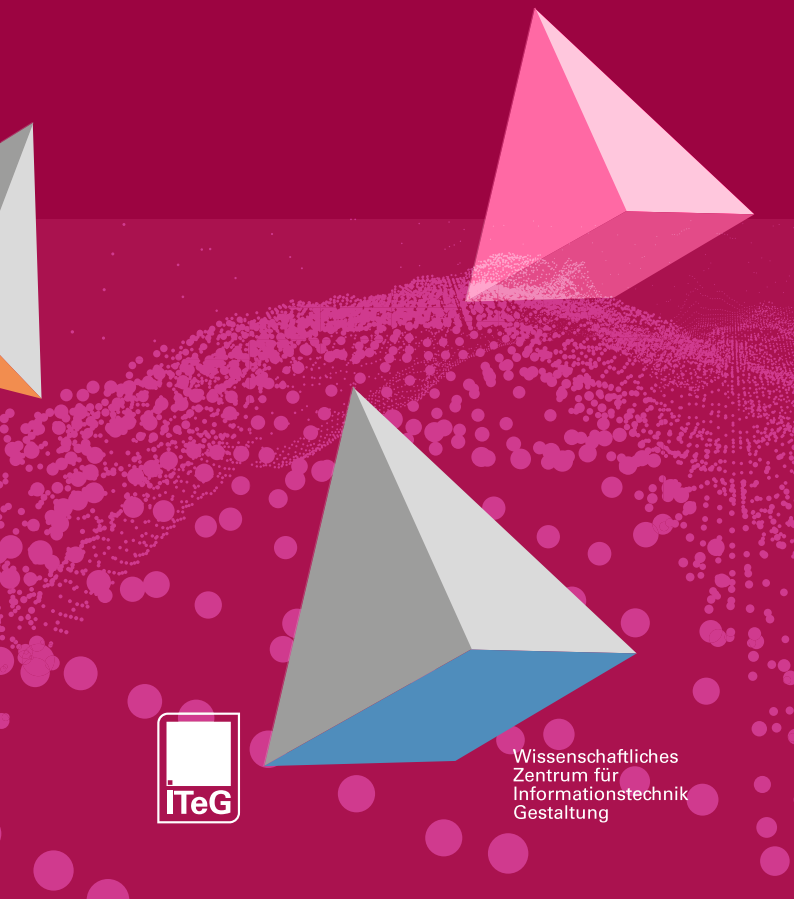
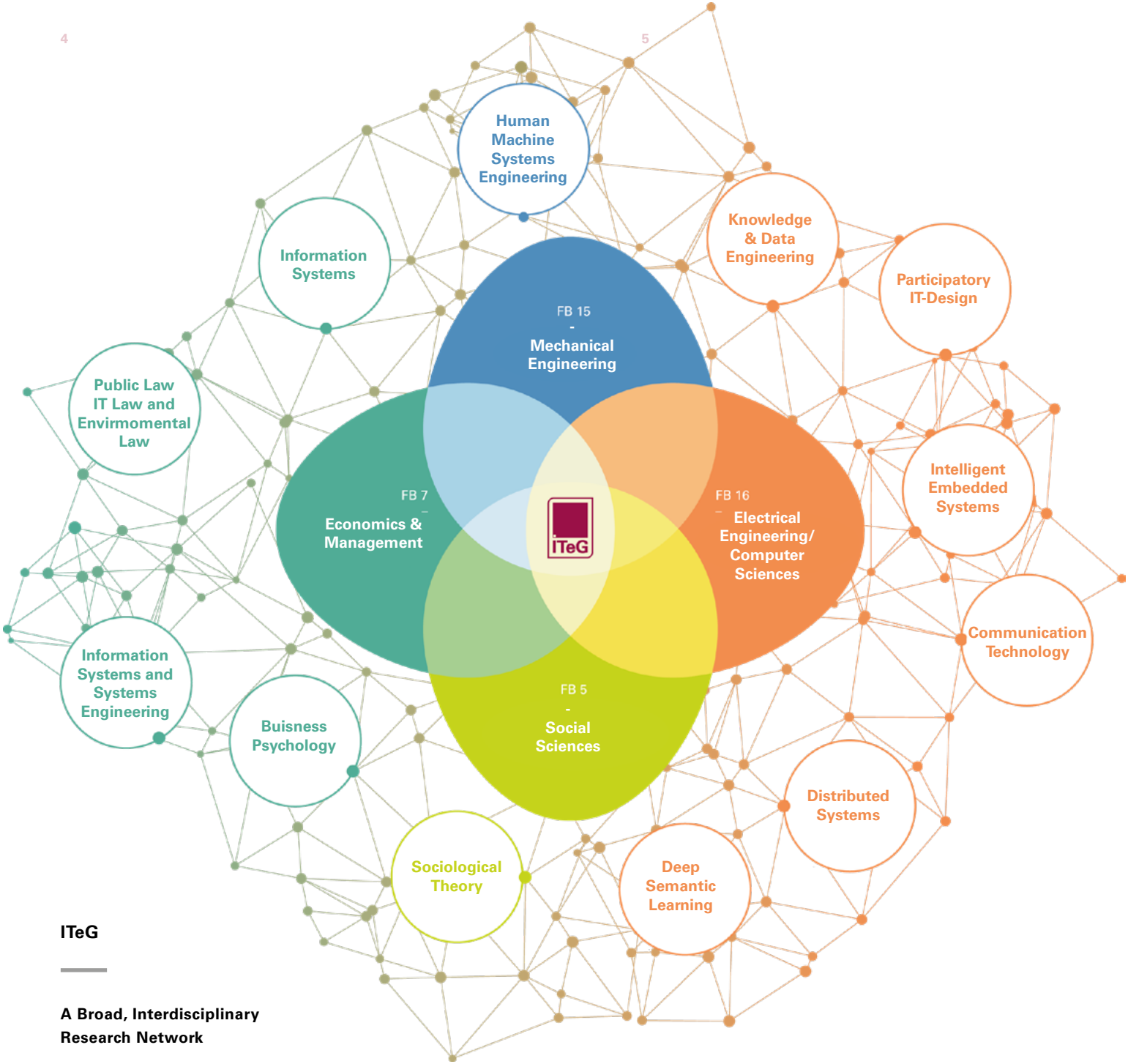
Research Center for
Information Systems Design (ITeG)

Information Systems Design for socially desirable Innovations



Wissenschaftliches
Zentrum für
Informationstechnik
Gestaltung

Information technology (IT) enables social and economic innovations and they open up far-reaching individual and social opportunities and trigger major changes. The ITeG is focusing on the values and the social responsibility of IT system design with the aim of enabling these innovations and making it possible to use their potential in the long term.



ITeG

A Broad, Interdisciplinary Research Network



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„Plattform Privatheit – Research for a Self-Determined Life in the Digital World“

Since its establishment in 2014 as the “Privacy Forum,” ITeG has played a key role in this nationwide platform through the fields of Public Law and IT Law (Prof. Dr Alexander Roßnagel and Prof. Dr Gerrit Hornung) and Sociological Theory (Prof. Dr Jörn Lamla).
Prof. Dr Alexander Roßnagel (far right) has been the spokesperson of Plattform Privatheit since 2017. In 2024, Prof. Dr Matthias Söllner and PD Dr Carsten Ochs were appointed to the platform’s Scientific Advisory Board.

ITeG conducts research on the interdisciplinary design of socially desirable information technology from a sociotechnical perspective.

This means that an IT system has been designed in a socially desirable manner, if the results not only create a sense of acceptance, but also meet standard conditions of acceptability.

Acceptance is related to an empirically identifiable readiness on the part of consumers to use the IT application that has been evaluated.

Acceptability involves combining the forecast effects of IT with values and standards that have to be democratically negotiated.

Based on in-depth academic analyses of acceptance and acceptability, the ITeG is drawing up and evaluating system design principles for information technology and social innovations – and is critically examining contradictory values, standards and interests.

The central research focus at the ITeG is therefore the issue of how IT needs to be designed to create socially desirable innovations and which methods should be used to achieve these structural goals.

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„AI Forensics: Accountability through Interpretability in Visual AI Systems“
Artificial Intelligence is being used in an ever-increasing number of areas. However, only very few people still understand which data are being used and how. An international research project involving the Participatory IT Design Group at ITeG (Prof. Dr Claude Draude) aims to create greater transparency. The “AI Forensics” project focuses on the use of image-based systems. The project is funded as part of the Volkswagen Foundation’s funding initiative „Artificial Intelligence and the Society of the Future”.





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Hub for Human-centered AI in Production „ZuKIPro“

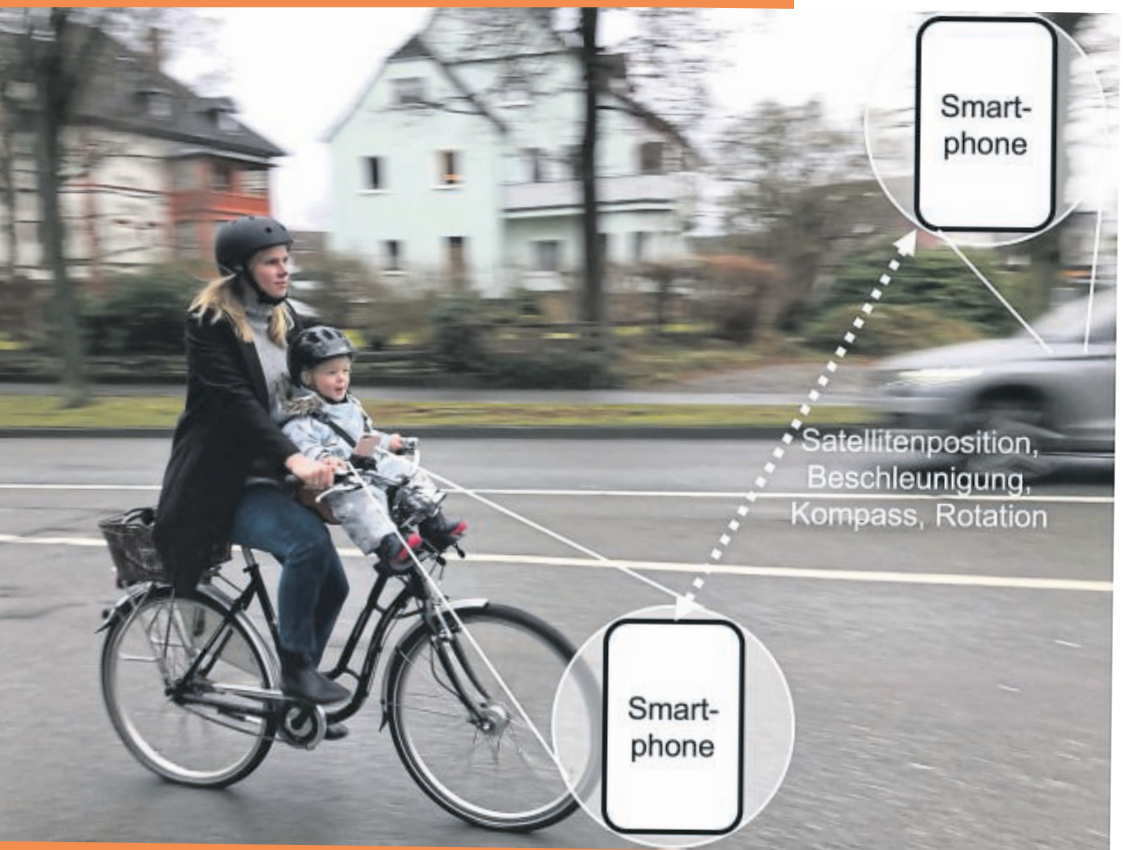
With the Research Groups of Human Machine Systems Engineering (Prof. Dr Ludger Schmidt), Information Systems (Prof. Dr Jan Marco Leimeister), and Communication Technology (Prof. Dr Klaus David), ITeG is involved in this BMAS AI Hub for Tomorrow that supports small and medium-sized enterprises (SMEs) in the state of Hesse, cofounded by the European Social Fund Plus (ESF Plus). Their focus is on the participatory and human-centered design, introduction and use of digital technologies. Based on the analysis of region-specific support needs Based on the analysis of region-specific support needsZUKIPRO provides a practice-oriented framework for advising, qualification, testing, and disseminating digital technologies.
(The image shows 3D scanning for the design of work systems in the Digital Laboratory at the University of Kassel.)

How Can Artificial Intelligence Improve Road Safety for Cyclists?

In January 2025, the new LOEWE research cluster DYNAMO, “Safe and Sustainable Mobility in the City of Tomorrow,” was launched at the University of Kassel.

The interdisciplinary team, led by Prof. Dr Klaus David (ITeG, ComTec Group), is committed to making cycling safer. To prevent traffic accidents in the long term and increase cyclist safety, DYNAMO is researching the Foundations for:

- the implementation of suitable cycling infrastructure measures,
- the development of training measures for cyclists, each based on an AI-based analysis of road users’ behaviour,
- the development of new, legally compliant AIbased assistance systems for cyclists, and
- an even better recording and anticipatory consideration of cyclist behaviour in AI-based autonomous driving.



To address these goals, the expertise of computer science, traffic psychology, traffic planning, and law is combined. In addition to Prof. Dr Klaus David, Prof. Dr Bernhard Sick and Prof. Dr Gerrit Hornung are also involved on behalf of ITeG. Other participants from the University of Kassel are Prof. Dr Angela Francke and Prof. Dr Carsten Sommer. An associated partner is the Hessian University of Public Management and Security, represented by Chief Inspector Jens Peters.

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Recording of driving behaviour, e.g., raising the arm to turn, is carried out using vehicle- and wearable-based sensors and is being researched using various AI methods (e.g., transformers, hyperparameter optimization, transfer learning, sensor fusion).

Making Data-Oriented Value Creation Sustainably

SustainablyThe DaWeNa-HUB brings together ten collaborative projects involving more than 70 partners from academia and practice. Funded by the Federal Ministry of Research, Technology and Space (BMFTR) under the funding guideline “Developing New Digital Services for Data-Oriented Value Creation” (DigiLeistDAT), the projects join forces to address overarching challenges.

The ITeG Group Information Systems, headed by Prof. Dr. Marco Leimeister at the University of Kassel, conducts extensive research into the design, implementation, and management of IT-supported organisational forms and Innovations.
The aim of this research is to develop theories, methods, models, and tools for designing innovative information and business systems. Advancing IT-based innovations that are socially acceptable, technically robust, and economically viable is of central importance. Within the DaWeNa-HUB, the group is working together with the ISF Munich to support ten collaborative projects from a range of sectors, including public administration, medicine, tourism, mechanical and plant engineering, and the construction industry. All of these projects are currently developing sustainable, data-based innovations.



Directors (01.09.2026)

> **Prof. Dr.-Ing. Klaus David**
Communication Technology

> **Prof. Dr. phil. Claude Draude**
Participatory IT-Design

> **Prof. Dr. rer. nat. Oliver Hohlfeld**
Distributed Systems

> **Prof. Dr. jur. Gerrit Hornung, LL.M.**
Public Law, IT Law and Enviromental Law

> **Prof. Dr. phil. Jörn Lamla**
Sociological Theory

> **Prof. Dr. oec. Jan Marco Leimeister**
Information Systems

> **Prof. Dr. rer. nat. Sandra Ohly**
Buisness Psychology

> **Prof. Dr. rer. nat. Martin Potthast**
Deep Semantic Learning

> **Prof. Dr. jur. Alexander Roßnagel**
Plattform Privatheit

> **Prof. Dr.-Ing. Ludger Schmidt**
Human Machine Systems Engineering

> **Prof. Dr. rer. nat. Bernhard Sick**
Intelligent Embedded Systems

> **Prof. Dr. rer. pol. Matthias Söllner**
Information Systems and Systems Engineering

> **Prof. Dr. rer. nat. Gerd Stumme**
Knowledge & Data Engineering

Further information on current ITeG research topics and events can be found on our website:
www.iteg.uni-kassel.de

ITeG –
Research Center for
Information Systems Design

University of Kassel
Pfannkuchstr. 1
34121 Kassel

www.iteg.uni-kassel.de



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