



Fraunhofer

ISI

FRAUNHOFER INSTITUTE FOR SYSTEMS AND INNOVATION RESEARCH ISI



ANNUAL REPORT
2016

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STRATEGIC VIEW TO THE INNOVATION PROCESS OF THE FUTURE

The year 2016 was a successful and exciting year for the Fraunhofer Institute for Systems and Innovation Research ISI. Between January and December, a highly motivated team of around 210 members of staff worked on about 400 interesting projects and generated a turnover of 22.5 million euros. Our project results provide our clients from politics, industry and society with scientifically sound options of action for research and innovation policy decisions.

In addition, Fraunhofer ISI was present at numerous high profile events as an important actor in the innovation process, including the Research Summit 2016 in April, and the “Woche der Umwelt” (Environment Week) in June. Furthermore, the two sessions of the lecture series “Fokus: Zukunft. Unser Leben 2050” (Focus: Future. Our life 2050), which we organized together with the Karlsruhe Institute of Technology, and Siemens AG, were very successful.

A particular focus of our research this year which we also present in this annual report is our preliminary research to develop the innovation systems approach further. The aim here is to regularly revise established concepts of innovation systems research and to develop them further. This is absolutely essential in order to become aware of new forms of innovation and innovation actors as well as to gain new analysis perspectives and realistic insights into the innovation process. Against this background, the interdisciplinary team at our institute has further developed the innovation systems approach in several sub-projects and has also investigated how innovation systems can be actively shaped and new forms of innovation identified.

You will also find in this annual report selected examples of projects which show the diverse activities of our six Competence Centers (CC). Here, you will find information on the climate protec-

tion plan 2050, the organization of the EU heat transition, the mechanical and plant engineering of the future, innovative technologies for industrial resource efficiency, Europe’s positioning in new key technologies and the capacity for innovation of suppliers.

In the extensive appendix you will also find information on our projects, our membership in groups and alliances as well as the teaching activities, dissertations and lectures of our scientists. The list of our visiting scientists shows our involvement in the international research network.

We wish you instructive and enjoyable reading and look forward to receiving your feedback.

*Professor Marion A. Weissenberger-Eibl
Director of the Institute*

*Dr. Harald Hiessl
Deputy Director of the Institute*

PRELIMINARY RESEARCH FOR THE FURTHER DEVELOPMENT OF THE INNOVATION SYSTEMS APPROACH

In order to become aware of new forms of innovation, innovation actors and their impacts, established concepts of innovation systems research have to be reviewed regularly and developed further. Only by doing so are new analysis perspectives and realistic insights into the innovation process possible from which effective innovation policy measures can be derived. As part of its preliminary research, Fraunhofer ISI therefore further develops the innovation systems approach in several sub-projects and also investigates how innovation systems can be actively shaped and new forms of innovation can be identified.

The characteristics of the innovation system are crucial for innovations to emerge. But what should an ideal innovation system look like? Which actors are needed in which constellation to create good conditions for innovations? The sub-project "Understanding innovations and actors in innovation systems" of Fraunhofer ISI looks at these issues. Several topic areas are analyzed which deal with actors, institutions and forms regarding the emergence of innovations. Examples are topics such as user innovation, frugal innovation, societal and collaborative innovation, new intermediary actors and non-research-intensive industries.

Development of a three-dimensional innovation systems framework

While some of these phenomena can be integrated into the traditional innovation systems concept, the analysis of other topics suggests a thorough revision of the innovation systems framework. For this purpose a three-dimensional innovation systems frame was developed as part of the project. The first dimension is defined by the innovation range and demand, encompassed by innovation input as the second dimension. The third dimension establishes the framework conditions for innovations. First project results show that it is not necessarily possible in the innovation process to clearly assign actors and functions: For example societal actors and local user communities can no longer be reduced to the role of consumers as they contribute to the emergence and organization of innovations by sharing creative ideas and improvements as well as new financing models such as crowd funding. Particularly in the area of frugal innovations, which are essentially tailored to the core of customers' needs, such development processes in the interplay between providers and users play a key role. As can be demonstrated in an exemplary way by the success stories from developing countries, the capacity to come up with market-oriented innovations which are adapted to individual needs is becoming increasingly more important to the economic success of companies and whole nations.





The sub-project “New approaches of governance in innovation systems” also deals with the framework conditions for innovations, but puts the focus more on actively influencing and shaping them. One reason is that for a few years now innovation policies have increasingly oriented themselves towards social needs and included big societal challenges such as demographic or climate change. Due to this increasing “mission orientation” of innovation policies, a certain integration of societal needs into the innovation concept is needed. Taking the governance approach into consideration, the project investigates how innovations and their dissemination can be steered in a certain direction. This design requirement can come from industry, society or politics and may result from current technological (for example new forms of mobility) or ecological developments (for example climate change). This changes the normative political objectives (for example increasing importance of sustainability) and creates new requirements for innovations.

How can innovations and innovation systems be actively influenced?

In order to find out in practical terms how innovations and innovation systems can be influenced in a certain direction, the concept of the reflexive innovation system is developed in the project. Reflexivity is the ability of an innovation system to be aware of its current state, to formulate objectives for the system and/or goals for innovations and to develop and therefore implement suitable strategies. This requires four characteristics: The ability for self-reflection, integration, anticipation and the ability to experiment.

Several quality criteria are the result with which existing innovation systems can be examined regarding their options for influence and design.

If politics steer innovation systems in a particular direction – for example by the changes related to the energy transition from fossil to renewable energy carriers – it is an important task for innovation research to analyze the impact of political measures on the innovation system. This is exactly the purpose of the sub-project “Developing an approach to measure the impact of policy instruments on the diffusion of innovations using the example of energy efficiency in industry”. The project’s aim is to develop a system of quantitative and qualitative indicators for measuring the connection between innovation and energy policy as well as innovation dynamics and market diffusion. In a second step, the measurement approach is empirically tested using the examples of “energy management systems” (organizational innovation) and “energy efficient electric engines” (technical innovation). The basis is the approach to the technological innovation system whose development itself is subject of the preliminary research project “Further development and dynamization of the concept of sectoral and technological innovation systems”.

FACTS AND FIGURES

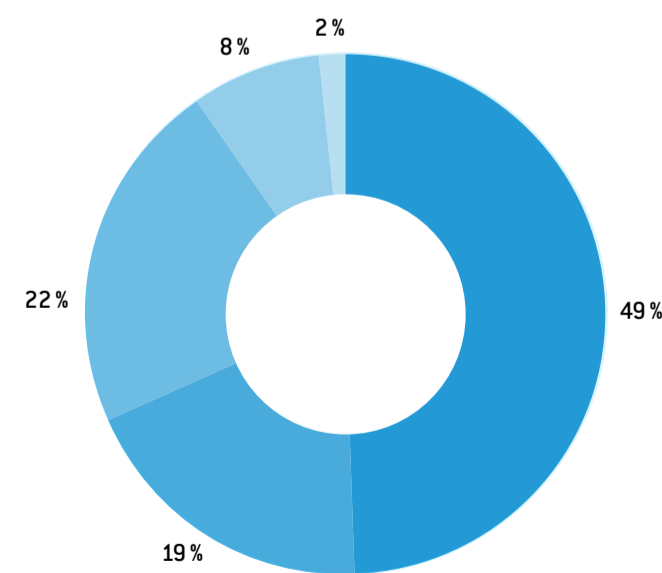
OPERATING BUDGET 2016

22.5 million euros

Total

3.5 million euros

Basic funding

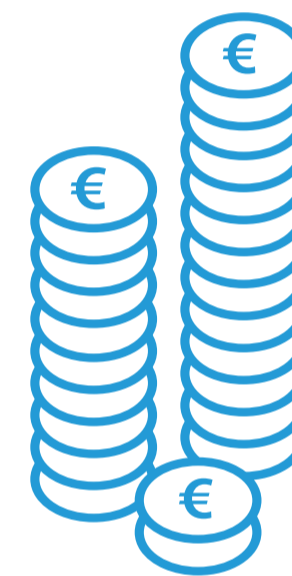


19.0 million euros

Earnings

▶ Total	19.0
▶ Public sector national	9.4
▶ Industry	3.6
▶ EU	4.2
▶ Other R&D	1.5
▶ Other earnings	0.3

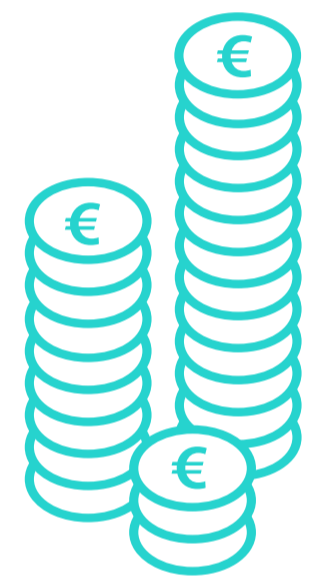
DEVELOPMENT OF TURNOVER in million euros



▶ 2016



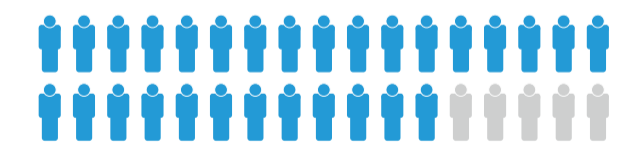
▶ 2015



▶ 2014

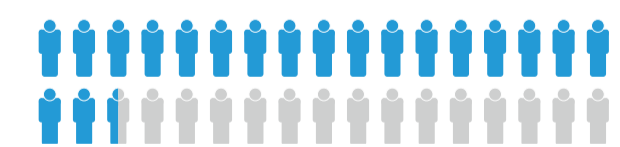
NUMBER OF STAFF

2016



Total

212



Scientists

150



Non-scientists

62

▶ 2016

▶ 2015

▶ 2014

ORGANIZATION

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SCIENTIFIC SUPPORT OF THE CLIMATE PROTECTION PLAN 2050

Germany has already set itself ambitious targets for medium- and long-term climate protection with its Energy Concept of September 2010: By the year 2020, greenhouse gas emissions are to be reduced by 40 percent and by 2050 by 80 to 95 percent compared to the year 1990. After a gap was discovered of around six to seven percent for the reduction target in the year 2020, the federal cabinet decided the "Action Program Climate Protection 2020" in December 2014. This program includes concrete measures to close the climate gap and key points to set up a "Climate Protection Plan 2050". This climate protection plan should contain intermediate targets necessary to reach the long-term climate protection target and develop concrete measures in a broad-based dialog process.

In order to set up the "climate protection plan 2050", the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) initiated a broad-based participation procedure with two groups: In the "stakeholder dialog", representatives from federal states, municipalities and interest groups developed proposals for strategic climate protection measures which should have an impact between 2020 and 2030. The second group consisted of selected citizens. In several dialog events between June 2015 and March 2016, both groups developed proposals for measures along five key fields of action for climate protection: energy industry, transport, buildings, industry as well as agriculture and land use.

Several institutes gave this dialog process and the development of the climate protection plan organizational and scientific support. Commissioned by the BMUB, Fraunhofer ISI together with the Öko-Institut (Institute for Applied Ecology) and IREES, supported the

project scientifically. This support included developing the scientific basis for setting the sectoral intermediate targets and emission paths leading to the 2050 target, accompanying the dialog events as experts, as well as evaluating the measures proposed as part of the dialog process.

The key result of the dialog process was the "Catalog of Measures 3.1", which was officially presented to the BMUB in March 2016. It contains roughly 100 strategic climate protection measures in the five fields of action. Fraunhofer ISI, together with its partners, evaluated all measures regarding their contribution to climate change mitigation, the costs to be expected and the economic benefit as well as possible synergies and conflicts with other policy areas. The most important five proposals for measures which came out of the citizen dialog were an international network for renewable energies, labeling products according to their ecological footprint, decentralizing energy production and distribution, tax incentives for climate-friendly transport as well as a catalog of measures for an agricultural transition.

The "Catalog of Measures 3.1" was an important basis for the actual "Climate Protection Plan 2050", which the BMUB developed following the dialog process in agreement with all the federal ministries involved. Even if the political decision-making process did not take up all the proposals from the participation procedure, a broad based dialog process, as set up for the first time by the BMUB for the "Climate Protection Plan 2050" and supported by Fraunhofer ISI, makes an important contribution to ensuring social acceptance of the long-term transformation of the energy system.

[Other projects of the Competence Center](#)

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BUSINESS UNITS

▶ Renewable energies

▶ Energy policy

▶ Climate policy

▶ Electricity markets and infrastructures

SCENARIO CALCULATIONS PROVIDE SUPPORT FOR THE DEVELOPMENT OF THE EU HEATING AND COOLING STRATEGY

The largest share of energy consumption in the European Union is accounted for by the provision of heat and cold, about 50 percent, even the share for mobility is significantly lower with 35 percent. At the same time, the use of renewable energies is increasing only slowly in most member states; particularly heat production is still dominated by the use of fossil fuels, such as gas, oil and coal.

The European Union has set itself ambitious energy and climate targets for the year 2030: reducing greenhouse gas emissions by a minimum of 40 percent compared to 1990, increasing the share of renewable energies to at least 27 percent, and raising energy efficiency by a minimum of 27 percent. If the EU wants to reach these targets, faster diffusion of renewable energies is necessary.

In order to fully support the use of renewable energy for heat production, the EU Commission proposed its highly regarded heating and cooling strategy in February 2016, which for the first time considered the heating and cooling sector as a whole.

Fraunhofer ISI strongly supported the EU Commission in the preparation of this strategy with the commissioned study "Mapping EU heat supply". The comprehensive energy balance for the heating and cooling sector of all EU countries, which was completed in the first part of the project, was used to develop the strategy on a sound data basis. Here, for example, it became apparent that, measured by the primary consumption for heat and cold production, just 18 percent are covered by renewable energies while natural gas accounts for a share of approximately 45 percent and is thus the most important energy source.

Furthermore, the project team coordinated by Fraunhofer ISI compiled the current status of the most important technologies for heat and cold production in all EU countries: 58 percent of coal-

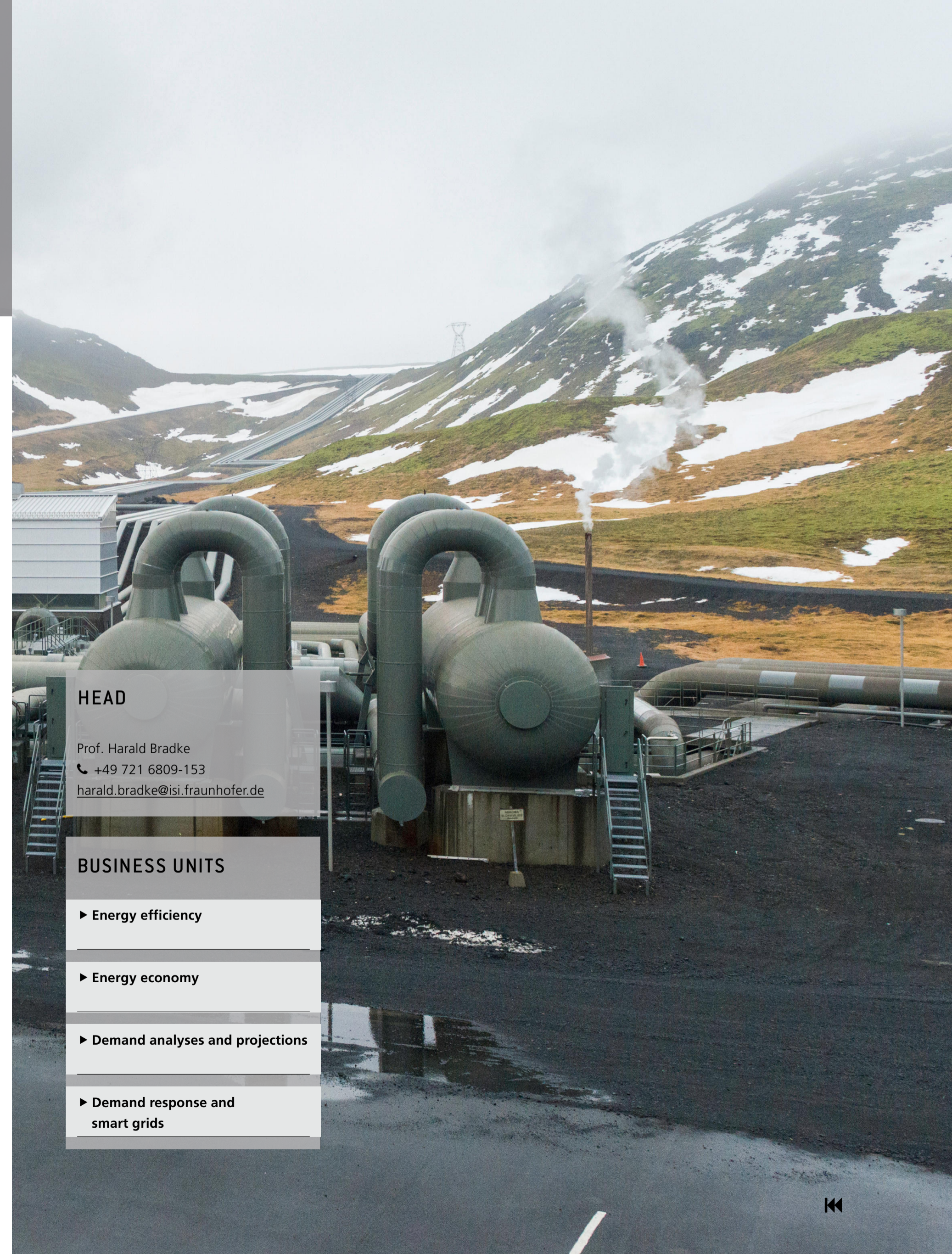
fired heaters, 45 percent of oil boilers and 22 percent of natural gas boilers are older than 23 years and have therefore exceeded their technical service life. Old systems also feature prominently in industry. More than half the steam turbines used for combined heat-and-power generation are more than 23 years old. On the one hand, these old plants entail great losses of efficiency; on the other hand, this is an opportunity to change from oil-fired heat production to renewable energies in the not too distant future as the old systems are due to be exchanged for age reasons.

The second part of the study will be published in spring 2017 and contains scenarios on the development of heat and cold supply of the EU until the year 2030 for the sectors buildings, industry and district heating. The scenarios are based on simulations using the energy system models FORECAST (developed by Fraunhofer ISI) Invert/EE-Lab and Green-X (both TU Wien). A particular focus was on possible funding instruments to increase the share of renewable energies. These scenarios have been included in current legislative initiatives of the EU Commission – this time in the EU Winter Package and the proposal to revise the Renewable Energies Directive.

In the past two years, the 500 page long study and an extensive annex has created the most comprehensive set of figures on the status quo of the energy consumption for heat and cold production in the EU and its development until 2030. In current projects in the EU research program Horizon 2020, Fraunhofer ISI builds on this foundation and continues research on possible paths to an EU-wide heat transition. The most important projects include Heat Roadmap Europe, progRESsHEAT and HotMaps.

All reports and data annexes of the project "Mapping EU heat supply" can be found on our [website](#).

[Other projects of the Competence Center](#)



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BUSINESS UNITS

- Energy efficiency
- Energy economy
- Demand analyses and projections
- Demand response and smart grids

TREND RADAR AND FUTURE IMAGES FOR THE MECHANICAL ENGINEERING INDUSTRY

In a longer term cooperation between the Mechanical Engineering Industry Association (VDMA) and the Fraunhofer Gesellschaft, the Competence Center Foresight of Fraunhofer ISI is working together with VDMA Future Business on a trend radar for mechanical engineering as well as future scenarios of different topic areas. The trend radar for mechanical engineering indicates societal, political, economic and technological developments currently on 50 trend cards and outlines the possible impacts for the mechanical engineering industry up to the year 2030. The trend cards support strategic foresight activities of the association members including the development of company-specific future scenarios.

“Machine Learning” and the artificial generation of knowledge though experience was the first topic, whose future development was looked at more closely. An artificial system learns from many examples and large unknown amounts of data which it can generalize and evaluate by itself. Machine Learning is an established subfield of artificial intelligence and its industrial use is already widely discussed in the US. However, up to now, only leading IT specialists have taken note of this technology in Germany and Europe.

Fast and extensive diffusion of the technology in the German mechanical engineering industry would entail huge changes. But when, to what extent and in what way will Machine Learning be introduced to the industry and particularly to customers and solution providers? And how can companies adapt to this development and profit from it?

In a scenario process, the following four future scenarios were developed in collaboration with experts in order to take account of the uncertainty regarding future developments and the need for information of mechanical engineering companies:

- ▶ “Avant garde wins”: Diverse co-operations lead to a triumph of Machine Learning in the mechanical engineering industry
- ▶ “Size matters”: Large companies use their vast data access as a competitive advantage for Machine Learning
- ▶ “Start SME networks”: Small and medium-sized enterprises advance the paradigm change
- ▶ “Digital steppe hinders”: Missing learning data, problems regarding data security and ethical concerns dominate in Europe

It has been found that the opportunities for German mechanical engineering companies to use Machine Learning range from the design and engineering process to administration, production up to operation management and reengineering. In all areas, the extensive integration of additional, innovative sensors in the components, systems and production lines as well as in the factory buildings will be a crucial element for success.

The existing competences in Germany for developing Machine Learning algorithms in research facilities offer a good starting point and in the long run should be brought closer together with German mechanical engineering expertise. In addition, access to operating data is a prerequisite for Machine Learning and accordingly improved possibilities to exchange data between companies would make spreading the technology easier.

Following Machine Learning, Fraunhofer ISI and the Mechanical Engineering Industry Association are developing further topics, for example, future materials scenarios. Their results will be presented at the Future Business Summit of the VDMA on 5 May 2017. Further information (in German) can be found on the [website of VDMA](#).

[Other projects of the Competence Center](#)

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BUSINESS UNITS

- ▶ **Future alternatives and society**
- ▶ **Futures thinking and dialogs**
- ▶ **Foresight for strategy development**

INNOVATIVE TECHNOLOGIES FOR INCREASED INDUSTRIAL RESOURCE EFFICIENCY

In its Sustainable Development Strategy, the German government aims for the continuous increase of raw material productivity for Germany until the year 2030. As shown in the German Resource Efficiency Program (ProgRess II), the economical use of resources is not only to protect the resources which are available in the future but also to ensure the supply of industrial raw materials. This is particularly important for the German government's 2020 High-Tech Strategy, which intends to maintain or even increase the competitiveness of Germany as a production location on a high level through a comprehensive, future-oriented innovation policy.

As part of the program "Research for Sustainable Development" (FONA), the Federal Ministry of Education and Research has so far initiated a total of four support measures whose key objective is to increase resource efficiency. Fraunhofer ISI is responsible for the accompanying research and has been part of these measures since the beginning.

The most recent measure "r+Impuls – Innovative technologies for resource efficiency – Impulses for industrial resource efficiency" started in 2016 and for the first time the focus is on more mature technologies. This measure is intended to accelerate industrial application and foster wider market entry. Fraunhofer ISI coordinates the accompanying research of "r+Impuls" under the name "r4 TeTra (technology transfer project)".

The research agenda includes issues which were already relevant in the previous measures. Among these are particularly activities which connect actors with each other as well as with their environment in order to enhance the innovation strength of the funded joint projects. Also issues which cut across sectors and technologies are dealt with – particularly the question as to what contribution the funded research projects make towards reaching the objectives of "r+Impuls".

Ecological effects such as the contribution to increase the raw material productivity, the dissemination potential of the used technologies as well as impacts on the economic development and employment in Germany are investigated. The assessment of the criticality of raw materials which have either been saved or substituted in the research projects is also examined for selected raw materials.

A special feature of "r+Impuls" is that it offers targeted support for new solutions for the transition from laboratory to the market. The accompanying and transfer project of Fraunhofer ISI therefore includes particular activities in connection with the higher level of maturity of the technologies supported in "r+Impuls" and their greater proximity to the market.

There are two key elements for this purpose: The first important element is the identification of challenges common to the different projects. The legal conditions for operating innovative process technology as well as business models for the sales of these installations have turned out to be relevant aspects.

The second important element also aims at supporting the funded enterprises in identifying application potentials of the technologies they have developed. The objective is to exploit the existing potentials as much as possible and to identify additional potentials which have not been taken into account so far.

Further information on the project can be found on the [website](#).

[Other projects of the Competence Center](#)



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BUSINESS UNITS

- ▶ Water resources management
- ▶ Sustainability innovation and policy
- ▶ Systemic risks
- ▶ Mobility

INTERNATIONAL POSITIONING OF EUROPE IN KEY TECHNOLOGIES AT RISK

In 2016, the Competence Center Emerging Technologies dealt with Europe's future competitiveness in the area of research and innovation. As part of a study for the department DG Research & Innovation of the European Commission, a number of aspects were considered which have to be looked at against the backdrop of the rise of China and the continuously high research output of the USA.

The research questions in the project "Study on EU Positioning: An Analysis of the International Positioning of the EU Using Revealed Comparative Advantages and the Control of Key Technologies" were: In which research and development areas will Europe be strong in the year 2020 and in which ones weaker?

On the one hand, the Key Enabling Technologies (KETs) identified by the European Commission were considered: advanced materials, advanced manufacturing technologies, photonics, industrial biotechnology, nanotechnology as well as micro- and nano-electronics. On the other hand, the Societal Challenges defined within the research program Horizon 2020 were looked at: health, nutrition, energy, transport, climate, security as well as forestry/agriculture and the bio-economy.

In order to adequately answer the research questions, the scientists carried out several analysis steps. First of all, they examined the current strengths and weaknesses of the European research and innovation portfolios in the international context. They then calculated Europe's position in the year 2020 on the basis of insights into possible future key technologies and an impact analysis of current European research support using a scenario approach.

As is customary for calculations of international comparative advantages, the scientists used mainly statistics on business expenditure for research and development (R&D) as well as publication and patent data for the scenario analysis. In addition to quantitative

methods, from which current trends can be derived, qualitative methods were also used: For example, in order to identify potentially disruptive developments (game changers), more than 30 international expert interviews were conducted.

The most important result of the study is that Europe's position in the area of research and innovation, which is currently strong, is at risk in the future. The main reasons are that Asian technology regions are catching up rapidly and that the US will keep its lead as regards digitalization. Currently, Europe still has advantages in aerospace, Industry 4.0, the Internet of Things and particularly in climate research, transport and energy. However, these advantages could diminish because other world regions, especially China, increasingly strategically support and expand these areas.

As the various research and innovation activities in Europe cannot be translated automatically into comparative advantages on a global scale, the authors of this study recommend that Europe specializes more. In order to identify the right core areas, their recommendations include increasing Europe's strategic intelligence, for example, by making use of scientific scenario processes, or by supporting pre-competition cooperation with other world regions.

The publication "Study on EU Positioning: An Analysis of the International Positioning of the EU Using Revealed Comparative Advantages and the Control of Key Technologies" can be downloaded [here](#).

[Other projects of the Competence Center](#)

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BUSINESS UNITS

▶ Bioeconomy and life sciences

▶ Innovations in the health system

▶ Information and communication technologies

▶ Industrial Technologies

HOW CAN SUPPLIERS' INNOVATION CAPABILITY BE ASSESSED?

For the project “DBInnoSupply”, Fraunhofer ISI developed an approach which integrates the criterion “Innovation as an assessment and development indicator” of existing as well as potential supply companies into the existing supplier management of Deutsche Bahn AG. The approach, which can also be adapted and applied to other companies, facilitates the identification of important innovation potentials of supplier companies, which can be exploited more within strategic development partnerships. It also stimulates suppliers' innovation activities with the aim of improving the regular suppliers' performance in the long term.

The developed approach comprises the following partial results:

As part of the project, a complex measuring and assessment instrument was developed at Fraunhofer ISI, which enables Deutsche Bahn AG to continually identify and assess the ability to innovate of more than 15,000 suppliers. The instrument outlines a science-based assessment and measuring approach, which is unique in practice, and suitable to take the entire range of the operational innovation process into account. It can analyze the ability to innovate of the different “clusters” of suppliers regarding their current and future performances for Deutsche Bahn AG. In addition to selecting respective suppliers for certain innovative orders, it also serves to realize and systematically use possibilities for the exploitation and expansion of innovation potential as well as to identify fields of action to increase their innovation capability as part of the existing supplier development program of the company. By using this instrument, suppliers also receive an external evaluation of their innovation processes, which they can use as a basis to optimize and fine-tune these processes for key customers.

As part of the reorientation of the supplier management at Deutsche Bahn AG, an Innovation Award was presented for the first time in September 2016 at the “InnoTrans” in Berlin to particularly innovative and outstanding supplier companies. Fraunhofer ISI elaborated the concept for the award, organized and carried out the application process, and developed an approach to evaluate technologically totally different applications. Fraunhofer ISI also conducted the first assessment phase and organized and accompanied all the other assessment phases as part of the award at Deutsche Bahn AG. The instrument to measure and assess was a conceptual pillar of the award. Furthermore, a systemic evaluation approach with four main and 20 subcriteria as well as three different assessment methods were applied which enabled the assessment of the submitted, technologically totally different innovative performances throughout five process phases.

During the final analysis of the adaptability of the developed approach, it was proved together with Deutsche Bahn AG that the “innovation capability” as a new suitability criterion as well as “innovative performance of the project” as a new award criterion can be operationally linked to the existing systematics of the DB supplier management. In addition to formal aspects, this also encompassed the possibility of the IT technical integration of the developed instrument and the reference to existing logics, structures and weightings and algorithms.

More information can be found on our [website](#).

[Other projects of the Competence Center](#)



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BUSINESS UNITS

► Policy design and evaluation

► Industrial innovation

► Regional innovation systems

► Innovation indicators

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Director Research & Development of DSM Nutritional Products, Basel, Curator until December 2016
- ▶ **Dr. Andrea Frenzel**
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- ▶ **Dr. Peter Fritz**
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- ▶ **Dr. Heike Hanagarth**
Senator of the Helmholtz-Gemeinschaft of the Research Field "Aeronautics, Space and Transport" and former chairwoman of Technology and Environment of Deutsche Bahn AG
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Head of Innovation Networks and Public Funding of R&D of Freudenberg & Co.KG, Weinheim
- ▶ **Dr. E. h. Manfred Wittenstein**
Chairman of the board of Wittenstein AG and former president of the Association of German Machinery and Plant Manufacturers e. V., Igersheim
- ▶ **Engelbert Beyer**
Head of Department 11 "Innovation strategies" in the Federal Ministry of Education and Research, Berlin
- ▶ **Professor Beat Hotz-Hart**
Member of the science team on ETH Board, Zurich, Curator until December 2016
- ▶ **Michael Kleiner**
Head of Department III "Research, Technology transfer, E-Science, International" at the Ministry of Science, Research and the Arts Baden-Wuerttemberg, Stuttgart, Curator until July 2016
- ▶ **Dr. Peter Mandler**
Head of Department 71 "Questions of Principle of Industrial and Technology Politics" and Deputy Head of Department 7 "Industry, Innovation and Technology Transfer" at the Ministry of Finance and Economy Baden-Wuerttemberg, Stuttgart

GROUPS AND ALLIANCES | ACADEMIC TEACHING | DISSERTATIONS

GROUPS AND ALLIANCES

Fraunhofer ISI is a member of the Fraunhofer groups:

- ▶ Materials and Components Group
- ▶ Group for Defense and Security (Guest)

Fraunhofer ISI is part of the Fraunhofer Alliances:

- ▶ Batteries
- ▶ Big Data
- ▶ Energy
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- ▶ SysWasser
- ▶ Transport

ACADEMIC TEACHING

Daniel Bachlechner

SEMINAR
Management von Informationssystemen
University of Innsbruck, Austria

Harald Bradke

LECTURE
Energiewirtschaftliche Aspekte der Energietechnik I
University of Kassel

SEMINAR

Energiewirtschaftliche Aspekte der Energietechnik II
University of Kassel

Sibylle Braungardt

LECTURE
Renewable Energies
Karlsruhochschule International University, Karlsruhe

LECTURE

Climate and Energy Policy
University of Freiburg

Barbara Breitschopf

GUEST LECTURE
Economic Instruments
Vrije Universiteit Amsterdam, Netherlands

LECTURE

Renewable Energy
Karlsruhochschule International University, Karlsruhe

LECTURE

Resource Economics
Karlsruhe Institute of Technology

Kerstin Cuhls

SEMINAR
Methodologische Grundlagen der Zukunftsforschung
Freie Universität Berlin

SEMINAR

Implementation von Forschungsergebnissen aus der Zukunftsforschung
Freie Universität Berlin

Ewa Dönitz

SEMINAR
Innovationswerkstatt: Innovations- und Projektmanagement
Femtec Berlin

Vicki Duscha

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University of Freiburg

Elisabeth Dütschke

LECTURE CONTRIBUTION
Renewable Energy
Karlsruhochschule International University, Karlsruhe

Wolfgang Eichhammer

LECTURE + SEMINAR
EU Energy Efficiency Policy
Utrecht University, Netherlands

Rainer Elstrand

LECTURE
Energiewirtschaft I / Energienachfrage
Offenburg University of Applied Sciences

LECTURE

Rationelle Energieanwendung der Industrie
University of Koblenz-Landau

LECTURE

Analyse der Energiebereitstellung und -umwandlung
University of Koblenz-Landau

LECTURE

Einführung in die VWL, Mikroökonomik I
Baden-Wuerttemberg Cooperative State University, Lörrach

Tobias Fleiter

LECTURE
Energy Policy
Helmholtz Research School Energy Scenarios, Karlsruhe

Till Gnann

SEMINAR
Elektromobilität – Konzepte, Treiber und Potenziale
Karlsruhe Institute of Technology

Matthias Gotsch

LECTURE
Strategisches Management
Baden-Wuerttemberg Cooperative State University, Karlsruhe

LECTURE

Innovationsökonomik
Karlsruhe University of Applied Sciences

Bruno Gransche

SEMINAR
Erzählte Zukünfte – Narrationen in der Zukunftsforschung
Karlsruhe Institute of Technology

Anne Held

LECTURE
Energy Industry Management
Karlsruhochschule International University, Karlsruhe

Nils Heyen

SEMINAR
Einführung in die Medizinsoziologie
University of Konstanz

SEMINAR

Technik und Gesellschaft
Furtwangen University

Simon Hirzel

LECTURE
Energy Efficiency
Karlsruhochschule International University, Karlsruhe

Petra Jung Erceg

LECTURE
Personalentwicklung für Dienstleistungen
Karlsruhe University of Applied Sciences

LECTURE

Dienstleistungsökonomik
Karlsruhe University of Applied Sciences

Marian Klobasa

LECTURE
Windenergie
University of Freiburg

Daniel J. Koch

SEMINAR
Methoden im Innovationsmanagement
Karlsruhe Institute of Technology

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Technologien im Innovationsmanagement
Karlsruhe Institute of Technology

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Technologiebewertung
Karlsruhe Institute of Technology

Knut Koschatzky

SEMINAR
Innovationssysteme in räumlicher und sektoral-technologischer Perspektive – Wissenschaftliche und politische Weiterentwicklungen
Leibniz Universität Hannover

SEMINAR

Aufgaben und Rollen von Forschungseinrichtungen in nationalen und regionalen Innovationssystemen
Leibniz Universität Hannover

Christian Lerch

LECTURE
Dienstleistungsökonomik
Karlsruhe University of Applied Sciences

Simon Marwitz

SEMINAR
Auslegungen von Stromnetzen
University of Applied Sciences Bingen

Cornelius Moll

SEMINAR
Schwerpunkt-Seminar Marketing/ Management-Insights
University of Hohenheim

Peter Neuhäusler

TUTORIAL
Management neuer Technologien – Technikbewertung mit Patentanalysen
Karlsruhe Institute of Technology

Jose Ordenez

LECTURE
Renewable Energies
Karlsruhochschule International University, Karlsruhe

Matthias Pfaff

LECTURE
Einführung in die VWL, Mikroökonomik I
Baden-Wuerttemberg Cooperative State University

Benjamin Pfluger

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Karlsruhochschule International University, Karlsruhe

Patrick Plötz

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Elektromobilität – Konzepte, Treiber und Potenziale
Karlsruhe Institute of Technology

LECTURE

Quantitative Methoden der Energiewirtschaft
Karlsruhe Institute of Technology

Martin Pudlik

LECTURE
Renewable Energy Policy, Modelling and Analysis of Potential
University of Cranfield, Great Britain

LECTURE

Renewable Energy Policy, Modelling and Analysis of Potential
University of Freiburg

Mario Ragwitz

LECTURE
Climate and Energy Policy
University of Freiburg

LECTURE

Wind Energy
University of Freiburg

Thomas Reiß

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Management neuer Technologien
Karlsruhe Institute of Technology

Karoline Rogge

LECTURE
Introduction to Energy Policy
University of Sussex, Brighton, Great Britain

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German energy transition
University of Sussex, Brighton, Great Britain

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Technological Innovation Systems
University of Sussex, Brighton, Great Britain

Clemens Rohde

LECTURE
Energieeffizienz
Technische Universität Darmstadt

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Grundlagen des Planens, Entwerfens und Konstruierens – Energie und Ressourcenmanagement
Technische Universität Darmstadt

Joachim Schleich

LECTURE
Advanced Econometrics
Grenoble Ecole de Management, France

LECTURE

Energy Economics
Grenoble Ecole de Management, France

LECTURE

Business Economics
Grenoble Ecole de Management, France

Ulrich Schmoch

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Techniksoziologie
Karlsruhe Institute of Technology

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Innovation & Transfer
German University of Administrative Sciences, Speyer

Torben Schubert

LECTURE
Globalization of Innovation
Lund University, Schweden

Rainer Walz

LECTURE
Umweltökonomik und Nachhaltigkeit
Karlsruhe Institute of Technology

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Karlsruhe Institute of Technology

Marion A. Weissenberger-Eibl

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Aktuelle Themen im Innovationsmanagement
Karlsruhe Institute of Technology

LECTURE

Innovationsmanagement: Konzepte, Strategien und Methoden
Karlsruhe Institute of Technology

Martin Wietschel

LECTURE
Energiepolitik
Karlsruhe Institute of Technology

LECTURE

PhD Program KIC: Energy models – supply and demand side
Grenoble Ecole de Management, France

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Themenfelder Energie und Umwelt
Karlsruhe Institute of Technology

LECTURE

Technologischer Wandel in der Energiewirtschaft
Karlsruhe Institute of Technology

LECTURE

Energy Efficiency – Demand side
Hector School, Karlsruhe

DISSERTATIONS

Piret Fischer (née Kukk)

Complexities in Building Innovation Systems. The Case of Radical Medical Technologies
Prof. Marko Hekkert
Prof. Ellen Moors
Utrecht University, Netherlands

Victoria Kayser

Extending the Knowledge Base of Foresight. The Contribution of Text Mining.
Dr. Knut Blind
Technische Universität Berlin

André Kühn

Ökologische und ökonomische Effekte einer Regionalisierung der Automobilzulieferer – ein systemdynamisches Wirkungsmodell
Prof. Heike Flämig
Hamburg University of Technology

Katharina Mattes

Materialeffizienzinnovationen in Betrieben des Verarbeitenden Gewerbes – Eine ganzheitliche Analyse der Adoptionsfaktoren
Prof. Carsten Dreher
Freie Universität Berlin

Kristin Reichardt

The policy mix and its role for innovation: Insights from offshore wind in Germany
Prof. Marko Hekkert
Universität Utrecht, Niederlande

Uta Schneider

Und wenn das Auto elektrisch wäre: Eine Studie zur prägenden Wirkung von Mobilitätsleitbildern in Familien
Prof. Günter Burkart
Leuphana University of Lüneburg

PRESENTATIONS | PROJECTS

Examination of international trade flows of copper

► Joint Statistical Committee / Environmental and Economic Committee / Industry Advisory Panel Meeting, International Copper Study Group, Lisbon, Portugal

Axel Thielmann

Trends, markets and business scenarios of battery-based energy storage for electric vehicles and stationary applications
► Advanced Automotive Battery Conference (AABC) Europe, Mainz

Potenziale für Innovation und Kostensenkung in der Elektromobilität: Folgerungen aus dem Batterie-Roadmapping
► Fach- und Ideenkonferenz der Bundesregierung 2016; Das Elektroauto – Extravaganz für wenige oder automobiler Normalität der Zukunft, Berlin

Speicher-Roadmap 2030: Entwicklungsperspektiven für die stationäre Energiespeicherung

► Photovoltaic Association (PVA) Speichertagung, Vienna, Austria

Jakob Wachsmuth

How energy efficiency cuts costs for a 2-degree future
► After COP21: Potentials and policies for energy efficient decarbonisation, Brussels, Belgium

Rainer Walz

Innovationen – Komplexität beherrschen, Zukunft gestalten.
► Innovationen – mit Mut in eine nachhaltige Zukunft, 25 Jahre DBU, Berlin

Towards empirical modelling of innovation system dynamics: an integrated TIS-MLP approach.

► New Developments in Eco-Innovation Research, ZEW, Mannheim

Innovations for reaching the green SDG – will they come from the North or South?

► Annual Globelics Conference, Bandung, Indonesia

Marion A. Weissenberger-Eibl

Innovationsindikator 2015 – Ergebnisse und Fokusthema 2016: Digitalisierung

► BDI – Ausschuss für Forschungs-, Innovations- und Technologiepolitik, Berlin
Innovation und Vielfalt
► NOW-Netzwerk, Heidelberg

Julius Wesche

Policy change driven by niche advocacy coalitions – The German residential heat case
► 7th International Sustainable Transitions Conference, Wuppertal

Martin Wietschel

Elektrifizierungsstrategien im Lkw-Bereich
► Kolloquium Das neue Auto – elektrisch, automatisiert, vernetzt. Technische Akademie Esslingen, Esslingen

Stand des Markthochlaufes der Elektromobilität

► Kongress Forum Elektromobilität, Berlin

Elektrifizierung auf Europas Straßen – Status Quo und Perspektive

► Innovation mit Tradition – Metzler meets Fraunhofer, Frankfurt

Jenny Winkler

Technische Besonderheiten von Kapazitätsmärkten
► Dornburger Energiegespräche, Jena

Fördersysteme für erneuerbare Energien im Stromsektor

► Schiedsverfahren und Erneuerbare Energien, Munich

Impact of Renewables on Electricity Markets – Do Support Schemes Matter?

► 33^{ème} séance du séminaire de recherche en économie de l'énergie de Paris-Sciences-Lettres, Paris, France

Andrea Zenker

Beyond smart specialisation: New insights for regional innovation policies

► 16th Conference of the International Joseph A. Schumpeter Society (ISS), Montreal, Canada

PROJECTS

ENERGY POLICY AND ENERGY MARKETS

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RE-frame: Untersuchung der Zusammenhänge zwischen den bestehenden politischen Rahmenbedingungen und dem zukünftigen Ausbau erneuerbarer Energien sowie deren Kapitalkosten im länderübergreifenden Kontext der Energiewende in den EU-Mitgliedsstaaten
Inga Boie

• DIA-CORE: Policy Dialogue on the assessment and CONvergence of RES policy in EU Member States
Inga Boie

• CSP_Exec_Agency: The Middle East and North Africa Concentrated Solar Power Knowledge and Innovation Program
Inga Boie

• BRISKEE: Behavioural Response to Investment Risks in Energy Efficiency
Sibylle Braungardt

• CHEETAH: Changing Energy Efficiency Technology Adoption in Households
Sibylle Braungardt

• Klimaschutzszenario 2050
Sibylle Braungardt

• ImpRES: Analyse zu übergreifenden einzel- und gesamtwirtschaftlichen Nutzen- und Verteilungswirkungen des Ausbaus EE unter Berücksichtigung der Wechselwirkungen zwischen den Bereichen Strom, Wärme und Verkehr
Barbara Breitschopf

• EnPriC: Analysis of energy prices and costs in the EU, its Member States and major trading partners
Barbara Breitschopf

• Energiewende: Makroökonomische Wirkungen und Verteilungsfragen der Energiewende
Barbara Breitschopf

• EnerNor: Electricity Costs of the Aluminium Industry in Norway – in comparison to industries in selected countries
Barbara Breitschopf

• RES-Observer: Technical Assistance in Monitoring and Analysis of Renewable Energy Data for the Period 2016–2020
Barbara Breitschopf

• ETS-Modelle: Modellierung des Emissionshandels im Kontext europäischer energie- und klimapolitischer Maßnahmen: Markt und Machbarkeitsstudie für ETS-spezifische Modelle
Vicki Duscha

• ETS-VKK: Modellierung des Emissionshandels im Kontext europäischer energie- und klimapolitischer Maßnahmen: Entwicklung von ETS-spezifischen Vermeidungskostenkurven
Vicki Duscha

• Low-Carbon Europe: Entwicklung ambitionierter Klimaschutzszenarien unter Berücksichtigung von Energieversorgungssicherheit, Nachhaltigkeit und Wettbewerbsfähigkeit
Vicki Duscha

• MinderungPost2020: Minderungsverpflichtungen und faire Lastenteilung in einem neuen umfassenden Klimaschutzabkommen ab 2020
Vicki Duscha

• 2^oEuropa: Unterstützung der Entwicklung ambitionierter Klimaschutzszenarien in Europa
Vicki Duscha

• Ambition2020: Instrumente zur Erhöhung weltweiter Klimaschutzanstrengungen vor 2020 – ökonomische und politische Implikationen in ausgewählten Industrie- und Schwellenländern
Vicki Duscha

• ETS 7: Evaluierung und Weiterentwicklung des EU-Emissionshandels aus ökonomischer Perspektive für die Zeit nach 2020 (EU-ETS-7)
Vicki Duscha

• ODYSSEE-MURE: a decision support tool for energy efficiency policy evaluation
Wolfgang Eichhammer

• Assessment ETS Benchmarks: Assessment of the first years of the functioning of the new allocation system based on benchmarks
Wolfgang Eichhammer

• ETSKorea: Implementation of an Emission Trading System (ETS) in the Republic of Korea
Wolfgang Eichhammer

• EED Implementation Luxembourg: Unterstützung bei der Umsetzung der Energieeffizienz-Richtlinie der EU (EED) in Luxemburg und Erstellung des nächsten Nationalen Energieeffizienzplans für Luxemburg
Wolfgang Eichhammer

• TransNIK: Transitionsgestaltung für nachhaltige Innovationen – Initiativen in den kommunal geprägten Handlungsfeldern Energie, Wasser, Bauen & Wohnen
Nele Friedrichsen

• BMUB_Klimaschutzfragen: Wissenschaftliche Analysen zu aktuellen klimapolitischen Fragen
Nele Friedrichsen

• ETS 6: Untersuchung der klimapolitischen Wirksamkeit des Emissionshandels – Erweiterte Analysen
Nele Friedrichsen

• EU Governance: Wissenschaftliche Unterstützung zu Fragen der Entwicklung eines Governance-Systems für den 2030 Klima- und Energierahmen
Anne Held

• Towards2030-dialogue: Dialogue on a RES policy framework for 2030
Anne Held

• Pre2020-Initiativen: Bewertung des THG-Minderungsbeitrags von globalen, regionalen und nationalen Initiativen außerhalb von UNFCCC bis 2020
Jan Kersting

• Leitstudie: Langfristszenarien und Strategien für den Ausbau der Erneuerbaren Energien in Deutschland unter besonderer Berücksichtigung der nachhaltigen Entwicklung sowie regionaler Aspekte
Benjamin Pfluger

• BMWi Klimaschutz: Auswirkungen der Klimaziele und diesbezüglicher Maßnahmen auf den Energiesektor und den Ausbau der erneuerbaren Energien
Benjamin Pfluger

• Leitstudie Strommarkt: Erneuerbare Energien als Leitlinie für das Marktdesgin der Zukunft – Untersuchung zu Leistungsfähigkeit und Weiterentwicklungsoptionen der Strommärkte für die effektive und effiziente Integration erneuerbarer Energien
Martin Pudlik

• Dezentrale PV: Potenziale und Anwendungsoptionen von dezentralen Photovoltaik-Anwendungen in Schwellen und Entwicklungsländern
Martin Pudlik

• ZAYED_GOBITEC: Chancen und Risiken von Gobitec und dem asiatischen Supergrid – Stakeholder-, Verbrauchs- und Kostenanalyse im asiatischen Raum
Martin Pudlik

• R&D Südkorea: Energy Research Network Südkorea
Martin Pudlik

• GIZ EE Mexico: Nachhaltige Energien Mexico
Martin Pudlik

• GIZ AEO5: Support to the Development of the 5th ASEAN Energy Outlook (AEO5)
Martin Pudlik

• LUX-RES II: Wissenschaftliche Beratung zu Fragen der Energiestrategie Luxemburgs mit besonderem Fokus auf Erneuerbare Energien
Mario Ragwitz

• DFID – RES: Applied Research on Energy and Economic Growth
Mario Ragwitz

• NL Review 2016: 2016 review of Dutch renewable energy tariffs
Mario Ragwitz

• PATHWAYS: Exploring transition pathways to sustainable, low carbon societies
Karoline Rogge

• EU-China ETS: EU-China ETS Joint research activity
Karoline Rogge

• Aktionsplan Energieeffizienz: Entwicklung eines Konzepts für das Erreichen der nationalen Energieeinsparziele bis 2020 und bis 2050 auch unter Berücksichtigung relevanter EU-Vorgaben im Kontext einer ganzheitlichen Klima- und Energiepolitik
Barbara Schломann

• BMWi Energieeffizienzfonds: Evaluierung und Weiterentwicklung des Energieeffizienzfonds
Barbara Schломann

• Grundsatzstudie Energieeffizienz: Grundsatzfragen der Energieeffizienz und wissenschaftliche Begleitung der Umsetzung des Nationalen Aktionsplans Energieeffizienz unter besonderer Berücksichtigung von Stromverbrauchsentwicklung und -maßnahmen
Barbara Schломann

• R&D Südkorea: Energy Research Network Südkorea
Martin Pudlik

• EU-Parliament_Energy-poverty: Energy efficiency for low-income households
Barbara Schломann

• BMWi – NAPE 2.0: Grünbuch / NAPE 2.0
Barbara Schломann

• Klimaschutzplan 2050: Wissenschaftliche Unterstützung, Erstellung und Begleitung Klimaschutzplan 2050
Barbara Schломann

• Politikszenerarien VIII: Verbesserung der methodischen Grundlagen und Erstellung eines Treibhausgasemissionsszenarios als Grundlage für den Projektionsbericht 2017 im Rahmen des EU Treibhausgasmonitorings
Barbara Schломann

• Leitstudie Strommarkt 2: Leitstudie Strom – Analysen für eine sichere, kosteneffiziente und umweltverträgliche Stromversorgung
Frank Sensfuß

• SET-Nav: Navigating the Roadmap for Clean, Secure and Efficient Energy Innovation
Frank Sensfuß

• EUPEF: Review of the default primary energy factor (PEF) reflecting the estimated average EU generation efficiency referred to in Annex IV of Directive 2012/27/EU and possible extension of the approach to other energy carriers
Frank Sensfuß

• ESPON: Territories and low-carbon economy
Jan Steinbach

• EEWärmeG Erfahrungsbericht: Wissenschaftliche Analyse des Wärme- und Kältemarkts und Vorbereitung des Erfahrungsberichts zum EEWärmeG
Jan Steinbach

• Grünbuch AT: Erstellung eines Grünbuchs für eine Energie- und Klimastrategie als Grundlage für einen Konsultationsprozess
Jan Steinbach

PROJECTS

- AURES: Auctions for Renewable Energy Support: Effective use and efficient implementation options
Simone Steinhilber

- Support for Consultation on RED II
Simone Steinhilber

- International Auctions for Renewables
Simone Steinhilber

- Gas-Roadmap: Roadmap Gas für die Energiewende – Nachhaltiger Klimabeitrag des Gassektors
Jakob Wachsmuth

- Zielarchitektur Energiewende: Wirkung der Maßnahmen der Bundesregierung innerhalb der Zielarchitektur zum Umbau der Energieversorgung
Jakob Wachsmuth

- DecarbEE: The contribution of energy efficiency to reducing the cost of decarbonization
Jakob Wachsmuth

- Zukunftswerkstatt Erneuerbare Energien
Jenny Winkler

- PV EU-Parlament: Solar energy policy in the EU and the Member States, from the perspective of the petitions received
Jenny Winkler

- EE-Ausschreibungsdesign: Unterstützungsleistungen bei der Ausgestaltung eines Ausschreibungssystems für erneuerbare Energien
Jenny Winkler

- EEG-Öffnung: Unterstützungsleistungen bei der Ausgestaltung zur Öffnung von Fördersystemen für Strom aus Erneuerbaren Energien, für im Ausland erzeugten Strom
Jenny Winkler

- Ausschreibung KWK: Unterstützungsleistung bei der Ausgestaltung von Ausschreibungen für KWK
Jenny Winkler

- MVV PV+ Speicher: Marktdiffusion von PV-Anlagen mit Batteriespeichern
Katharina Wohlfarth

ENERGY TECHNOLOGY AND ENERGY SYSTEMS

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- UBA Exergie: Exergie und Wirtschaft
Ali Aydemir

- LEEN 100: Lernende Energieeffizienz-Netzwerke – Anschlag auf dem Weg zu 100 und mehr Netzwerken
Harald Bradke

- Vernetzte Mobilität: Begleitforschung Vernetzte Mobilität der Modellregionen Elektromobilität des BMVI
Elisabeth Dütschke

- DiffusionEE: Modellierung individueller Entscheidungsprozesse und des Einflusses von Intermediären bei der Diffusion von Energieeffizienzmaßnahmen und Erneuerbaren Energien im Gebäudebereich
Elisabeth Dütschke

- WISE Power: Fostering social acceptance of wind power
Elisabeth Dütschke

- HYACINTH: Hydrogen ACceptance IN the Transition pHase
Elisabeth Dütschke

- Digi-Label: Delivering digital Energy Labelling solutions to enable consumer action on purchasing energy efficient appliances?
Elisabeth Dütschke

- Regionale Stromverbräuche NEP: Netzentwicklungsplan Strom
Rainer Elsland

- Versorgungssicherheitsbericht: Definition und Monitoring der Versorgungssicherheit an den europäischen Strommärkten von 2017 bis 2019
Rainer Elsland

- UBA Sektorkopplung Recht: Integration erneuerbarer Energien durch Sektorkopplung
Anke Eßer

- BMWi-Interkonnektoren: Ziele, Anreize und Hemmnisse für den grenzüberschreitenden Ausbau der Stromnetze
Anke Eßer

- Energiesystemanalyse: Dekarbonisierung des Energiesystems durch verstärkten Einsatz erneuerbaren Stroms im Wärme-, Verkehrs- und Industriesektor bei gleichzeitigen Stilllegungen von Kraftwerken – Auswirkungen auf die Versorgungssicherheit in Süddeutschland (DESK)
Anke Eßer

- FORECAST Brazil: Long-term electricity demand (hourly and annual) forecast in Brazil until 2050
Tobias Fleiter

- FORECAST 2015: FORECAST scenario analysis 2015
Tobias Fleiter

- E.ON Kurzfristmodellierung: FORECAST model extension: short-term simulation
Tobias Fleiter

- Engie-EnEff French Industry: Bottom-up estimation of quantitative energy efficiency trends by industrial sub-sector until 2035
Tobias Fleiter

- BW Klimaschutz: Energie- und Klimaschutzziele 2030
Tobias Fleiter

- progRESsHEAT: Supporting the progress of renewable energies for heating and cooling in the EU on a local level
Tobias Fleiter

- Mapping EU heat supply: Mapping and analyses of the current and future (2020–2030) heating/cooling fuel deployment (fossil/ renewables)
Tobias Fleiter

- Heat Roadmap Europe (HRE): Building the knowledge, skills, and capacity required to enable new policies and encourage new investments in the heating and cooling sector
Tobias Fleiter

- HotMaps: Heating and Cooling – Open Source Tool for Mapping and Planning of Energy Systems
Tobias Fleiter

- FIS: Inhaltliche Pflege und Bearbeitung von Themengebieten des Forschungs-Informations-Systems (FIS) des BMVI Los 4
Simon Funke

- MKS H2-LKW: Brennstoffzellen-LKW – kritische Entwicklungshemmnisse, Forschungsbedarf und Marktpotenzial
Till Gnann

- SYSTLOES: Business Development
Tim Hettesheimer

- EnArgus II: EnArgus2.0 – Zentrales Informationssystem Energieforschungsförderung – Teil: Gebäude, Städte, Biogas
Simon Hirzel

- Amprion Zukunft Last: Struktur der elektrischen Last und Potenziale zur Laststeuerung
Marian Klobasa

- BMWi – Netzentgelte: Optionen zur Weiterentwicklung der Netzentgeltsystematik für eine sichere, umweltgerechte und kosteneffiziente Energiewende
Marian Klobasa

- DENA-LastFlex: Erstellung einer Studie zu den Möglichkeiten für grenzüberschreitenden Handel mit lastseitigen Flexibilität in Deutschland, Frankreich, Schweiz und Österreich im Rahmen des Pilotprojekts Demand Side Management Baden-Württemberg
Marian Klobasa

- KomMA-P: Komplementäre Nutzung verschiedener Energieversorgungskonzepte als Motor gesellschaftlicher Akzeptanz und individueller Partizipation zur Transformation eines robusten Energiesystems
Marian Klobasa

- Flex MVV: Gekoppelte Optimierung von Flexibilität in Energieerzeugung sowie Verbrauch unter Berücksichtigung der Auskopplung in andere Märkte (Wärme)
Marian Klobasa

- EnSYS-FlexA: Flexible Nachfrage als wichtiger Beitrag zur Energiewende und Baustein in der Energiesystemanalyse – EnSYS-FlexA
Marian Klobasa

- DV+EEG-Erfahrungsbericht: Vorbereitung und Begleitung bei der Erstellung eines Erfahrungsberichtes gemäß §97 Erneuerbare-Energien-Gesetz (EEG 2014)
Marian Klobasa

- Gutachten zuschaltbare Lasten für das Ministerium für Energiewende, Umwelt, Landwirtschaft und ländliche Räume des Landes Schleswig-Holstein
Marian Klobasa

- KWK Luxemburg: Bewertung des Potenzials für den Einsatz der hocheffizienten KWK und der effizienten Fernwärme- und Fernkälteversorgung – Comprehensive Assessment
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- EnergiestiftungBW Lastverschiebepotenzial: Bewertung des Lastverschiebepotenzials von Elektrofahrzeugen in Deutschland unter Berücksichtigung differenzierter Haltegruppen und Ladeinfrastrukturen im Vergleich zu anderen flexiblen Verbrauchern
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- AVerS: Analyse der Versorgungssicherheit in Süddeutschland unter Berücksichtigung der europaweiten Kopplung der Strommärkte
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- REFLEX: Analysis of the European energy system under the aspects of flexibility and technological progress
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- emobilBW-Gutachten-LIS: Öffentliche Ladeinfrastruktur in Baden-Württemberg
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- Schnellladeinfrastruktur: Standortkonzepte für Schnellladeinfrastruktur in der Region Stuttgart
Patrick Plötz

- Get-e-Ready: Betreibermodell Elektroflotten in Stuttgart
Patrick Plötz

- MKS HO-BUS: Machbarkeit von HO-Busverkehr in Deutschland – am Beispiel Marburg und Trier
Patrick Plötz

- EE Facility: Energy Efficient Products Facility
Clemens Rohde

- DG Ener – EnEff Invest: Delivering informed investment decisions for energy efficiency investments through accessible data, standardized procedures and benchmarking of performance also supporting the Smart Finance for Smart Buildings Initiative
Clemens Rohde

- DG ENTER-EcodesignPointSystem: Technical assistance study for the assessment of the feasibility of using points system methods in the implementation of Ecodesign Directive
Clemens Rohde

- PolicyPaper eceee: Policy Paper on the implementation of Art. 8 in the EU member states and potential improvements
Clemens Rohde

- BMWi Industrieinnovation: Studie zu marktverfügbaren Innovationen der Industrie
Clemens Rohde

- HA-Klimaschutzplan Hessen: Dienstleistungen zur Erarbeitung des integrierten Klimaschutzplans Hessen 2025 mit einem sich anschließenden Monitoring sowie zur Kommunikation und Beteiligung der Öffentlichkeit am integrierten Klimaschutzplan Hessen 2025
Clemens Rohde

- BMUB-Aktionsprogramm-Klimaschutz: Umsetzung Aktionsprogramm Klimaschutz 2020 – Begleitung der Umsetzung der Maßnahmen des Aktionsprogramms
Clemens Rohde

- Anwendungsbilanzen 2014–2017: Erstellen von Anwendungsbilanzen auf der Grundlage der deutschen Energiebilanzen für die Jahre 2014 bis 2017
Clemens Rohde

- UBA Energiemanagementsysteme: Branchen- und unternehmensgrößenbezogene Ermittlung von Klimaschutzpotenzialen (Schwerpunkt KMU) durch verstärkte Umsetzung von Energiemanagement-Maßnahmen in der Wirtschaft
Clemens Rohde

- Wasserstofftankstellen: Begleitforschung 50-Tankstellen – Programm im Rahmen des Nationalen Innovationsprogramms Wasserstoff- und Brennstoffzellentechnologie
Martin Wietschel

- Flexibilitätsbewertung: Monetäre Bewertung von Flexibilitätsoptionen unter Berücksichtigung von Verteilnetz- und Strommarktssimulation
Martin Wietschel

- Almost all electric world: Identifikation und Bewertung komplexer Energieträger
Martin Wietschel

- Profilregion Mobilität: Profilregion Mobilitätssysteme Karlsruhe – effizient – intelligent – integriert
Martin Wietschel

- Helmholtz Energieszenarien
Martin Wietschel

- Power to Gas: PtG-Konzepte mit hoher gesellschaftlicher Akzeptanz für eine effiziente und flexible Speicher- und Energieinfrastruktur zur Integration erneuerbarer Energien in Baden-Württemberg
Martin Wietschel

- GIZ-Flex: CSP update & flexibility options for cost efficient RE based system – Lot 2
Martin Wietschel

- ENavi – Kopernikus: Kopernikus-Projekte für die Energiewende – Themenfeld 4: Systemintegration und Vernetzung der Energieversorgung
Martin Wietschel

- TF Energiewende: Technologien für die Energiewende: Status und Marktpotenziale – eine multikriterielle vergleichende Technologieanalyse und -bewertung
Martin Wietschel

- UBA Sektorkopplung: Integration erneuerbarer Energien durch Sektorkopplung, Teilvorhaben 2: Analyse zu technischen Sektorkopplungsoptionen
Martin Wietschel

- MKS HO-LKW: Teilstudie Machbarkeitsstudie zur Ermittlung der Potenziale des Hybrid-Oberleitungs-LKW
Martin Wietschel



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Kerstin Cuhls

• SCHRUMPF: Maßnahmen gegen die Folgen des demografischen Wandels – schrumpfende Gesellschaften im Vergleich
Kerstin Cuhls

• Infrastrukturszenarien: Durchführung eines Workshops zur Entwicklung von Szenarien der Infrastruktur in 2016, 2020, 2030
Ewa Dönitz

• Assurance 2020/2025: Assurance 2020/2025 based on New Technology and Trends
Ewa Dönitz

• COWERK: Stakeholder-Dialoge zu Commons-based Peer Production in offenen Werkstätten
Lorenz Erdmann

• EU-ARES-ForeValue: Foresight on the Impact of Changing Value Systems on European Research and Innovation Policies: Signals, Drivers, and Responses
Lorenz Erdmann

• INNOLAB: LivingLabs in Green Economy – realweltliche Innovationsräume für Nutzerintegration und Nachhaltigkeit, Teilprojekttitel: Living Labs: Zukunftspfade und inHaus.
Lorenz Erdmann

• MICA: Mineral Intelligence Capacity Analysis
Lorenz Erdmann

• Begleitung Hightech-Forum: Wissenschaftliche Begleitung Foresight des Hightech-Forums
Simone Kimpeler

• Foresight Filmfestival: Konzeption und Durchführung eines jährlichen Foresight Filmfestivals
Simone Kimpeler

• Strategische Dialoge Zukunft der Arbeit: Foresight und Strategische Dialoge zur Zukunft der Arbeit
Simone Kimpeler

• KKW Monitoring: Stand und Perspektiven der Kultur- und Kreativwirtschaft in Deutschland: Monitoring zu ausgewählten wirtschaftlichen Eckdaten
Simone Kimpeler

• ISTIQ Roadmap: Development on Technology Foresight Research System
Björn Moller

• i³-Food: Process integration for rapid implementation of sustainable innovative food processing
Björn Moller

• FhG Leitbild
Elna Schirrmeister

• Fut-Business: Future Business – VDMA-Zukunftsbilder des Maschinenbaus
Elna Schirrmeister

• Innovationsakademie Biotechnologie 2015
Elna Schirrmeister

• Global Future Survey: internationale Befragung zu Zukunftserwartungen bezogen auf regionale gesellschaftliche Veränderungen
Elna Schirrmeister

• VDMA Stahl: Konzeption, inhaltliche Vorbereitung und Durchführung von zwei Workshops zur Erweiterung des Beobachtungsbereichs der Mitgliedsunternehmen durch Erarbeitung von Veränderungsimpulsen
Elna Schirrmeister

• JERRI: Joining Efforts for Responsible Research and Innovation
Benjamin Teufel

• Zukunft TPK: Trends und Anforderungen im Rahmen des Projekts Reload Technologiepark
Benjamin Teufel

• CIMULACT: Citizen and Multiactor Stakeholder Processes
Philine Warnke

• FuFoCo: Szenarioentwürfe zur Zukunft neuer Modelle der Nahrungsmittelproduktion
Philine Warnke

• INCOBRA: Increasing International Science, Technology and Innovation Cooperation between Brazil and the EU
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Claus Doll

• TRIP-Portal: Continuation of the Transport Research and Innovation Portal
Claus Doll

• UBA-Methodenkonvention 3.0: Weiterentwicklung und Erweiterung der Methodenkonvention zur Schätzung von Umweltkosten
Claus Doll

• LowCarb RFC: Klimafreundlicher Güterverkehr in Europa
Claus Doll

• RohPolRes: Entwicklung von Politikempfehlungen für die Weiterentwicklung und Ausgestaltung von strategischen Ansätzen einer nachhaltigen und effizienten Rohstoffgewinnung und -nutzung
Carsten Gandenberger

• Umweltinnovationen: Umweltinnovationen und ihre Diffusion als Treiber der Green Economy
Carsten Gandenberger

• SoNa-WSK: Transition in globalen Wertschöpfungsketten – Förderung der sozialen Nachhaltigkeit
Carsten Gandenberger

• ECI-DKI-Blei_Brass_EU: Dynamic Material Flow Model of Lead Containing Copper Alloys in Europe (EU28)
Simon Glöser-Chahoud

• Digitalisierung und Umwelt
Matthias Gotsch

• TWIST++: Transitionswege WasserInfraStruktursysteme – Anpassung an neue Herausforderungen im städtischen und ländlichen Raum
Thomas Hillenbrand

• UBA-Mikroschadstoffe: Wirksamkeit und Kosteneffizienz von produktbezogenen und nachgeschalteten Maßnahmen zur Verminde- rung des Eintrages von Mikroschadstoffen in die Gewässer
Thomas Hillenbrand

• ZukOWIS: Finanzierbare Zukunftsoptionen für die kommunale Wasserinfrastruktur in NRW
Thomas Hillenbrand

• Mikroschadstoffstrategie: Organisation, Durchführung und Auswertung eines Stakeholderdialogs zur deutschen Mikroschadstoffstrategie
Thomas Hillenbrand

• Clean Sky 1: Clean Sky Technology Evaluator, Work Package 2 – Models, Work Package 4 – Impact Assessment
Jonathan Köhler

• BMVBS Beratung: Beratungs- und Unterstützungsleistungen für das BMVBS im Rahmen der Diskussion von Maßnahmen zur Verminderung von Treibhausgasemissionen in der Seeschifffahrt
Jonathan Köhler

• Clean Sky 2: Clean Sky 2 Eco-Design Scenarios 2020+, CS2-ED-WP5.2_Big impact technology Pathways
Jonathan Köhler

• WINDASSIST: Study on analysis of market potentials and market barriers for wind propulsion technologies for ships
Jonathan Köhler

• DG Move TEN-T Core Network: Study on support measures for the implementation of the TEN-T core network related to sea ports, inland ports and inland waterway transport
Jonathan Köhler

• ENVPOLMOD: Scoping Study on Modelling of EU Environment Policy
Jonathan Köhler

• MKS_LNG_Schifffahrt: MKS Studie über die Marktreife von Erdgasmotoren in der Binnen- und Seeschifffahrt
Jonathan Köhler

• Mapping EU heat supply: Mapping and analyses of the current and future (2020–2030) heating/cooling fuel deployment (fossil/renewables)
Michael Krail

• TRIMODE: Services contract for the development of a Europe wide transport model, technology watch data and scenarios
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Erarbeitung der Mobilitäts- und Kraftstoffstrategie des BMVI
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Gesamtkoordination der Wissenschaftlichen Beratung des BMVI zur Mobilitäts- und Kraftstoffstrategie
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Maßnahmen zur Steigerung des Anteils des Schienenpersonenfernverkehrs in der Fläche
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Ausbau Elektrifizierung auf Hauptstrecken
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Umschlagstechnologien im kombinierten Verkehr: Mögliche Einsparpotenziale und Verlagerungseffekte
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – SPNV-Anschluss, Versorgung, Freizeitstrukturen, Land Use Planning
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Maßnahmen zur Steigerung des Anteils des grenzüberschreitenden Personen- und Güterverkehrs
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Ad-hoc Beratung im Rahmen der Weiterentwicklung der Mobilitäts- und Kraftstoffstrategie
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Entwicklung von Maßnahmenbündeln zur Förderung von CNG/LNG zur Unterstützung der CPT-Initiative
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Nachtragsangebot zu Mobilitäts- und Kraftstoffstrategie: Prognosenetz
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Studie zu Energie- und Treibhausgaswirkungen vom autonomen Fahren im Straßenverkehr
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Rahmenbedingungen und Kosten einer Komplettelktrifizierung des deutschen Schienennetzes
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Entwicklung eines attraktiven europäischen Nachtzugsystems und Potenziale für den Nachtzugverkehr von, nach und innerhalb Deutschlands
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – THG-Emissionsreduktionsziele für den globalen Luftverkehr im Kontext der deutschen und europäischen Luftverkehrsentwicklung unter besonderer Berücksichtigung alternativer Kraftstoffe und Antriebe
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Einsatz von erneuerbarem Kerosin am Flughafen in Leipzig/Halle
Michael Krail

• Mobilitäts- und Kraftstoffstrategie – Demoprojekt mit DVGW: Wissenschaftliche Begleitung
Michael Krail

• NaRoBaWü: Regionale Handlungsoptionen in globalen Wertschöpfungsketten – Steigerung der Transparenz im Rohstoffsektor
Sabine Langkau

• BagassePlast: Plastification of bagasse by chemical modification and utilization of bagasse fractions in thermoplastic processing
Frank Marscheider-Weidemann

• IKU: Innovationspreis für Klima und Umwelt für die Jahre 2015 bis 2017
Frank Marscheider-Weidemann

• MachWasPlus: Begleitvorhaben zu Materialien für eine nachhaltige Wasserwirtschaft
Frank Marscheider-Weidemann

• T&E_HGV_Toll-Systems: Tender for Economic Impact of Introducing Road Charging for Heavy Goods Vehicles
Lucia Mejia-Dorantes

• InnoA2: Innovative Abwärmenutzung durch Wärmeverteilung über die Kanalisation
Eve Menger-Krug

• INTEGRIS: Gebündelte Infrastrukturplanungen und -zulassungen und integrierter Umbau von regionalen Versorgungssystemen – Herausforderungen für Umwelt- und Nachhaltigkeitsprüfungen
Jutta Niederste-Hollenberg

• z*dez-Phase 3: Zentraler Betrieb dezentraler Anlagen – Umsetzung eines innovativen Organisationskonzepts zur Abwasserentsorgung mittels Kläranlagen in Baden-Württemberg, Anwendungsgebiet Landkreis Ravensburg
Jutta Niederste-Hollenberg

• MindER Phase2+3: Pilotprojekt zur Minderung des Eintrags von Röntgenkontrastmitteln in die Umwelt
Jutta Niederste-Hollenberg

• Bochum Ostpark: Entwicklung verschiedener Varianten eines Grauwasserkonzeptes zur Speisung der Quelle eines Wasserlaufes im Ostpark Bochum
Jutta Niederste-Hollenberg

• r⁴-INTRA: r⁴ – Wirtschaftsstrategische Rohstoffe, Verbundvorhaben: r⁴ INTRA – r⁴ Integrations- und Transferprojekt – Teilvorhaben 2: Operative Projektkoordination und Abschätzung der Ressourceneffizienzpotenziale
Katrin Ostertag

• Green Finance-CC-Ü: Green Finance-Strategien und Instrumente zur Finanzierung des ökologischen Modernisierungsprozesses
Katrin Ostertag

• Circular economy Lot 3: Competitiveness, eco-innovation and value chain sustainability
Katrin Ostertag

• Wirtschaftsfaktor Umweltschutz: Erfassung der Umweltschutzbeschäftigung und Aktualisierung wichtiger Kenngrößen zur Wettbewerbsfähigkeit der Umweltschutzwirtschaft
Katrin Ostertag

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Katrin Ostertag

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- **DetereSS:** Strukturelle und produktionstechnische Determinanten der Ressourceneffizienz: Untersuchung von Pfadabhängigkeiten, strukturellen Effekten und technischen Restriktionen auf die zukünftige Entwicklung der Rohstoffproduktivität

Christian Sartorius

- **DAIAD RTD:** DAIAD-Open Water Management – from droplets of participation to streams of knowledge
Christian Sartorius

- **r+TeTra:** r+Impuls Technologietransferprojekt – Teilvorhaben 1: Projektleitung, Wirkungsanalyse und Öffentlichkeitsarbeit
Christian Sartorius

- **Beschäftigung EE Bayern:** Beschäftigungseffekte der Energiewende in Bayern
Luisa Sievers

- **r³ – InTra:** Innovative Technologien für Ressourceneffizienz – Strategische Metalle und Mineralien
Luis Tercero

- **Cu-Modell VI:** Development of a global copper flow model – phase 6
Luis Tercero

- **ECI-ByproductsOverview:** By-products in copper production
Luis Tercero

- **SCREEN:** Solutions for CRITICAL Raw materials – a European Expert Network
Luis Tercero

- **EIT RawMaterials-EMFIS:** European Materials Stock and Flow Intelligence Service
Luis Tercero

- **Cu-Modell VII:** Development of a global copper flow model
Luis Tercero

- **Stoffströme, Märkte und Umwelt**
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Luis Tercero

- **HAPPI 2:** HAPPI – Kleinwasserkraftwerke: Bewertung des Klimaschutzpotenzials und Verbesserung durch Intelligente Technologien
Felix Tettenborn

- **ReAs:** Reduzierung der Gewässerbelastungen mit Rückständen von Arzneistoffen in ausgewählten Pilotgebieten
Felix Tettenborn

- **m:ci** Morgenstadt Phase II
Felix Tettenborn

- **WaKap:** Modulares Konzept zur nachhaltigen Wasserentsalzung mittels Kapazitiver Entionisierung am Beispiel Vietnam
Felix Tettenborn

- **CIRC-02:** Vorbereitung eines EU-FuE-Vorhabens zum Thema Evidence based knowledge, large scale demonstration and a new perspective for the next generation of water systems and services
Felix Tettenborn

- **LeNa:** Leitfaden Nachhaltigkeitsmanagement
Rainer Walz

- **DFG-SINCERE:** Sino-European Circular Economy and Resource Efficiency (SINCERE) – Societal Challenges – Green Economy and Population Change Call for European-Chinese joint research projects
Rainer Walz

- **Öko-Innovationsplan EcoAP:** Erarbeitung der fachlichen Grundlagen für einen deutschen Öko-Innovationsplan als nationaler Beitrag zum Eco-Innovation Action Plan (EcoAP) der Europäischen Union
Rainer Walz

- **Competitiveness eco-innovation:** MFWC with reopening of the competition in the field of sustainable industrial policy and construction
Rainer Walz

- **TITUS:** Implikationen des wirtschaftlichen Aufstieges der Schwellenländer für die globalen Technologischen Innovationssysteme bei Umwelttechnologien
Rainer Walz

- **NaWiKo:** Wissenschaftliche Koordination des Förderschwerpunktes Nachhaltiges Wirtschaften – Synthese und Transferökonomie
Rainer Walz

EMERGING TECHNOLOGIES

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Daniel Bachlechner

- **FET Traces:** Tracing impacts of the FET programme
Bernd Beckert

- **EU-Software_2:** The economic and social impact of software and services on competitiveness and innovation
Bernd Beckert

- **Vodafone Stiftung 2016 – Der Weg in die Gigabitgesellschaft**
Bernd Beckert

- **H2020 Interim Evaluation**
Bernd Beckert

- **Länderanalyse Strategien für den Glasfaserausbau** (Bertelsmann Stiftung)
Bernd Beckert

- **Evaluation der Nationalen Forschungsstrategie BioÖkonomie 2030**
Bärbel Hüsing

- **Wirtschaftsspionage und Konkurrenzausspähung in Deutschland und Europa**
Esther Bollhöfer

- **SecurePLUGandWORK:** intelligente Inbetriebnahme von verketteten Maschinen und Anlagen
Esther Bollhöfer

- **Rock-EU:** Robotics Coordination Action for Europe
Annette Braun

- **TICKET4SME:** Study on Access of SMEs to KETs technological infrastructure
Annette Braun

- **Wissenschaftliche Begleitforschung des nationalen Aktionsplans für Menschen mit seltenen Erkrankungen**
Tanja Bratan

- **Soziale Inklusion durch technigestützte Kommunikationsangebote im Stadt-Land-Vergleich**
Tanja Bratan

- **Begleitforschung auf dem Gebiet Mobile Diagnostiksysteme**
Tanja Bratan

- **STOA-AT:** STOA Assistive Technologies
Tanja Bratan

- **ENISA Smart Hospitals**
Michael Friedewald

- **Wissenstransfer 2.0:** Quantified Self
Nils Heyen

- **Studie zur Evaluierung von Innovationen im Gesundheitswesen**
Nils Heyen

- **TAB – Weiße BT:** Innovationsreport Weiße Biotechnologie – Stand und Perspektiven der Industriellen Biotechnologie für nachhaltiges Wirtschaften
Bärbel Hüsing

- **Evaluation der Nationalen Forschungsstrategie BioÖkonomie 2030**
Bärbel Hüsing

- **Res-AGorA:** Responsible Research and Innovation in a Distributed Anticipatory Governance Frame. A Constructive Socio-normative Approach
Ralf Lindner

- **TAB-RRi:** Das Konzept Responsible Research and Innovation und dessen Relevanz für die deutsche Forschungs-, Technologie- und Innovationspolitik (TA-Vorstudie)
Ralf Lindner

- **MoRRI:** Monitoring the evolution and benefits of Responsible Research and Innovation
Ralf Lindner

- **Vorlaufforschung:** Neue Ansätze der Governance in Innovationssystemen
Ralf Lindner

- **JERRI:** Joining Efforts for Responsible Research and Innovation
Ralf Lindner

- **Zehn Jahre Hightech-Strategie** der Bundesregierung: Bilanz und Perspektive
Ralf Lindner

- **STOA E-Democracy II:** Technology options and systems to strengthen participatory and direct democracy
Ralf Lindner

- **SMART-map:** RoadMAPs to Societal Mobilisation for the Advancement of Responsible Industrial Technologies
Ralf Lindner

- **EIB-KET:** Study on access-to-finance conditions for companies investing in Key Enabling Technologies (KETs)
Michael Meister

- **MetaForum**
Thomas Reiß

- **Gesundheitsregionen der Zukunft**
Thomas Reiß

- **EST-Frame:** Integrated EST Framework
Thomas Reiß

- **KETs-control:** Study on EU Positioning: An Analysis of the International Positioning of the EU using Revealed Comparative Advantages and the Control of Key Technologies
Thomas Reiß

- **Graphene:** Update Science and Technology Roadmap for Graphene Flagship
Thomas Reiß, Michael Meister

- **Beschleunigte Evolution zur Bereitstellung optimierter und neuartiger Enzyme**
Thomas Reiß, Heike Aichinger

- **KIC InnoEnergy ESA2 PhD 2015**
Andreas Sauer

- **Automatisierung und Robotik-Systeme**
Ulrich Schmoch

- **Gene Editing**
Ulrich Schmoch

- **Begleitmaßnahme Batterie 2020**
Axel Thielmann

- **KETs Observatory:** Key Enabling Technologies (KETs) Observatory
Sven Wydra

- **Ermittlung wirtschaftlicher Kennzahlen und Indikatoren für ein Monitoring des Voranschreitens der Bioökonomie**
Sven Wydra

- **Forum Privatheit und selbstbestimmtes Leben in der digitalen Welt**
Peter Zoche, Michael Friedewald

- **Fachdialog Sicherheitsforschung**
Peter Zoche, Michael Friedewald

POLICY – INDUSTRY – REGIONS

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ERP-Policy: Research and innovation policy analysis: provision of policy briefs and preparation of workshops
Susanne Bühner

- **MFT_Druckbericht:** Erstellung eines Druckberichtes auf Basis der Daten der aktualisierten Fassung der Landkarte Hochschulmedizin (2009–2012)
Susanne Bühner

- **EvaluDiskursprojekte:** Evaluation des Förderinstruments Diskursprojekte zu ethischen, rechtlichen und sozialen Fragen in den modernen Lebenswissenschaften
Susanne Bühner

- **MoRRI:** Monitoring the evolution and benefits of Responsible Research and Innovation
Susanne Bühner

- **SILQUA-FH:** Evaluation der Förderlinie – Soziale Innovationen für Lebensqualität im Alter – SILQUA-FH des Programms Forschung an Fachhochschulen des Bundesministeriums für Bildung und Forschung (BMBF)
Susanne Bühner

- **VERA:** Forward Visions on the European Research Area
Stephanie Daimer

- **Res-AGorA-RTD – CC P:** Governance frameworks for Responsible Research and Innovation (RRI)
Stephanie Daimer

- **EnArgus2.0 – Zentrales Informationssystem** Energieforschungsförderung
Stephanie Daimer

- **OECD-KT:** Knowledge triangle policies and practices in Germany – State of affairs and developments at the country level and in selected higher education institutions
Stephanie Daimer

- **PFI-Monitor:** Erfassung bibliometrischer Indikatoren für die PFI-Monitoringberichte 2011–2015
Rainer Frietsch

- **PFI-Uni:** Erfassung bibliometrischer Indikatoren von Universitäten
Rainer Frietsch

- **Software_Pat_2013:** Computerimplementierte Erfindungen
Rainer Frietsch

- **Swedish_Scientists:** Bibliometrics for Swedish Scientists
Rainer Frietsch

- **EFL_Pub_2014:** Ergebnisse von öffentlicher und privater Forschung: Publikationen
Rainer Frietsch

- **Innovationsindikator 2014**
Rainer Frietsch

- **Innovationsindikator 2015–2017**
Rainer Frietsch

- **AMCAP:** Assessing companies' capability to develop advanced manufacturing technologies in selected industrial sectors
Rainer Frietsch

- **China_RG:** Study on the Internationalization of science, technology and innovation: Strategy, Policy and Practice
Rainer Frietsch

- **GC_KETs:** Collection and analysis of private R&D investment and patent data in different sectors, thematic areas and societal challenges
Rainer Frietsch

- **Attorney:** Survey attorney service market
Rainer Frietsch

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• AG_Wissenschaftsindikatoren: Zuarbeit zur AG Wissenschaftsindikatoren – Bibliometrischer und patentstatistischer Vergleich

Rainer Frietsch

• DCPI: Mitarbeit im Rahmen der deutschen Expertengruppe der Deutsch-Chinesischen Plattform Innovation

Rainer Frietsch

• EFI_PUB_2015: Ergebnisse von öffentlicher und privater Forschung: Publikationen

Rainer Frietsch

• KB-Autoren: Autoren Disambiguation im Web of Science

Rainer Frietsch

• Durchführung einer Studie zur Bewertung des Beitrags von Fraunhofer zum deutschen Innovationssystem

Rainer Frietsch

• OBSERVE – CC P: Observing Emergence

Rainer Frietsch

• Biblio_Asien: Folgestudie zu den beiden bibliometrischen Analysen für den asiatisch-pazifischen Raum von 2008 und 2010

Rainer Frietsch

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