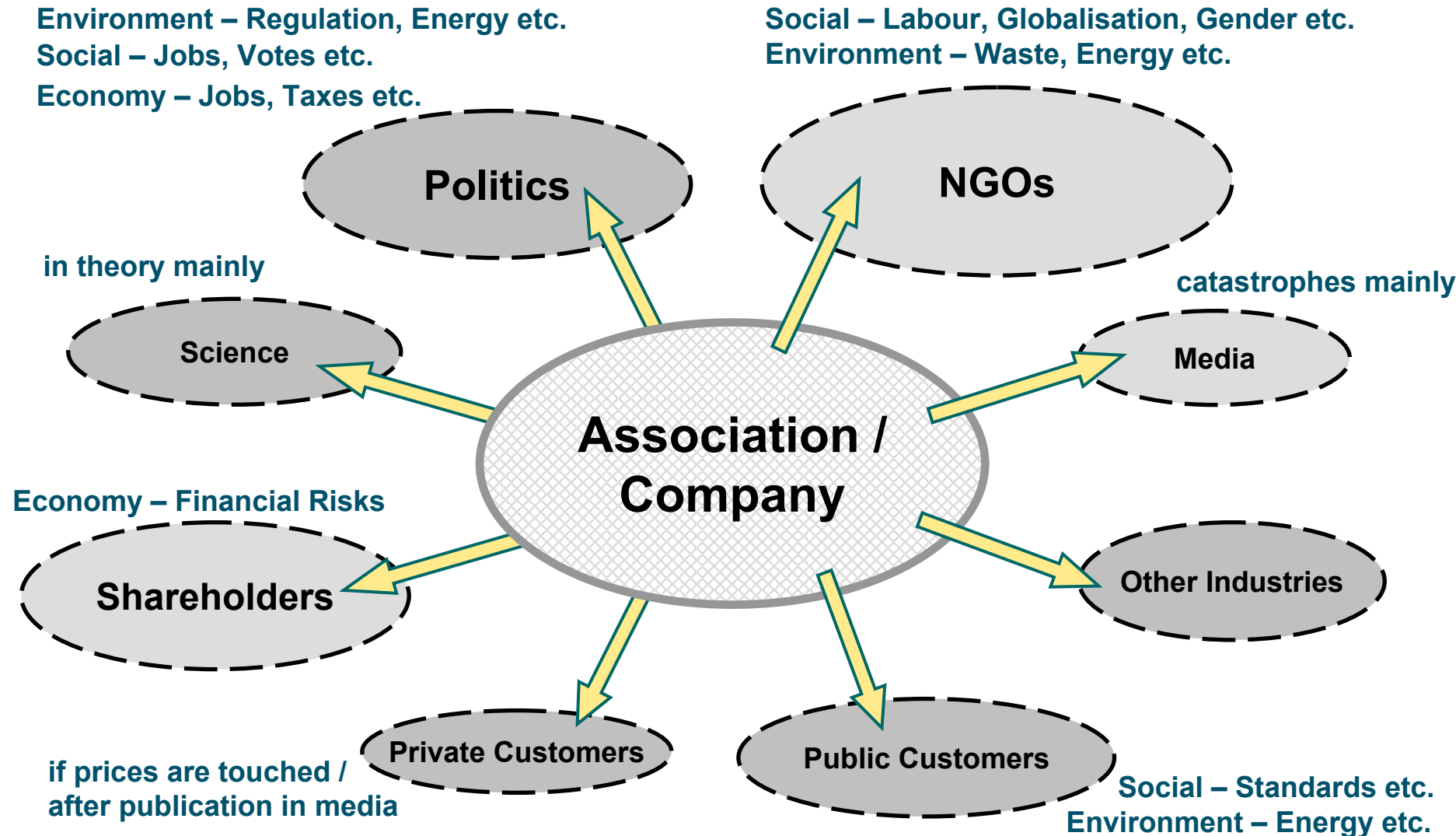
- BITKOM as member of steering board
- Article and session chair
- Vodafone
- Deutsche Telekom
- Technidata
- Fujitsu-Siemens
- Nokia
- Motorola
- Panasonic
- Hewlett-Packard
- Sony
- IBM etc.

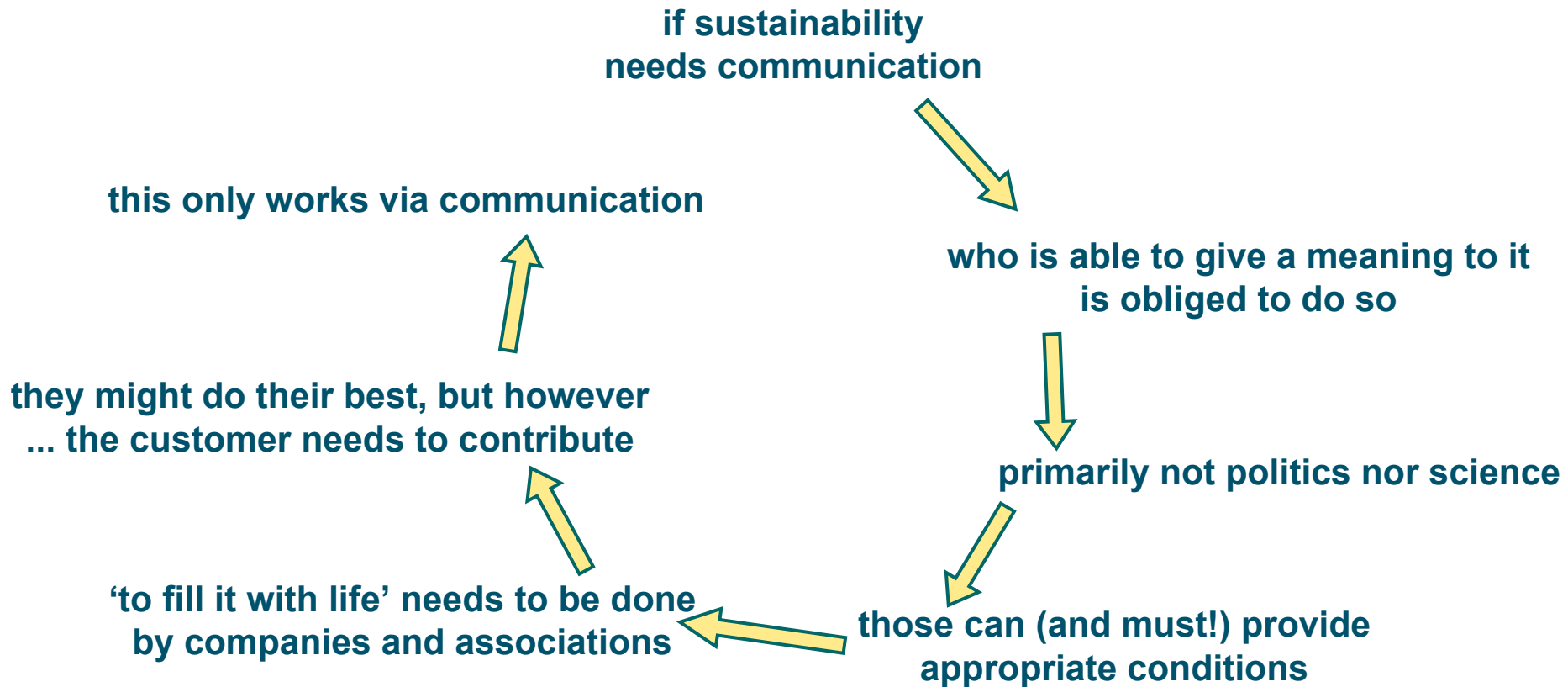


It's all about Communication



It's all about Communication





ICT will evolve: from being part of the Problem into being a unverzichtbarer part of the Solution

