

International Chamber of Commerce

Department of Policy and Business Practices

Commission Environment and Energy

Deutsche Telekom regarding business actions on climate protection and decoupling energy consumption from CO₂ emissions

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Monaco, 6. November 2007

Deutsche Telekom.

All Services from a single Source.

Deutsche Telekom is one of the world's leading companies in the telecommunications sector. As an integrated Group, Deutsche Telekom offers its customers the full range of telecommunications services, from fixed-network telephony, broadband Internet and mobile communications through to complex ITC solutions for business customers.

In the three strategic business areas of Broadband/Fixed Network, Business Customers and Mobile Communications, Deutsche Telekom is consistently aligning itself with the needs of its customers with the aim of becoming the most highly regarded service company in its industry.

The Group commits itself to the philosophy of sustainability and pursues its business activities according to economic, social and ecological criteria.

Group development - summary.

Deutsche Telekom in figures.

- Represented worldwide in around 50 countries
- Employees: nearly 250,000 worldwide
- Around 40 million fixed-network lines in operation
- More than 11 million broadband lines in operation
- More than 16 million online customers with a billing relationship
- More than 106 million mobile communications subscribers worldwide
- Revenue 2006: 61.3 bn €

Deutsche Telekom's Commitments

Taking care of natural resources and active climate protection are part of the global challenges of sustainable economic activity. An intact environment is the basis for healthy living, and is in the interest of future generations.

- Global warming is mainly a man-made phenomena
- We lead and support different initiatives aiming at promoting climate protection
- We consider ourselves responsible of our direct and indirect emissions
- We offer our customers services for reducing CO₂-emissions
- We promote developments of environmentally-friendly technologies
- We promote the efficient use of resources, dialog on climate protection, and in CO₂-emissions among customers and wider society.
- We decided to compensate the CO₂-emissions by 100 % up to 2010 on the basis of 1995

High Level commitment



CARING FOR CLIMATE: TOMORROW'S LEADERSHIP TODAY

Climate Change, Environmental Responsibility and Examples of Corporate Leadership

“I feel myself committed regarding climate protection not only because I am personally convinced but also because of my responsibilities as the CEO of Deutsche Telekom AG. Our products and services can offer an important contribution to reduce CO2 emissions. We will certainly take advantage of these opportunities.”

René Obermann, Chief Executive Officer (CEO), Deutsche Telekom AG

ICT Products and services represent a business opportunity



“Telcos are in the unusual position of being able to do something to help offset the effects of climate change as the products and services can contribute to displacement of goods, and reduction of travel.”

(Lehman Brothers, 2007)

Deutsche Telekom Climate Change Strategy

The stabilization of the temperature of the atmosphere is one of the biggest challenges of our society and business community. Business needs a healthy environment. Deutsche Telekom considers that climate protection offers major business opportunities.

Deutsche Telekom follows a double strategy:

- On one hand we are actively implementing measures leading to increasing energy efficiency and decoupling energy consumption from CO₂-emissions in our company.
- On the other hand we offer services to our customers, which increase their energy efficiency as well, e.g. tele/audioconferencing to replace traveling and telework to avoid commuting. E-Commerce instead of going to the supermarket, Business-TV, E-Business, E-Learning, E-Teaching, E-Government.

Energy use and emissions

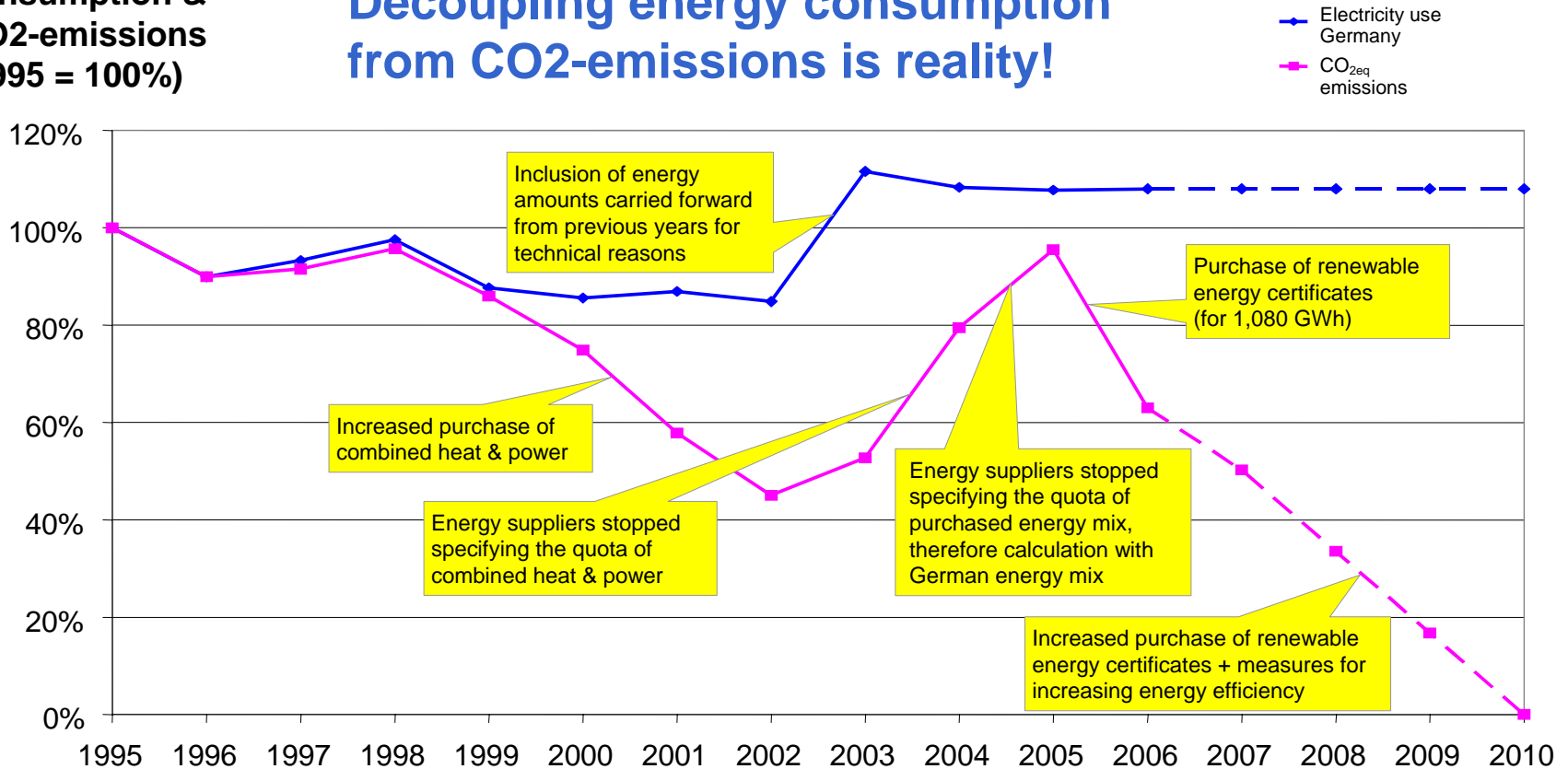
Decarbonisation of the energy supply

Deutsche Telekom is one of the biggest electricity consumers in Germany.

2006: 2,964 GWh → 1.25 million tons of CO_{2eq}

Electrical energy consumption & CO₂-emissions (1995 = 100%)

Decoupling energy consumption from CO₂-emissions is reality!



Increasing energy efficiency.

Manufacturer:

MTU, Friedrichshafen / Munich

Type: High temperature fuel cell
HM 300 (HotModule)

Fuel: Natural gas

Max. electrical power: 250 kW

Max. thermal power: 180 kW

Max. efficiency: about 90%

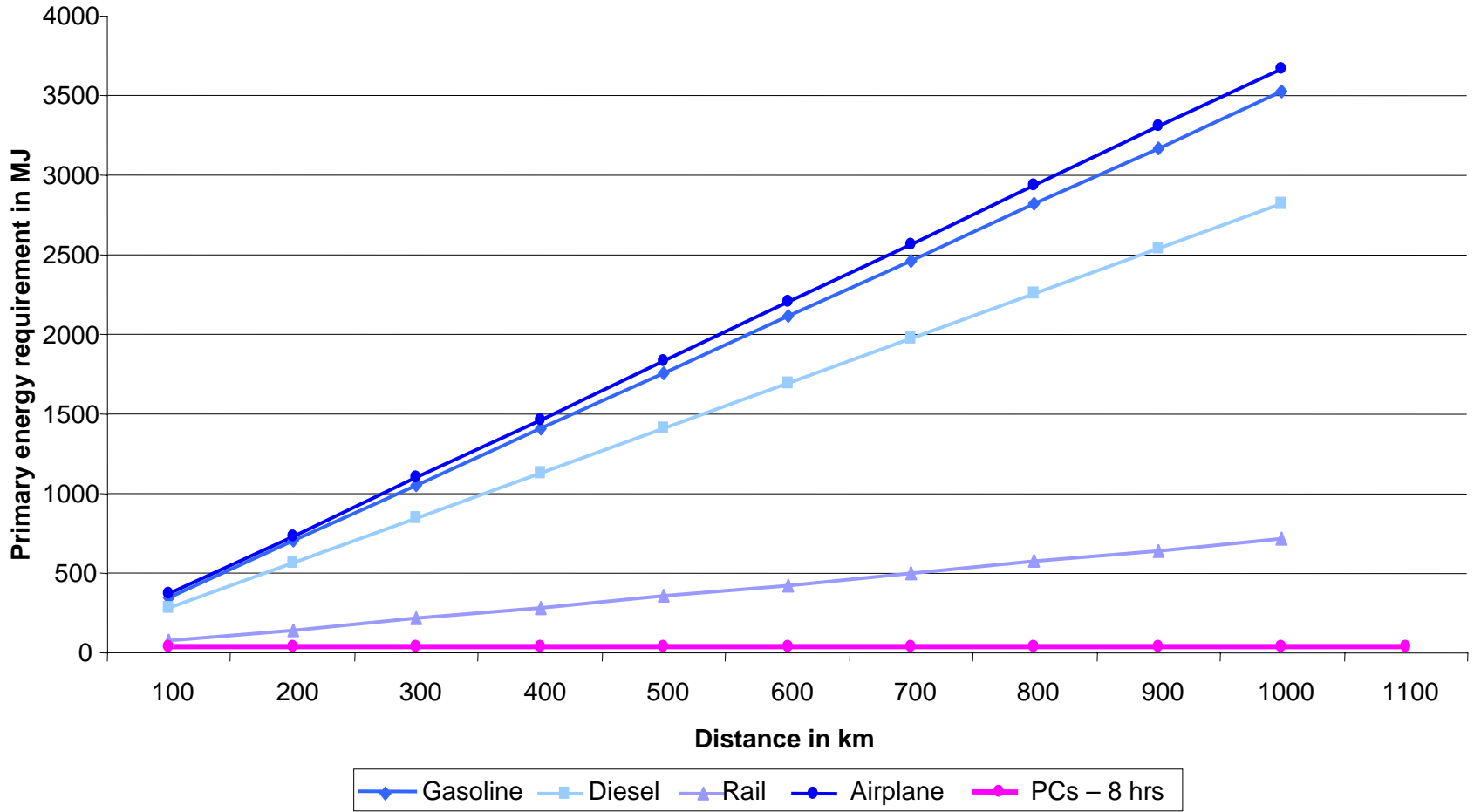
- Electrical power is used for UMTS.

- Thermal energy is used for heating in winter and for cooling in summer.



Video conferencing


Comparison of energy use:
video conference vs. transport





DT Zero Emissions Meetings

Zero Emission Meetings
Mehr als nur Geld sparen

DTVC - Desktop Video Conferences



Replay


 

Die Idee +

Die Lösung +

Der Nutzen +

- » Kosten- und Energieeinsparungen
- » Flexibilität und Unabhängigkeit
- » Arbeits- und Freizeitgewinn
- » Schadstoffreduzierung und Umweltschutz



Savings beyond money - Mehr als nur Geld sparen

Die Suche nach Lösungen für effiziente, zeit- und kostensparende Arbeitsabläufe ist präsent es Thema in vielen Unternehmensbereichen. Doch es geht um mehr: Die zunehmende Umweltbelastung, das Wissen um die Erkenntnisse der Klimaforschung stellen uns vor eine weit größere Herausforderung. [Lesen Sie hier weiter](#)

Warum Zero-Emission-Meetings?

Zero-Emission-Meetings bieten mehr als die Möglichkeit Geld zu sparen und Zeit zu gewinnen. Via DTVC bleiben Sie Ihren Gesprächspartnern verbunden, egal wo, egal zu welcher Zeit. [Ein Überblick über Features, Einsatzmöglichkeiten und Vorteile ...](#)

Beispiele und Zahlen

Im Januar 2007 wurden dank DTVC Video-Konferenzen ca. 400 Tonnen CO2 **nicht** an die Umwelt abgegeben! Was klingt wie ein Zahlenspiel erweist sich bei genauem Hinsehen als zuverlässige Rechnung. [Kalkulationen mit Zero-Emission-Meetings](#)

Initiator:



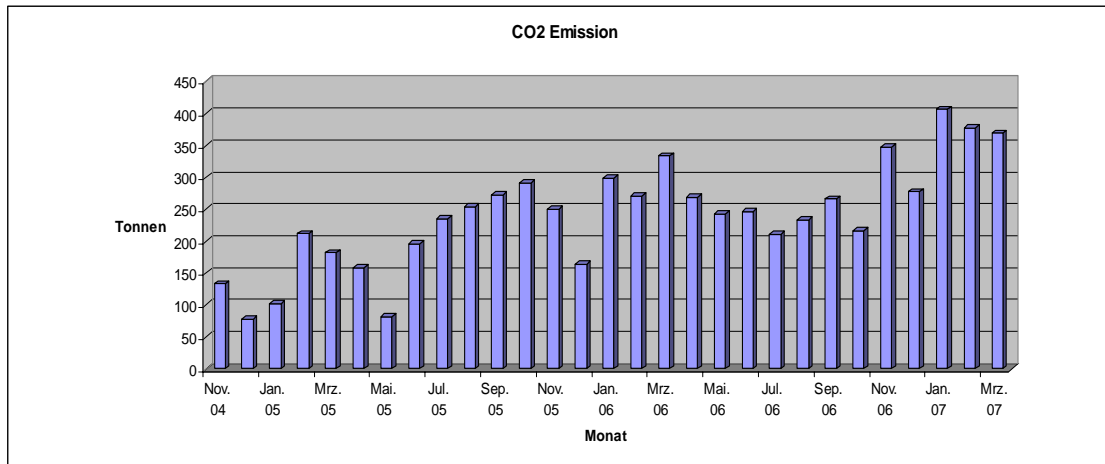
Partners:



Zero-Emissions-Meetings

The CO₂ Calculation

- from Nov. 2004 to March 2007
- Participants per conference in average 2,1
- Saved kilometers per car for 1 user in 1 conference: 150 Km with 23,4 Kg CO₂ emissions
- Saved kilometers per airplane for 1 user in 1 conference: 1000 Km with 366 Kg CO₂ emission
- Used car: Golf-class
- Different mix-coefficient per different conference types



Saved CO₂

2004: 210.6 Tons

2005: 2400.4 Tons

2006: 3213.4 Tons

2007: 1153.3 Tons

(Total in 2007 ~4613.2 T extrapolation)

Handset with Climate Features.



- Reduced energy consumption by 50%
- Power management during transmission
- Climate neutral for the time of use (5 years)



CO₂ calculator



Tool for Deutsche Telekom employees

You can use this tool to estimate your personal energy use in travel and at home and the CO₂ emissions produced as a result.

You can also compare it with the German national average. A look at your own results shows you the impact of your energy use.

<http://co2-rechner.telekom.de/>

Deutsche Telekom plays an active role in National and International Business initiatives for climate protection.

- e5 - European Business Council for Sustainable Energy
- GeSI - Global e-Sustainability Initiative
- ETNO (European Telecommunications Network Operator's)
- 2° Initiative - Deutsche Unternehmen für Klimaschutz
- European Corporate Leaders Group Initiative
- Global Roundtable on Climate Change (GROCC)
- BDI initiative Wirtschaft für Klimaschutz
- ICC

GeSI Membership



Drivers

- Benefit from the experience and knowledge of the other global ICT companies and organizations who are committed to sustainability
- Work with our peers and other global stakeholders to alter the direction of how technology influences the earth
- Be on the forefront of the effort to raise awareness of the contribution ICT can make to society and improve the global environment
- Benefit from the jointly developed tools, e.g. the E-TASC or the Supplier Self Assessment Questionnaire

OBJECTIVES, SCOPE AND APPROACH OF GLOBAL STUDY

■ Objective

Support the publication of a major report designed to examine how the application of ICT can

- deliver energy savings and carbon emission reduction, and
- do so in a way that drives even greater economic growth and productivity .

■ Scope

- Cover both developed and emerging economies
- Cover a wide range of ICT applications not simply travel substitution eg distributed power generation, smart homes and offices (devices, meters etc.), integrated transport and other infrastructures, etc.
- Identify and recommend workable ICT solutions that will assist in delivering reductions in carbon emissions (this could include the role of policy makers, cities, standards orgs etc)

■ Approach

- Not take the beneficial aspects of ICT as a given and consider the effect ICT has had on increasing emissions
- Balance the wider benefits against the direct impacts of the industry
- Be based on sound science and evidence worthy of professional scrutiny
- Be produced by respected experts, independent of the ICT industry
- Be supported by a range of organisations



A joint initiative of ETNO and WWF

SAVING THE CLIMATE AT THE SPEED OF LIGHT

INFORMATION & COMMUNICATION TECHNOLOGY FOR CO₂ REDUCTIONS

" The private sector and civil society, in dialogue with governments, have an important consultative role to play in devising national e-strategies...

Government, civil society and the private sector are encouraged to initiate actions and implement projects and programmes for sustainable production and consumption..."

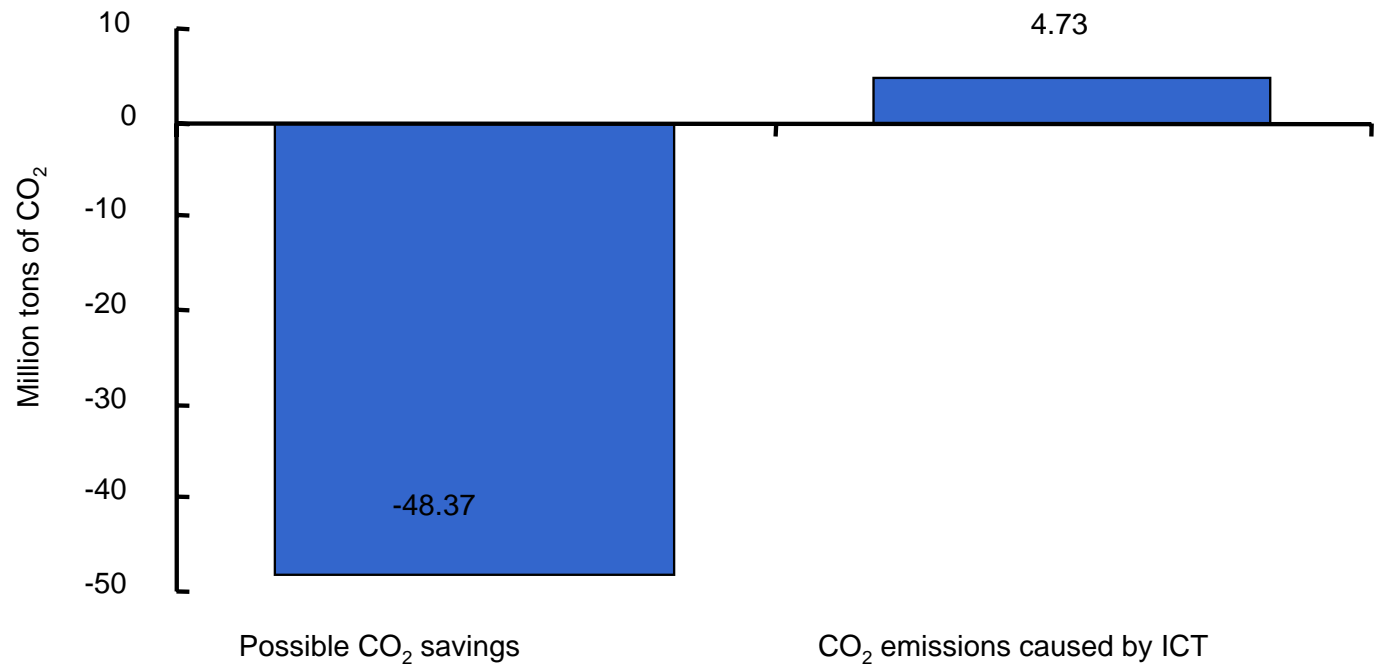
World Summit on the Information Society, WSIS



Climate protection and ICT

Opportunities and risks

Potential influence of ICT on CO₂ emissions



FIRST Steps for 2010

50 million tons CO₂ reduction per year with ICT by 2010

Tools:

Virtual meetings – reducing around 24 m tones CO₂/year

Audio-conference

If 50% (96.512 million) of EU-25 countries' employees have one audio-conference call per year, then 2.128 million tonnes CO₂ can be saved.

Business travel replacement (video-conference)

If 20% of business travel in EU-25 countries is replaced by non-travel solution (e.g. video-conference), around 22.35 million tonnes CO₂ can be saved.

Combined measures/Flexi-work – reduction around 22 million tones

CO₂/Year

Flexi-work

If 10% (19.3024 million) of EU-25 countries' employees are flexi-workers, then 22.17 million tonnes CO₂ can be saved.

FIRST Steps for 2010

50 million tons CO₂ reduction per year with ICT by 2010

E-dematerialization – reducing around 4 million tonnes CO₂/year

Online-bills

If all households, which have Internet in EU-15 countries and all mobile customers in EU-25 countries get online bill, then 491.57 thousand tonnes CO₂

Virtual answering machine

If 20% of households in EU-15 countries (31 million) use virtual answering machine instead of physical answering machine, then 1.03 million tonnes CO₂ can be saved.

Web-based tax return

If all employees in EU-25 countries (193 million) deliver the tax return via Internet, then 195.78 thousand tonnes CO₂ can be saved.

Policy revision for the target

For each of the following areas the policies should be explored to see how they could promote sustainable ICT use

- General energy policies
- General tax policies
- Public procurement
- Transport policies
- Efficiency policies
- Investment policies
- Innovation policies
- Export and import policies

Supplementary parallel actions for CO₂ reduction



ICT Climate change target for 2020

The target for 2020 should be set before 2010. It will include new services and system solutions, where a number of services are combined.

Sustainable consumption

- Further dematerialisation (E.g.: e-paper, music on demand, video on demand, Internet TV, etc.)
- Indirect effect on sustainable consumption by information (E.g. intelligent products that can inform users about optimal use and give feed-back about the environmental impacts of different choices.

Sustainable production

- Decentralised production
- Production on demand e.g. printing books on demand
- Converging technologies e.g. nanotechnology, biotechnology, robotics

Sustainable community / city planning including travel replacement

E.g.: intelligent buildings, smart public transport systems, tele-monitoring, tele-education, telemedicine, tele-care services, flexible car ownership, e-commerce, e-business, etc.

Benefits

- Climate protection represents a major business opportunity.
- ICT is recognised as an important part of the solution to tackle global warming.
- Concrete “ICT-Climate change” programmes are initiated
- Strong incentives for investments in the development of promising low-carbon technologies.
- Removal of policy inconsistencies and perverse incentives that undermine the effectiveness of climate policy.
- Institutional investors are very concerned on the consequences of global warming and therefore investing increasingly in companies with solid strategies on climate protection.

Other areas of Industry collaboration

- **Supply Chain**
Benchmarking, CR Supplier Tools, Coltan, Extractives Study, Capability building in China
- **E-Waste**
Senegal mobile phone recycling
- **Climate Change**
ICT carbon credits
Benchmarking
- **Communications WG**
GeSI website, Newsletter, GeSI annual report
- **EU ICT Sustainability Forum**
cooperation with European Institutions and Projects
- **Materiality**
CSR Benchmarking
- **Stakeholder Engagement**
Engagement with Stakeholders in different GeSI areas of activity

Thank you for your Attention