

Fujitsu Siemens Computers

IT with a Sense of Responsibility



The importance of IT in an environmentally-friendly world

We make sure



- n “IT-Equipment worldwide is responsible for 2% of CO2 emissions which corresponds to the amounts of CO2 emitted by airplanes.”

Simon Mingay, Gartner

- n “For approx. each \$1 spent on computer hardware, further \$0.5 need to be spent for electricity. Within the next 4 years, this number is to rise by 54%.”

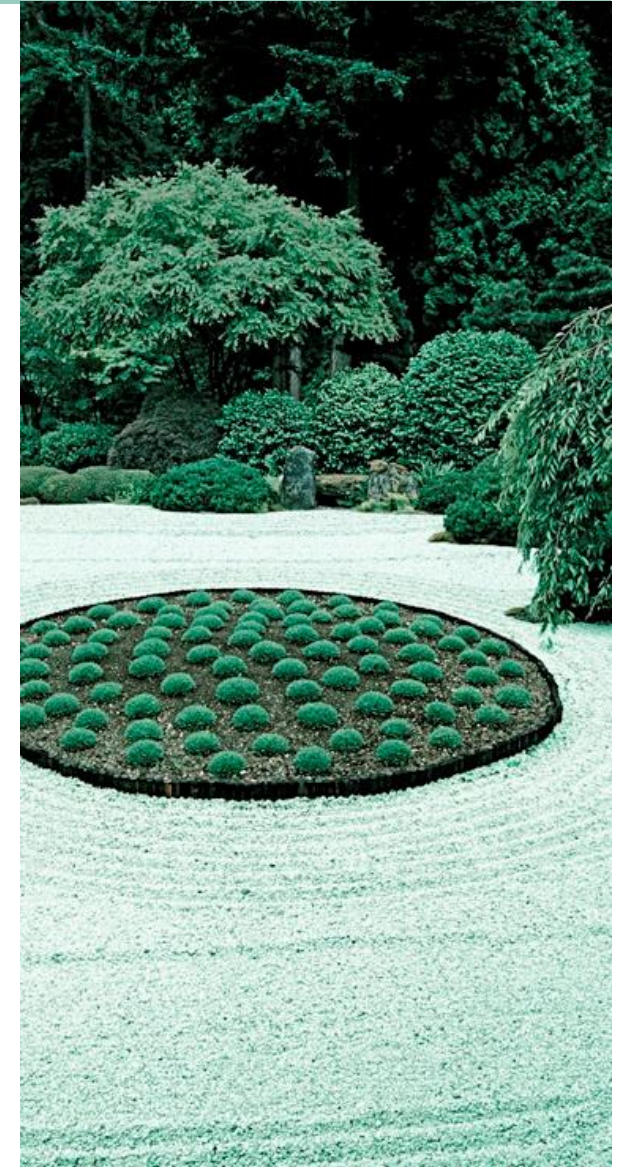
IDC, Worldwide Server Power and Cooling Expense 2006 - 2010

- n “It is essential not just to look at the computer in use, but the whole lifecycle.”

Financial Times, IT going green, June 2007

- n “Only one search request at Google consumes as much energy as an energy saving lamp per hour.”

Die Zeit, August 2007



Purchasing for a sustainable world

We make sure



- n 50% of all IT-organizations will have proposed a catalog of environmental measures by 2010

Simon Mingay, Gartner

- n "Going green" will become an essential activity of all IT-directors

Simon Mingay, Gartner

- n 67% of the UK consumers are more likely to buy a product with a low carbon footprint

Carbon Trust, 2006

- n Environmental aspects rank third as purchasing criteria for a PC

Ispos MORI, 2007

- n 52% of partners are convinced that green IT is growing in importance

Channel Survey, 2007



If DNA had a color, ours would be green ...

We make sure



- n Fujitsu Siemens Computers will be the first IT-vendor with a complete range of environmentally sound products for the datacenter, in the office, on the move and at home
- n “Saving the planet by green IT” is anchored in one of our five innovation intents for future R&D efforts
- n We have a long history. We started the first initiatives 20 years ago.
- n Taking care for the environment reflects our brand essence
 - o it is IT with a sense of responsibility

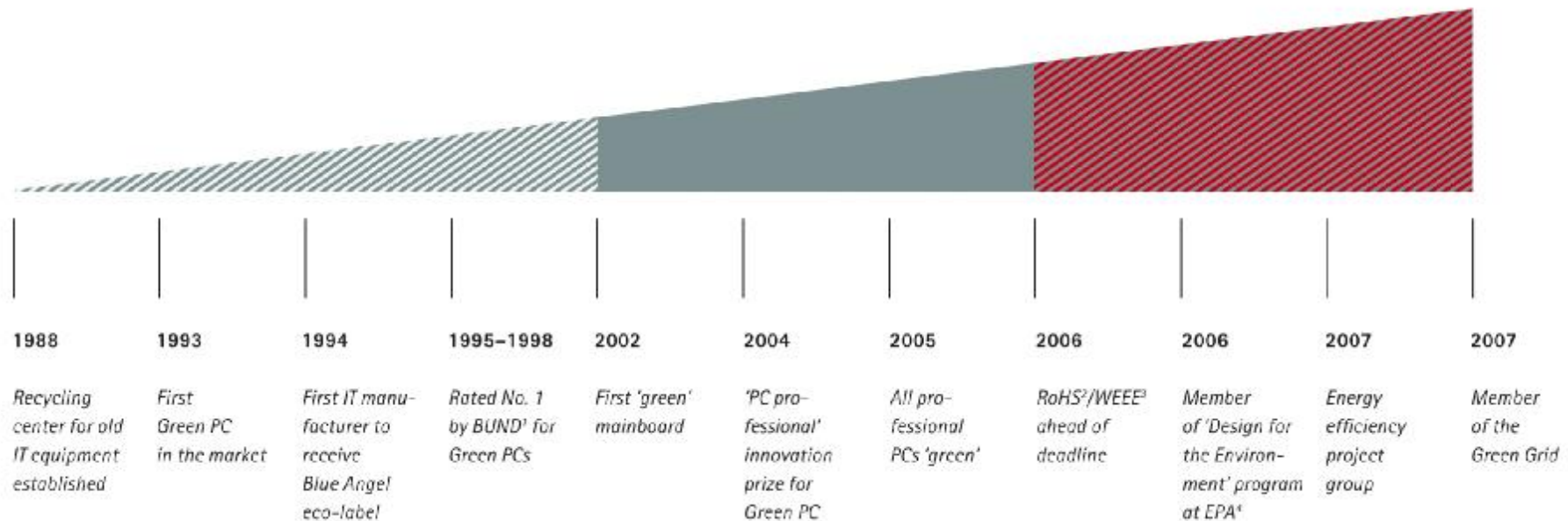


A very long history

We make sure



- n Environmental care – leaping ahead in green technology
- n As the following timeline illustrates, we have a long-standing, strong commitment to the principles of environmental sustainability.
- n First green PC 1993



1 German branch of "Friends of Earth"
 2 EU Directive on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment
 3 EU Directive on Waste Electrical and Electronic Equipment
 4 U.S. Environmental Protection Agency

For a better business. For a better planet.

We make sure



- n Our approach: We offer products, solutions and services with the right balance between business benefits and environmental benefits.
 - o ecology and economy can go hand in hand:
 - o for a better business. For a better planet.
- n Taking care for the environment is about all kinds of solutions, services or improved processes that reduce their environmental impact, need less resources and reduce costs:
 - o Dynamic Data Center solutions and holistic concepts for “green infrastructures” to save energy, cooling, space and resources
 - o Mobile solutions reduce power consumption and increase your freedom to choose where you work - therefore reducing unnecessary traveling
 - o Services that enable green IT by reducing complexity and improving processes



Customer Endorsements

We make sure



2001: Swedish Society for Nature Conservation

Asking for a green mainboard six years ago set the ball rolling for the development of green products at Fujitsu Siemens Computers

Goethe Institute

Since early 2004, institutes in 48 countries on five continents have been equipped with Green PCs from Fujitsu Siemens Computers

UniCredit

In 2005, UniCredit modernized its branches with 10.000 Green PCs which show that ecology and economy can go hand in hand.

WWF Germany

For its computer installations, WWF chose Fujitsu Siemens Computers products: "They meet our environmental criteria, e.g., in their use of lead-free circuitboards (PCB)." *Dr. Bernhard Bauske, Head of Strategic Corporate Alliances, WWF Deutschland*

ebm-papst

"As a world market leader in air technology and drive energy, we appreciate Fujitsu Siemens computers' environmentally friendly, economical and high performance Green PC." *Gerhard Zierlein, Head of the IT Department, ebm-papst*

We make sure

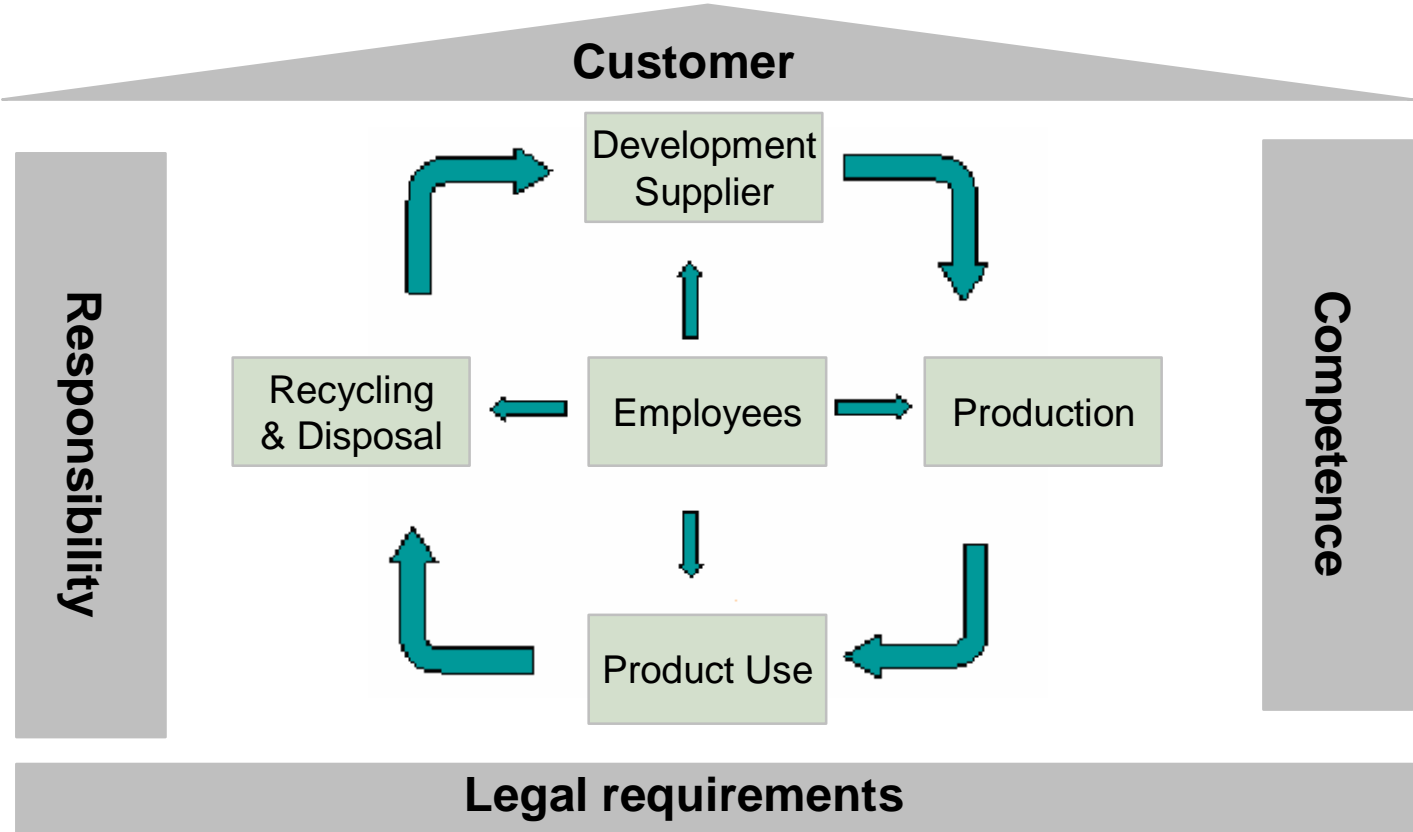


Our integrated approach



The integrated approach to Environmental Protection

We make sure



**Environmental Management System certified according to ISO 14001
Including all Employees and Suppliers**

Our integrated approach

We make sure



1. Development and Sourcing

Environmental Sustainability

We are committed to eliminate the use of harmful and potentially harmful substances in our products and production processes in order to minimize any risk to end users and to the environment.

- n minimizing hazardous substances wherever possible
- n own guideline developed
- n member of the 'Design for the Environment' Program at U.S. EPA

FSC Green Standard



EuP*

minimum legal requirements

today & in future

*EU Directive for energy using products

Our integrated approach

We make sure



2. Production & Logistics

Inbound logistics

- § components, materials, inbound logistics, sourcing
- § reduced packaging
- § sea freight when possible
- § supplier selection



Production

- § saving of energy, water, gas, and CO2 in each area
- § at Augsburg, within 10 years power consumption declined by 60 percent = 8.680 tons less CO2 emission
- § reduction of hazardous materials, waste, wastewater and emissions
- § lead-free soldering (years before RoHS)



Outbound logistics

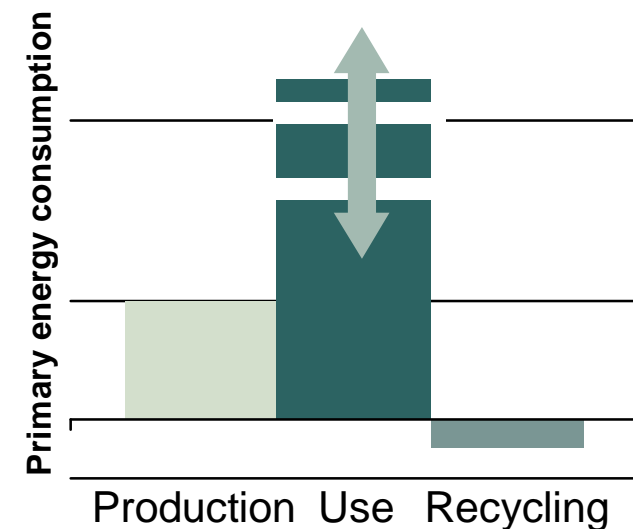
- § optimal packaging
- § direct shipment to customers
- § Bulk delivery to large accounts



3. Product use - focus on energy saving

- n Energy saving has emerged as one of the most critical components
 - o around the world, people are striving to be more energy efficient at home and at work
 - o warning to the industry - data centers will be unable to cope with future power consumption rates and the challenges of temperature regulation
- n Energy savings means cost savings
 - o "If performance per watt is to remain constant over the next few years, power costs could easily overtake hardware costs, possibly by a large margin." *Luiz Andre Barroso, Google*
- n Fujitsu Siemens Computers Green PCs
 - o can save an organization with 100 PCs €3,380 over three years; for the environment this means 14 tones of CO2 savings

Product Lifecycle of a PC



Source: Fraunhofer Institute

3. Product use - focus on energy saving

- n Energy saving focus at Fujitsu Siemens Computers
 - o 2006 energy efficiency project group was founded
 - o walk the talk: Internal energy-saving projects established
 - o active contribution to the definition of energy efficiency measurements at the Club of Rome
 - o 2007: Member of the Green Grid, a consortium to lower power consumption
 - o active support of the Energy using Products (EuP) implementation framework coming spring 2008
- n Broad range of product features for PCs and mobiles saving up to 50% of energy consumption
- n Holistic approach for energy saving in the data center



Our integrated approach

We make sure

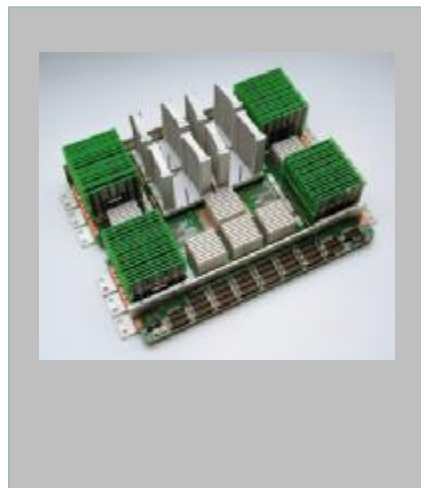


4. Re-use, Recycling and Recovery

- n In our own Recyclig center, 98% of all materials could be re-used or recycled thanks to a three-stage-concept
- n Our disposure rate of 2% is more than 10 times lower than legal requirements



Remarketing of products



Reuse of parts



Recycling of material

We make sure

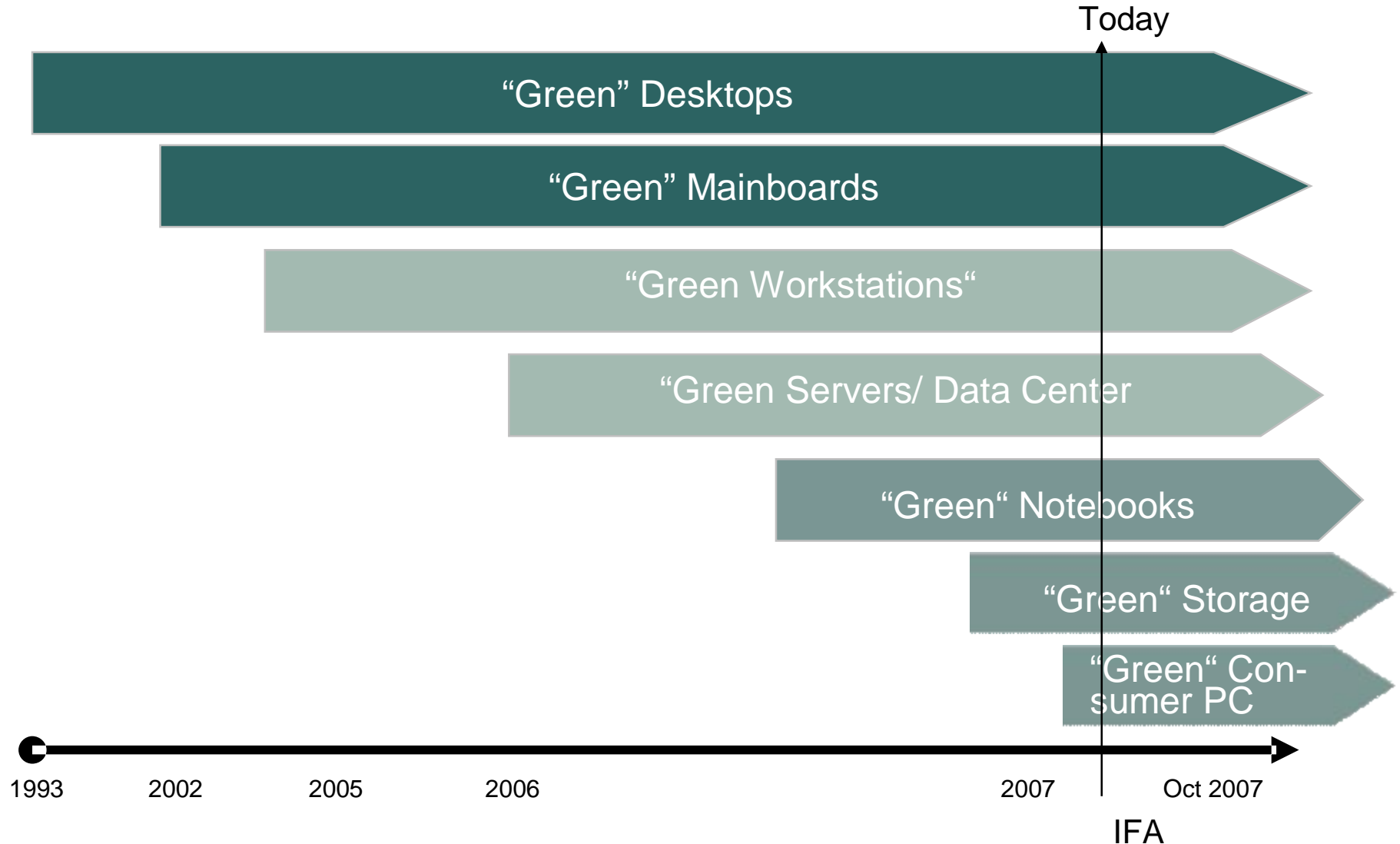


Our green products, solutions & services



We have a “Green” history

We make sure



Innovative technologies make PCs more green

We make sure



n Green Professional PCs

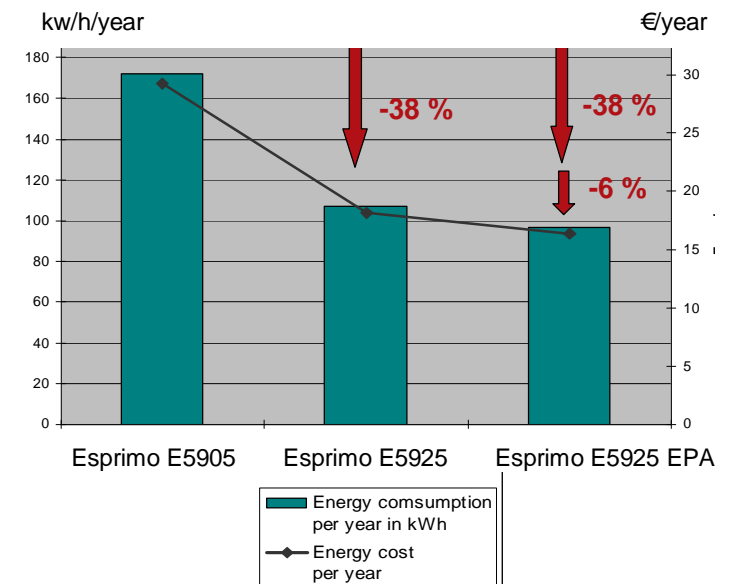
- o ESPRIMO professional PC microtower and Small form factor PCs compliant to Blue Angel and new Energy Star requirements
- o best-in-class cooling concept for increased lifetime and performance
- o optimized fan concept – only as much and as fast as needed
- o switched monitor outlet saves up to 10% of display power consumption
- o 15% savings possible by actively enabling Power Management settings per DeskView Energy



n 2007: 44% less energy consumption than in 2005

n Example ESPRIMO E5615, EPA:

- o 100 Fujitsu Siemens Computers Green PCs save €1130 worth of energy per year



First Consumer PC “Green Edition”

We make sure



SCALEO Li 2405 green edition

- n First green Consumer PC
- n Hardware configuration
 - o low power consumption
 - o “green” halogen free μ ATX mainboard
 - o extremely silent
 - o environmentally conscious packaging
 - o fully recyclable
 - o “Blue Angel” and “Energy Star 4.0.” in preparation
- n Software configuration
 - o FSC “green power management”



Green Mobility stands for

- n Professional notebooks like LIFEBOOK C1410 and LIFEBOOK S7110
 - o first and only notebooks worldwide compliant to Nordic Swan
- n Reduced power consumption and expanded battery time
 - o battery run time of a one whole working day (with second battery)
 - o EcoButton increasing battery time by more than 10%
- n Reduced traveling
 - o reduces transportation costs and CO2 emissions
 - o thanks to high level connectivity capabilities
 - n all notebooks to integrate 3G communication by Q4 07
 - o thanks to features such as confcameras



Green servers

- n Example: PRIMERGY TX120
- n The most energy efficient server in the world
 - o 40% less power
 - n lower power consumption vs. other standard tower servers (active power reduction of 163 Watts, even more with Celeron® processor)
 - o 33% less footprint
 - n the world's smallest footprint
 - o 25% less volume
 - n less volume compared to current 1-socket server in the market
 - o 50% less noise (28 dB in Idle Mode)
 - n advanced cooling technologies achieve low noise levels equivalent to a whispering noise



Three steps for a green data center

We make sure



1. Reduce Power Consumption
 - implement best technologies and processes
2. Optimize datacenter Infrastructure
 - improve cooling concepts
 - improve power infrastructure
 - increase energy recovery
3. Optimize utilization of existing resources
 - fully utilize existing computing power
 - improve utilization of systems



Dynamic Data Center = Green data center

We make sure



- n Reducing the energy costs to a minimum by transforming static data center to a Dynamic Data Center
 - o by creating pools of computer and storage resources that are provided to applications on demand
 - o better utilization by combination of Blade Server with Virtualization Methods and technologies
 - o integration of IT Management tools to react faster to resource allocation of servers
 - o an automated, intelligent ILM strategy to put the data where they consume the least power is key for an energy efficient storage pool
- n Example: a customer-scenario FlexFrame for Oracle proved a reduction of 70% of energy costs



Transformation to green IT: Lifecycle Services

We make sure



- n Services across the IT Lifecycle help to right size and reduce IT resources by professional IT design and IT operations in two steps:
 - o aligning IT infrastructures to business goals to ensure the most effective use of IT
 - o managing IT infrastructure towards lean operations with reduced complexity and increased flexibility. An optimized system management reduces the:
 - n number of overall systems
 - n number of utilized systems in non-peak times
 - n number of running sites in non-peak times



Managed Services: a business partnership for green IT

We make sure



- n Managed Services establish an enduring business partnership with a continuous flow of innovation and improvements to increase operational performance and resource consumption of the customer's IT
- n Managed Data Center offers additionally
 - o decrease of temperature and less cooling through virtualization and energy efficient system management
- n Managed Office offers additionally
 - o remote Bios and OS energy management and shut downs of unrequired systems over-night and thus significant decrease in power consumption
 - o reduction of paper and consumables through multifunctional devices and output management strategies



Services intrinsically enable green IT

We make sure



- n Print life cycle management
 - o helping customers optimize their printing, therefore reducing their carbon footprint
- n Environmental installation services
 - o ensuring your physical IT environment is optimized for green
- n Reducing the need for on-site interaction with innovative technologies, e.g., Auto Immune Systems
 - o improving costs and reducing unnecessary travel to site = reduced fuel usage
- n Optimizing spare stock locations ensuring the right parts are close to hand
 - o reducing the need for long-distance shipping = reduced fuel usage
- n Service factory – fixing it on line first time
 - o consolidating expertise in one place, reduce repeat call rate, reducing overall resources



If DNA had a color, ours would be green ...

We make sure



- n Complete range of environmentally sound products
 - o for the datacenter
 - o in the office
 - o on the move
 - o and at home
- n “Saving the planet by green IT”
 - o one of our innovation principles
- n We have a long history
- n It is IT with a sense of responsibility

