



Deutsche Telekom's Design Research Lab is housed with Deutsche Telekom Laboratories in Berlin.  
Photo: Deutsche Telekom.

# Design Research Strengthens Innovation at Deutsche Telekom

At Deutsche Telekom Laboratories in Berlin, design research has its own department, the Design Research Lab, which is an integrated part of the development activities. It helps secure the future innovation at Deutsche Telekom, and e.g. in the design of a telephone especially for elderly users it helped speed up the development process. Design research can generate new knowledge about products, product properties and use and about the contexts the products enter into – knowledge that is in high demand in business.

By Mads Nygaard Folkmann

Professor Dr. Gesche Joost heads Deutsche Telekom's Design Research Lab, which in addition to herself includes a post-doc., seven Ph.D. scholars and additional scientific staff. She founded the department in 2005 when she as the first designer began to work with user experience, a field that had mostly been domi-

nated by engineers until then.

Later, research was more and more focused within the design efforts, and that proved beneficial: With its emphasis on user-friendliness and interface design the department benefits greatly from being in close contact with product development, and similarly, Deutsche Telekom benefits greatly from the new angles and methods that the design researchers bring to the product development process.

## Public-Private Research Partnerships

Gesche Joost points out that public-private research partnerships can hold great potential. The model for public-private partnerships at Deutsche Telekom Laboratories ensures the stability of research, and the investment in design research is also a way of ensuring future innovation in companies.

"For us, it offers an amazing platform for our work. For universities, ensuring research funding is often a big challenge, while we have more direct access to funding and an inspiring context of scientific expertises from the other departments," she says.



With a particular emphasis on the needs of elderly users, the development of Deutsche Telekom's telephone Sinus A201 was based on the concept of Design for All, which aims to make products accessible to everybody. The development process also involved co-design, where users act as active co-designers; in the final design this is reflected in the fulfilment of specific user requests. For example, the phone has a simple interface with a relatively flat menu structure, and the main emphasis is on making phone calls. In addition, ergonomics and energy efficiency were key concerns.

Photo: Deutsche Telekom

“And from the company’s point of view, it is an asset that bolsters their position in the midst of the financial crisis. The question for companies right now is where innovation is to come from – and here, design research is an important source. To them, it is an investment in the future,” says Gesche Joost.

### Organisation Secures Collaboration

Gesche Joost points to the particular organisation at Deutsche Telekom Laboratories as crucial for the success in establishing public-private partnerships. She mentions related experiences elsewhere, for example in a partnership involving Philips and Eindhoven University of Technology in The Netherlands.

“At Deutsche Telekom Laboratories, we are organised into two main branches,” she explains.

“In the Innovation Development branch, the entire staff is employed by Deutsche Telekom. The other branch is Scientific Research, which we are a part of, and where the staff is employed by Technische Universität Berlin.”

Combined within one organisation, the different perspectives of the two branches provide optimum conditions for the exchange of knowledge.

“The two branches combine the best of both worlds, which is then brought into a productive dialogue,” says Gesche Joost.

“It simply makes it easier to achieve the knowledge transfer that both parties need: As design researchers, we have an optimum platform for exploring and testing our ideas, and we are in an interdisciplinary field where we can benefit from the knowledge that exists in other departments, for example with regard to safety and technology. For Innovation Development, which aims to make Deutsche Telekom’s products market-relevant, it is a tremendous benefit to be able to draw on a wide repertoire of design knowledge.”

### Research Freedom as an Asset

Gesche Joost points out that a fundamental condition for a pro-

ductive dialogue between research and business is the researchers’ freedom to explore new areas of knowledge.

“Design research can bring new perspectives into product development,” she says.

“Our research theme is general interface and interaction design, and to explore it we address three areas involving technical, human and theoretical aspects of design. In the field of Humanizing Technology we work with interface design, including tactile and auditory feedback, and multi-functionality. In the area of Mediating People we focus especially on the human aspect of design, examining, among other aspects, the role of gender differences for the use and perception of design products. The goal is to make user needs a trigger for innovation. And finally, in the field of Conceiving Design we work with issues of theory and methods in relation to the nature of design research,” says Gesche Joost.

The essential aspect of the approach applied in the Design Research Lab is that it involves the development of concrete prototypes that are used to explore various aspects of use and usage situations as well as general, methodological discussions.

“We work under scientific freedom, and we are mainly assessed on the basis of our research production in the form of articles, papers, patents etc.,” says Gesche Joost.

“At the same time, this research freedom is also what enables us to strengthen development efforts at Deutsche Telekom. For example we have been able to put methods for Co-Design, that is, where the users are co-designers, on the agenda and introduce the concept of service design as a new framework for product development.”

### Research Helped Speed up Development

One tangible outcome of the approach taken by Deutsche Telekom Laboratories is the telephone Sinus A201, which is intended to meet the needs of elderly users without appearing like a ‘senior phone’. Based on the concept of Design for All, where the product is not specialised for one particular user niche but aims to be

Professor Dr. Gesche Joost heads the Design Research Lab at Deutsche Telekom Laboratories in Berlin.  
Photo: Deutsche Telekom



widely accessible to everybody, the goal was to develop a phone that was not going to stigmatise its user as 'old'.

Gesche Joost says that design research offered an approach to the development process that holds unique benefits.

"The high level of method awareness that we provided led to a faster development process," Gesche Joost explains.

"We were able to adopt a method based on the concept of Design for All, and we also systematically included user involvement based on methods from co-design and participatory design. This approach is based on qualitative methods for design evaluation and ideation. In this framework, we used the design-specific method of 'Cultural Probes', which is a method for capturing knowledge about user behaviour, in a playful and open way with diaries, cameras, or postcards provided to the participants to document their every day life experiences."

Deutsche Telekom Laboratories is Deutsche Telekom's research department for innovation.

In addition to the department in Berlin there are departments in Darmstadt, Germany, in Beer-Sheva, Israel and in Los Altos, California.

Additional information at [www.design-research-lab.org](http://www.design-research-lab.org)

Gesche Joost also chairs DGTF, Deutsche Gesellschaft für Designtheorie und -forschung (German society for design theory and research).

See article about DGTF's conference *Entwerfen. Wissen. Produzieren / Design. Knowledge. Production: Design as a Form of Knowledge*, Mind Design #24, December 2009.

#### DANISH CENTRE FOR DESIGN RESEARCH

The Danish Centre for Design Research DCDR comprises the design researchers at the Aarhus School of Architecture, The Danish Design School, Designskolen Kolding and the Royal Danish Academy of Fine Arts, School of Architecture. The DCDR aims to contribute to establishing a strong design research environment in Denmark and to strengthen the exchange of knowledge about design research and facilitate the identification of potential areas of collaboration for researchers, schools and enterprises, on a national as well as an international level.

#### MIND DESIGN

Mind Design, DCDR Webzine is published once a month and features articles and interviews about current Danish and international design research. Mind Design aims to present design research and research findings from researcher to researcher as well as from researchers to design practitioners in general. The webzine is free of charge. Please see [www.dcdr.dk/uk/minddesign](http://www.dcdr.dk/uk/minddesign).

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