

*Research and Innovation for Germany*

*Hightech-Strategie 2020*

*and its established Advisory Boards*

**French-German Colloquium on “Scientific Expertise”  
December 8, German Embassy Paris**

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Federal Ministry of Education and Research*

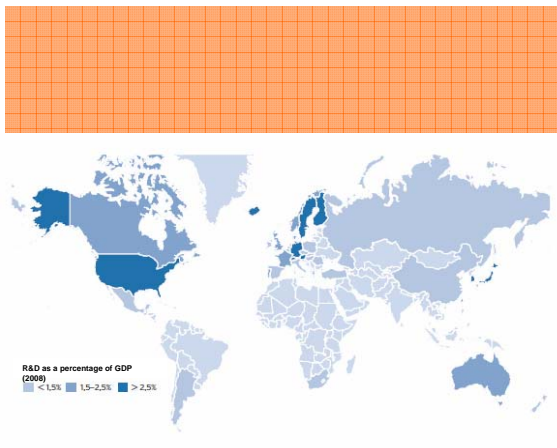
## Overview

- I. Germany’s Innovation System**
- II. High-Tech-Strategy 2020**
- III. Advisory Boards and their specific Roles**

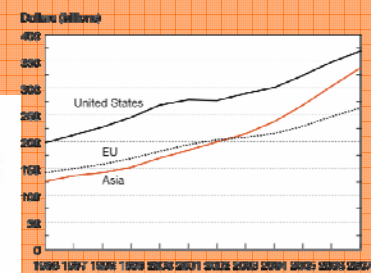
## I. Germany's Innovation System



## Challenges for Europe and Germany



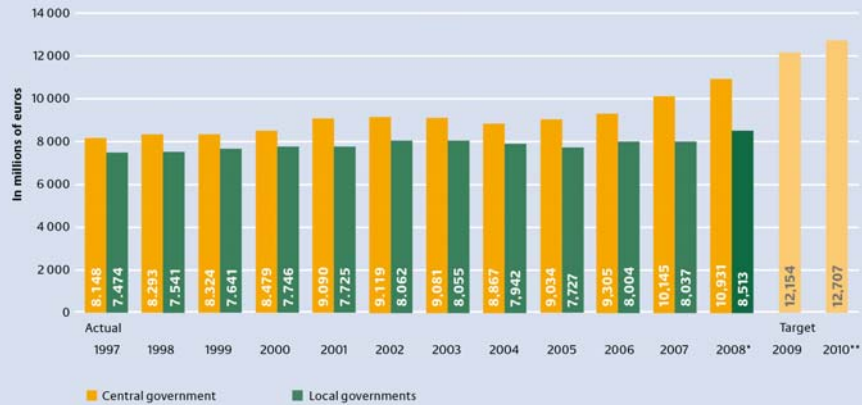
R&D expenditure 1996-2007



EU = European Union

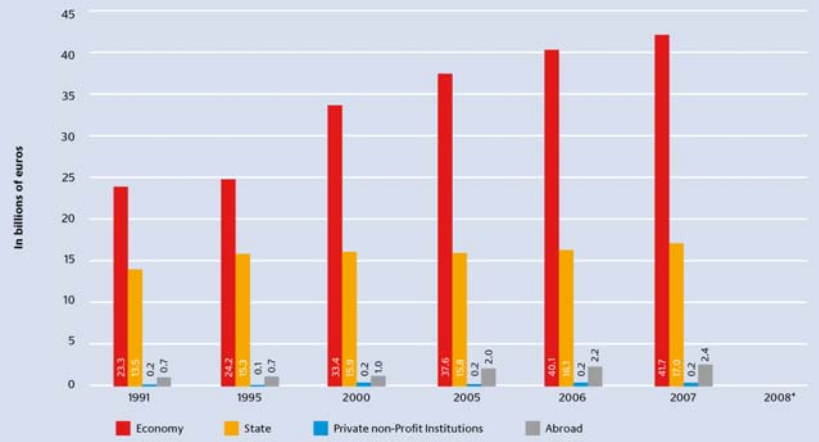
NOTES: Asia includes China, India, Japan, Malaysia, Singapore, South Korea, Taiwan, and Thailand. EU includes all 27 member states.

**Expenditure on research and development by central and local governments over time (financing view)**



\* Estimated local government expenditure in 2008, \*\* Estimated central government expenditure in 2010 (excluding the economic stimulus package II)  
Basis of data: tables 13 and 14

**Gross domestic expenditure on research and development (GERD) in the Federal Republic of Germany by funding sectors (implementation view) GERD as a percentage of the gross domestic product (GDP) over time**

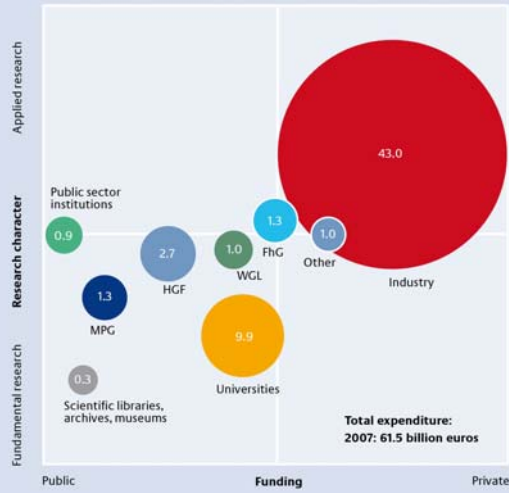


2008\*

### The German research landscape

R&D expenditure in billions of euros (2007 data)

FhG Fraunhofer-Gesellschaft  
HGF Hermann von Helmholtz Gemeinschaft  
MPG Max-Planck-Gesellschaft  
Other non-profit scientific institutions, predominantly funded neither by the state nor industry  
WGL Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz



Basis of data: tables 1 and 28  
Source: BMBF, VDI/VDE-IT

## II. The High-Tech-Strategy 2020 for Germany

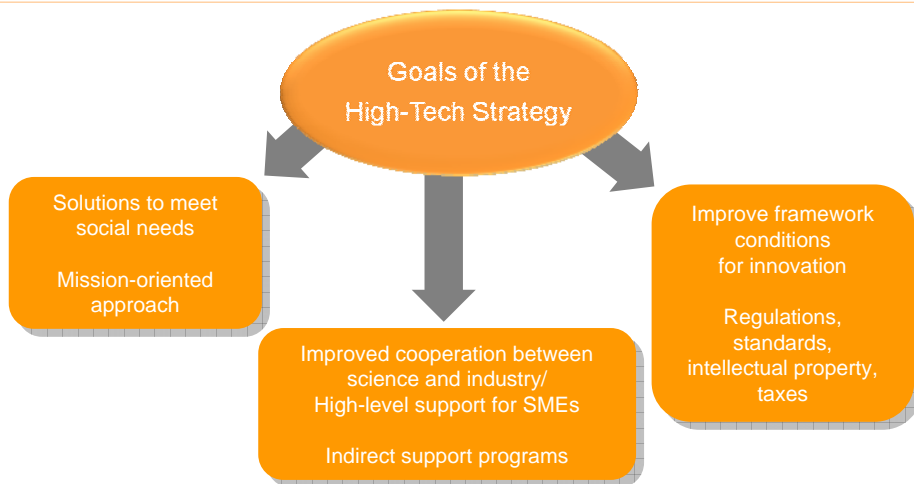


The High-Tech Strategy fosters new ways of thinking to avoid „never been done before“ situations.

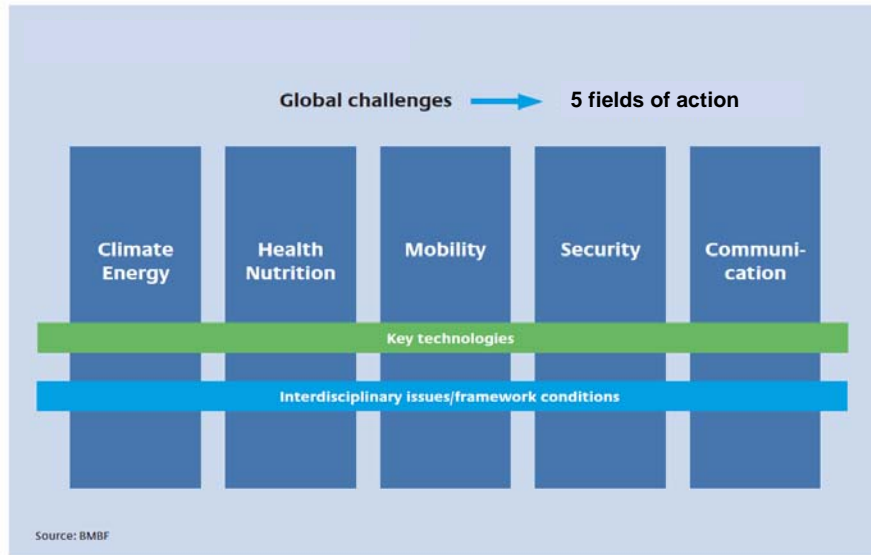


"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."

### Innovation strategy goals of the High-Tech Strategy 2020



## 5 fields of action of the High-Tech Strategy



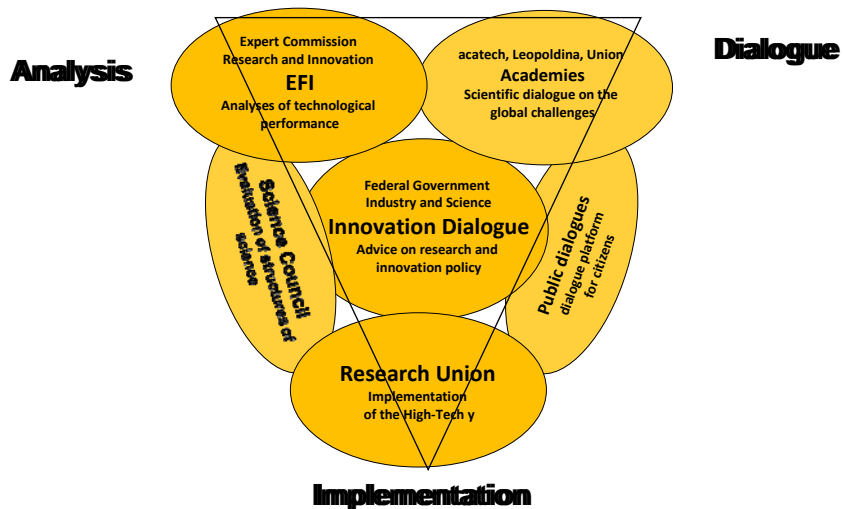
## 11 Forward Looking Projects – addressing all 5 demand fields

1. CO<sub>2</sub>-neutral, energy-efficient and climate-adapted cities
2. Intelligent restructuring of the energy supply system
3. Renewable resources as an alternative to oil
4. Treating illnesses more effectively with the help of individualized medicine
5. Better health through an optimized diet
6. Living an independent life well into old age
7. A million electric vehicles in Germany by 2020
8. More effective protection of communication networks
9. Increasing Internet use while decreasing energy consumption
10. Making global knowledge digitally available and accessible
11. Tomorrow's working world and its structure

### III. Advisory Boards and their specific Roles



### Policy advice on science, research and innovation



## Advisory Boards

### 1) Expert Commission on Research and Innovation

- Independent expert body
- Scientific policy guidance
- Regular (annual) reports on Germany's research, innovation and technological performance
- Proposals for optimising national research and innovation policy
- Made up of leading, internationally renowned scientists.



Handing over the latest report to chancellor Merkel,  
24 February 2010

## Advisory Boards

### 2) Industry-Science Research Alliance

- Body advising the Federal Minister of Research on innovation policy
- Implementation and expansion of the High-Tech Strategy
- Increasingly active in the societal dialogue
- Identifies drivers of innovation, obstacles to innovation and relevant cross-sectional issues
- Formulates research tasks and identifies the need for action
- 25 members from industry and science
- New configuration met for the first time on 25 February 2010





## Shaping further Forward-looking projects defines the work of the Industry-Science Research Alliance

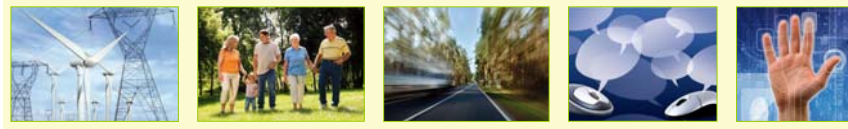
### For the fields of action ...

- Climate/Energy
- Health/Nutrition
- Mobility
- Security
- Communication



### ... Forward-looking projects

- are being developed by groups of promoters,
- roadmaps drawn up for their implementation,
- drivers of and obstacles to innovation identified,
- research tasks designated and
- need for action formulated.



## Advisory Boards 3) Innovation Dialogue

- “Innovation Dialogue” between the Federal Government (three members), industry and science (15 members)
- Observing new developments, findings and trends in the innovation cycle
- Using existing competence networks
- Intensifying the exchange on questions of innovation and technology policy
- Strengthening Germany as an industrial centre
  
- Chair: Prof. Dr. Henning Kagermann,  
President of acatech – German Academy  
of Science and Engineering

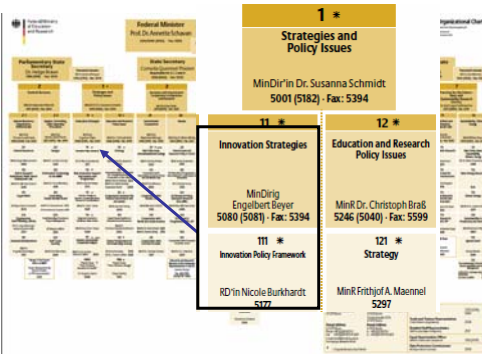


- Office:  acatech DEUTSCHE AKADEMIE DER  
TECHNIKWISSENSCHAFTEN

Kick-off Meeting on 13.09.2010

## Supporting the Governance of the High-Tech-Strategy

### Federal Ministry of Education and Research



#### Unit 111:

- developed the High-Tech Strategy
- refines the HTS based on evaluation and analyses
- coordinates communication processes within and across ministries
- analyzes framework conditions and develops new instruments
- publishes reports on the HTS and
- supports the external advisory bodies

**Thank you very much for your attention!**

