iSeeT@theClimateChangeKiosk
Deutsche Telekom for Climate Protection

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Global Warming is a Matter of Concern.

Climate scientists are urgently warning against the **consequences of global warming**. The reasons for this process are mainly the emissions of the so called "Greenhouse Gases" (GHG)[1] and the accumulation of these gases in the atmosphere with the effect that infrared radiation remains in it and warms up the lower layers of the atmosphere, ground and water.

The GHG emissions are originated by human activities like burning fossil fuels, deforestation and land-use. **Global warming is mainly man-made**.

Global warming will have wide consequences for the global ecosystem, for the economy and at the end for the whole society.

Therefore, we have to face the challenge to find a solution for this condition caused by us.

[1] GHG are: CO_2, methane, nitrous oxide, ozone, carbonflourocarbon compounds (CFC) and water vapour

Global Warming as a Risk.

Our society and therefore our economy has been developed "around" the current climate. That means temperatures, rain and wind patterns, vegetation, hydrology etc. A radical change of the environmental conditions will have consequences for all human activities and also for the economy.

Some concrete global consequences:

- Increase of arid regions in the World, acceleration of desertification (deterioration of food and water situation)

- Decrease of biodiversity (irretrievably lost of species)

- Increase of seasonal thaw of Arctic permafrost (damaging infrastructure and higher methane emissions (methane has a higher intensity than CO_2)

- Acceleration of melting process of Arctic and Antarctic ice and tropical glaciers (rise sea level and drinking water scarcity)

- Sea-level rise (increasing coastal inundation, damage to infrastructure)

- Unusual strong whether related catastrophes (cities and crops will be affected)

Global Warming is manageable!
There is a opportunity in it!

If global warming can be stopped by a temperature that is not exceeding 2°C against the pre-industrial temperature, then dangerous damages can be avoided.

The most recent research on global warming has shown that for keeping the target of the 2°C there is a GHG budget of about 750 $GtCO_2eq$ for the period from 2010 to 2050 that the World may emit. That means that the emissions by 2050 have to be halved compared to 1990.

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The Opportunities.

All industries that are able to provide alternatives for reducing CO_2 emissions compared to former products and services or to develop new solutions to substitute former carbon intensive processes have a good chance to survive the coming climate crisis.

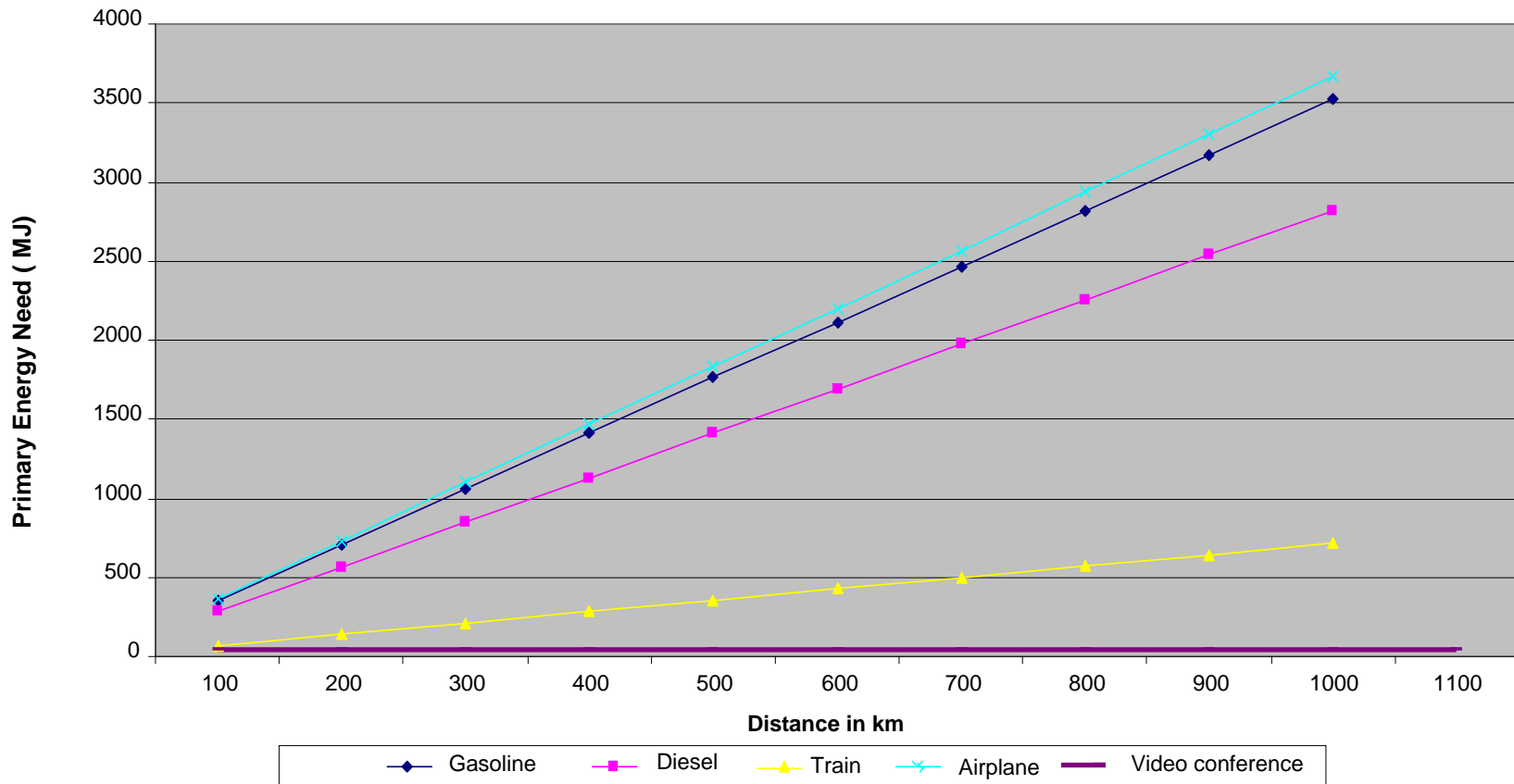Climate change will radically change our economy and it is necessary to be prepared.

Industries or companies that are not able to recognize and evaluate the risks are seriously endangered.

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Our contribution to the solution.

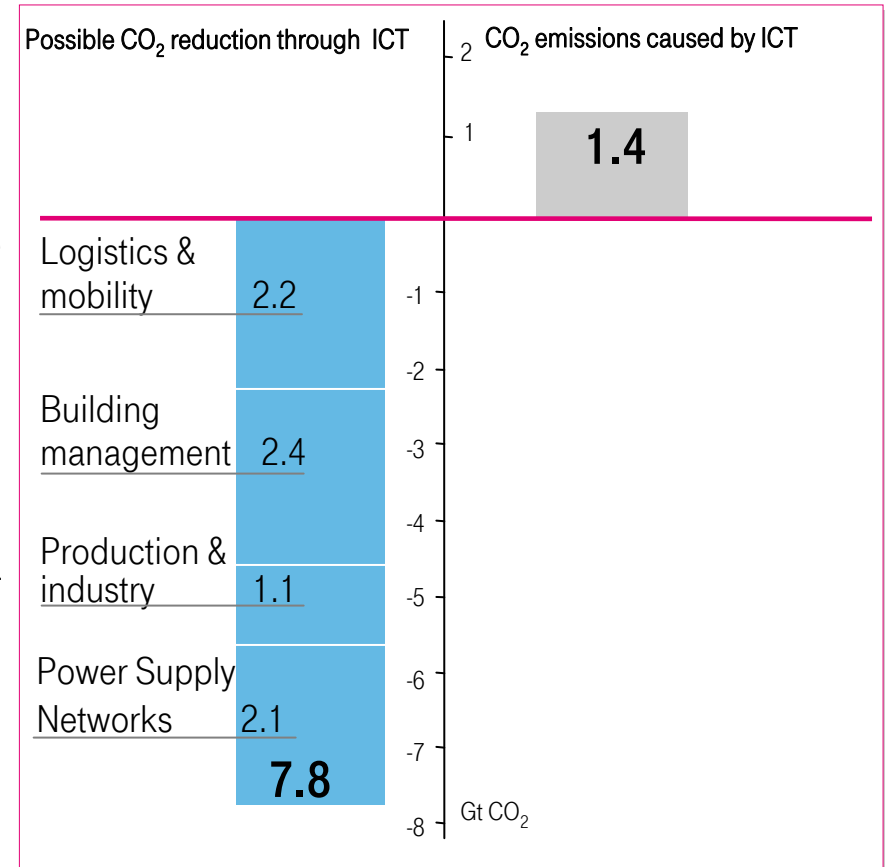# Emissions of Transportation vs. Video Conference.

Source: Deutsche Telekom, 2001

Low Carbon Society.
SMART 2020 Study.

- According to the Smart 2020 study carried out by the Global e-Sustainability Initiative (GeSI), the ICT industry was responsible for emitting 0.83 Gt of CO_2 in 2007. This represents around 2 % of global carbon dioxide emissions.

- Smart 2020 has concluded that CO_2 emissions produced by the ICT industry will almost double to 1.4 Gt CO_2 by 2020.

- At the same time, digital products and solutions will help other industries become a lot more energy efficient in the future.

- Smart 2020 predicts that with 7.8 Gt in 2020 the CO_2 reduction potential will be five times greater than the CO_2 emissions of the entire ICT industry.

CO_2 reduction potential in 2020.
(in gigatons - Gt)

Possible CO_2 reduction through ICT	CO_2 emissions caused by ICT
	1.4
Logistics & mobility 2.2	
Building management 2.4	
Production & industry 1.1	
Power Supply Networks 2.1	
7.8	Gt CO_2

Source: SMART 2020, Enabling the low carbon economy in the information age.

GeSI
GLOBAL e-SUSTAINABILITY
INITIATIVE

THE °CLIMATE GROUP

Contribution of ICT increasing Efficiency in most Industries. Some Examples.

T-Systems our IT service provider for enterprises offers several special services for airports and aviation authorities:

- **Optimization of IT system for taxi routes and time management for planes on the ground in larger airports:** Time is money, fuel consumption and CO_2 emissions. Reduction of taxi routes and stop and go traffic of planes on the way to the runway reduces fuel consumption.

- **SAMS, an IT system for the management slots:** SAMS (Slot Allocation and Monitoring System) is a coordination and information systems about slots. Round 2.2 million slots are coordinated each year for almost 250 airlines at the 17 German biggest airports.

- **Real time communication system (video, voice, documents):** A packing manufacturer with 1,200 employees in seven sites in four different European countries halved the number of business trips and reduced the CO2 emissions to almost 70% per year. The investment was paid in less than two years. The availability of employees increased significantly.

- **Digitalization of customer data:** A pension fund with 4,200 employees and more than 7 million customers reduced the storeroom and cost by digitalization of paper based customer data with a total length of 14 km.

- **Dynamic Services** is a concept for outsourcing data centers from companies with one or more processing peaks distributed over the year. Out sourcing brings an important rationalization potential. The power consumption may decrease from 40% to 70%.
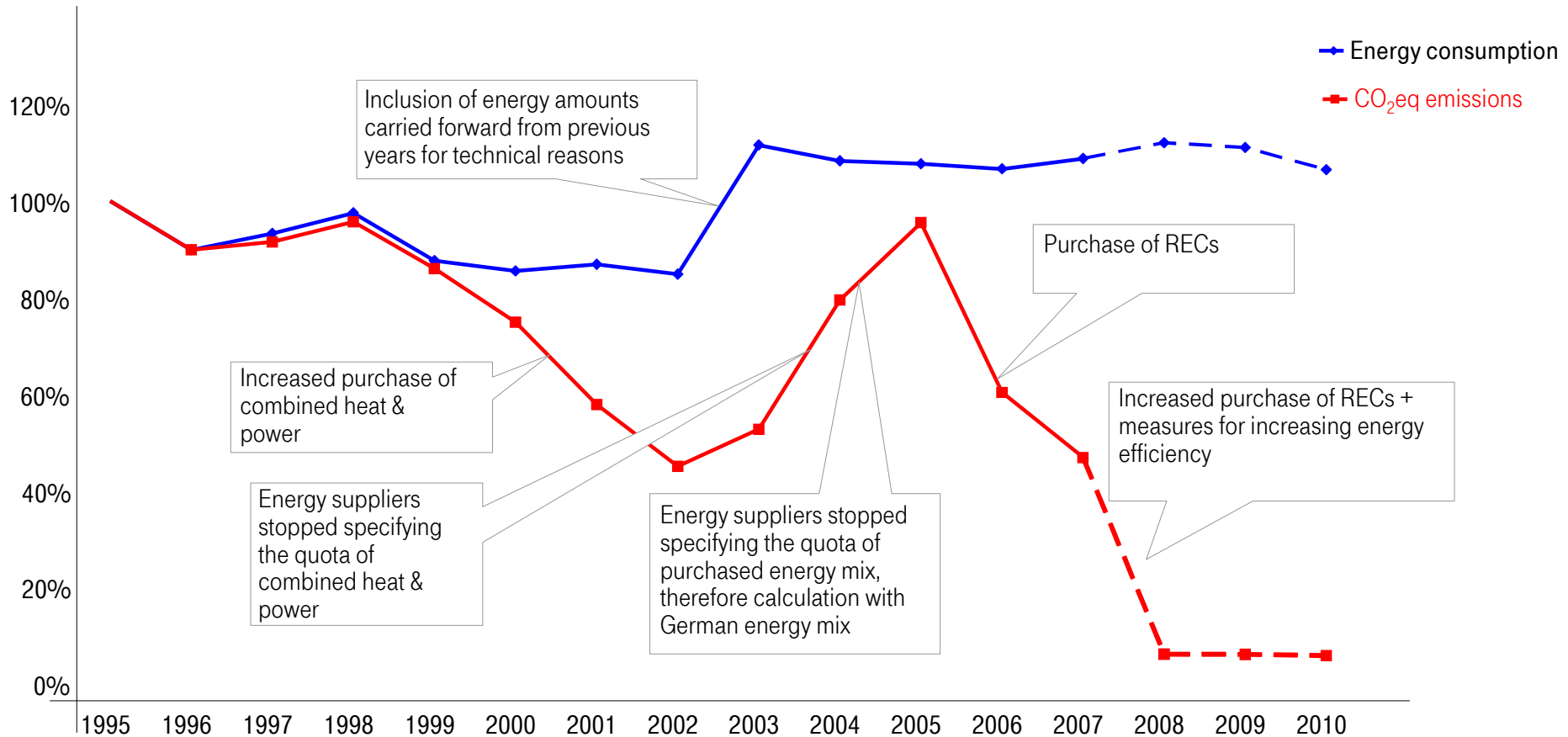
T-City – Intelligent Metering.

- An online and wireless electricity metering system that enables private und business customers to monitor consumption on-time and to recognize saving potentials

- Consumption profile over days, weeks, months or years
- Identification of electricity "guzzlers"
- Energy saving plan, cost savings
- Energy supply rules by requirements and generation

- Customer: Local energy supplier

100% Electricity from Renewables in Germany.
Cost reduction in 10 years: €500 million.

Low Carbon Society.
T-Home. Services for reducing CO_2 emissions.

The Sinus Series uses an extremely energy efficient technology and compensates CO_2 emissions for five years usage by means of certificates (RECs). This hand set was developed in co-operation with a citizen organization with the target to produce a family friendly phone.

Sinus A 201

Energie-effizient.

klimaneutral

Low Carbon Society.
T-Home. Examples for climate-friendly products and services.

Online Billing

Almost 10 million customers use "Rechnung Online". The dematerialization of the billing process means a reduction of CO_2 emissions and paper consumption.

About 2,560 t CO_2 /year [1]

1)   Data: calculation of "Öko-Institut e.V.", and own estimations

Low Carbon Society.
T-Home.Examples for climate-friendly products and services.

Start your meeting – wherever you are.
Telephone and data conferences.

Life is for sharing.

Data conferences are a kind of telephone conferences where presentations and documents can be discussed jointly. A special software allows a comfortable dealing with documents and creates a similar atmosphere among the participants.

Accordingly, travel time, fuel usage and CO_2 emissions can be reduced.

About 4.6 million tons CO_2 in 2007 [1]

1)   Data: in 2007 carried out telephone and data conferences

In Dialog with Society.
Deutsche Telekom is a recognized partner.

Outlook.

Due to the meaning of global warming and its consequences for the economy and the society all parties and stakeholder should initiate strong actions for achieving in the next years peak carbon. Strong reductions of the CO_2 emissions worldwide are seriously needed.

We are part of the solution and ready to go ahead!!!

Thank you.