



Action plan „Germany: Green IT Pioneer“, 2008-11-20

Ensuring a secure energy supply, preserving the environment and protecting the climate are central challenges facing today's world. These issues will fundamentally alter our lives and our economy. Environmentally friendly technologies are the key to sustainable economic activity. In order to optimise the use of resources across the entire spectrum of global value chains, it is essential to tap the full potential of technology.

Our aim is to strengthen Germany's economic position and to enhance "green value added" by taking advantage of the dynamism inherent in these technologies. And we are in excellent condition to do so: in the fields of environmental and energy technologies, German engineers are viewed as world leaders.

We are convinced that by combining our engineering and ICT expertise within both the business and research sectors, we can lay the groundwork for major growth opportunities. German information and communication technologies are green, and they make an important contribution to climate protection through the development of specialised ICT products and services, through awareness campaigns targeted toward users, and through the dissemination of best-practice solutions.

For this reason, we want to forge a Green IT Alliance comprised of high-level representatives from the Federal Government, industry and science, for the purpose of enhancing Germany's position as a leader in information and communication technologies. Our goal is for Germany to become a pioneer in Green IT. In the coming months, a working group will formulate specific measures that will help us press forward toward this goal.

Developing green IT solutions in Germany

Both the Federal Government and German industry promote the research, development and use of resource-efficient ICT products and services. The goal is to develop cross-sectoral solutions, especially in areas where, according to experts, energy savings would be particularly significant or easy to achieve. In the coming years, the Federal Government alone will provide over €400 million in funding for the following programmes and projects:

- optimisation of energy supply ("e-Energy" flagship project)
- energy storage (innovation alliance for lithium-ion batteries, "Electromobility" project)
- logistics (Toll Collect pilot project)
- private households (energy-efficient solutions for the home, "Innovation Centre for Networked Living" project)
- improving resource efficiency (innovation alliance on automotive electronics; the "cool silicon" leading-edge cluster; "IT Goes Green" research project within the framework of the Environmental Innovation programme)



- The establishment of a cluster of Germany's most important software makers and research centres by 2013, with the aim of extending Germany's technology lead in the area of "green" process optimisation software for businesses.

Many of these projects will be tested in model regions. In many sectors, accompanying research will be conducted to ensure that project findings are broadly distributed and that networks are established among all interested parties. Additional projects will be developed on the basis of ongoing research findings.

Using ICT in an energy- and resource-efficient manner

It is important to ensure not only that ICT products are *designed* with energy and resource efficiency in mind but also that they are *used* in this way. We therefore intend to increase transparency in the area of product usage while simultaneously identifying potential savings – in both economic and environmental terms – within specific sectors.

- **IT operations within the Federal Government:** As a measure to support its Energy and Climate Programme, the Federal Government has resolved to reduce the level of energy consumed by government IT operations by 40% by the year 2013, as compared to the year with the highest level of IT energy consumption prior to 2009. In addition, in the future, the public procurement criteria for all new large-scale public sector investments will require an assessment of IT-related energy consumption for the full duration of planned operations.
- **CO₂ emissions in Germany's ICT sector:** Germany's ICT industry is working systematically and demonstrably to ensure that the CO₂ emissions for which it is responsible are kept as low as possible. Moreover, the ICT industry also promotes resource efficiency in its relations with users and the general public. In the coming years, we will work to expand the voluntary commitments that numerous ICT firms have already adopted.
- **Greater Transparency:** The Federal Government will urge the European Commission to provide for the fastest possible implementation of the Ecodesign Directive with respect to both stand-by consumption as well as specific product groups including PCs (desktop and laptop computers), computer monitors, and imaging equipment (printers, scanners, photocopiers, etc.). Minimum efficiency standards for these products will then be stipulated in implementation regulations. In addition, European energy consumption labelling should be expanded and brought up to date in order to make it easier for consumers to decide what to purchase.
- **"Green" public procurement:** Germany's information platform for the procurement of ICT products (www.itk-beschaffung.de) will be expanded step-by-step to include additional types of equipment. As a rule, public procurement tenders for ICT products and services take into account the latest energy efficiency and environmental standards in accordance with the recommendations of the Federal Environment Agency (UBA).



- **Energy-efficient data centres:** We will provide companies with information on how to save energy in the operation of data centres. For this purpose, the German IT industry association BITKOM has collaborated with partners from government, science, industry, consulting firms and testing agencies to develop a concept for conducting energy efficiency analyses in data centres. Servers and data centres are the nerve cells of the information society – in Germany, their electricity consumption is roughly equal to that of four medium-sized coal-fired power plants. Energy efficiency analyses will be of particular benefit to small and medium-sized enterprises and the public sector by helping them to identify opportunities for process optimisation and to achieve energy savings in the amount of 20% and more.
- **Advisory services:** We will provide targeted advice to businesses and consumers regarding the selection and use of ICT products.
- **Disseminating best practices:** We will document and publish best practices – i.e. examples of particularly efficient applications – and actively communicate these solutions to users, policy makers and the media. This outreach will be performed using standard forms of communication as well as more international forums such as the CeBIT 2009 trade show and upcoming OECD conferences.

Next steps

Above and beyond the 2008 IT Summit, we will remain dedicated and active in our efforts to press forward with Green IT.

- **The Green IT alliance:** Based on the activities at this year's IT Summit, a working group on Green IT will be formed that includes representatives from government, industry and science. This working group will focus on the long-term economic opportunities that Green IT can provide for Germany and will draw on various reports and projects to kick off its deliberations, including (a) the study "SMART 2020 Germany", (b) the report "Assessing the energy needs of the German information society" and (c) various ongoing pilot projects in the field of Green IT. BITKOM will submit a proposal for the Green IT Alliance's organisational structure and work programme by the beginning of the CeBIT 2009 trade show.
- **Private sector contributions to the national energy efficiency monitoring process:** One of the Alliance's aims is to ensure that the contributions of ICT companies operating in Germany are included in the national monitoring process that is currently being set up by the Federal Ministry of Economics and Technology to assess whether energy efficiency targets are being met.



- **National network of excellence for Green IT:** Germany's scientific sector has launched an initiative to establish a network of excellence in the field of Green IT. The goal of this network will be to integrate and accelerate research and innovation projects that aim to enhance the energy and materials efficiency of IT hardware and IT systems (e.g. in the areas of data centres, thin client and server-based computing, cloud computing, etc.). The network will also make recommendations on strategies to strengthen Germany's economic position in the Green IT sector.
- **Positioning ourselves internationally:** The Federal Government will work hard to ensure that German IT experts, firms and institutions are integrated into (a) ongoing discussions in international organisations (e.g. the EU, OECD, ITU and UN), (b) measures to promote foreign trade and investment and (c) efforts to boost inward investment. Involvement in all of these activities will allow German actors to demonstrate best-practice solutions that have been implemented in Germany both within businesses as well as within the public sector.