



Federal Ministry  
of Education  
and Research



# Research and Innovation for Germany

## The High-Tech Strategy 2020 for Germany

**Engelbert Beyer**

Head of Directorate - Innovation Strategies

Federal Ministry of Education and Research

*Boosting Competitiveness by Connecting Science and Industry: Insights from Germany's Innovation Model - Washington -October 18, 2011*



## Three factors will influence the success of German Innovation Policy

An accelerating international innovation competition demands a coherent, dynamic innovation policy. German **Hightech-Strategy** is the right answer.

International comparisons show that different innovation strategies can lead to success. Germany is putting emphasis on **its innovative “Mittelstand” (SME), system integration and strong cooperation between industry and research.**

We need smart specialization, but also **strong international cooperation in** innovation policy. We need intensified **exchange** of innovation strategies and new approaches to address **global challenges.**



An accelerating international innovation competition demands a coherent, dynamic innovation policy.  
German **Hightech-Strategy** is the right answer.

### **Current dynamics :**

- Emerging innovation regions in BRIC-countries (indicators: R&D expenditure, citation indexes, patents, market success)
- Global economic balance is changing in favor of these regions
- This means more competition for the US and Europe
- The demand for coherent and strategic innovation policy is rising

### **Hightech-Strategy is the right answer for Germany:**

- Priority for innovation, holistic approach, more financial resources, new measures
- Strong support for this strategy by leading innovation experts like EFI or recent “Innovation Report” of Telekom-Foundation
- Prove of competitiveness in recent global economic crisis



# OBJECTIVES OF THE HIGH -TECH STRATEGY

Establish  
**LEAD SUPPLIERS**  
Create  
**LEAD MARKETS**

- Resetting priorities
- Creating prerequisites
- Key technologies as a foundation

**CROSS-TECHNOLOGY** initiatives:  
Strengthen cooperation between  
**BUSINESS** and **SCIENCE**

- Leading-edge cluster competition
- Innovation alliances
- Validation
- SMEs

Improve  
**FRAMEWORK  
CONDITIONS**

- Funding of innovation
- Start-ups
- Tax law
- Public procurement



## The Five Fields of Action of the High-Tech Strategy

Global challenges → 5 fields of action

Climate  
Energy

Health  
Nutrition

Mobility

Security

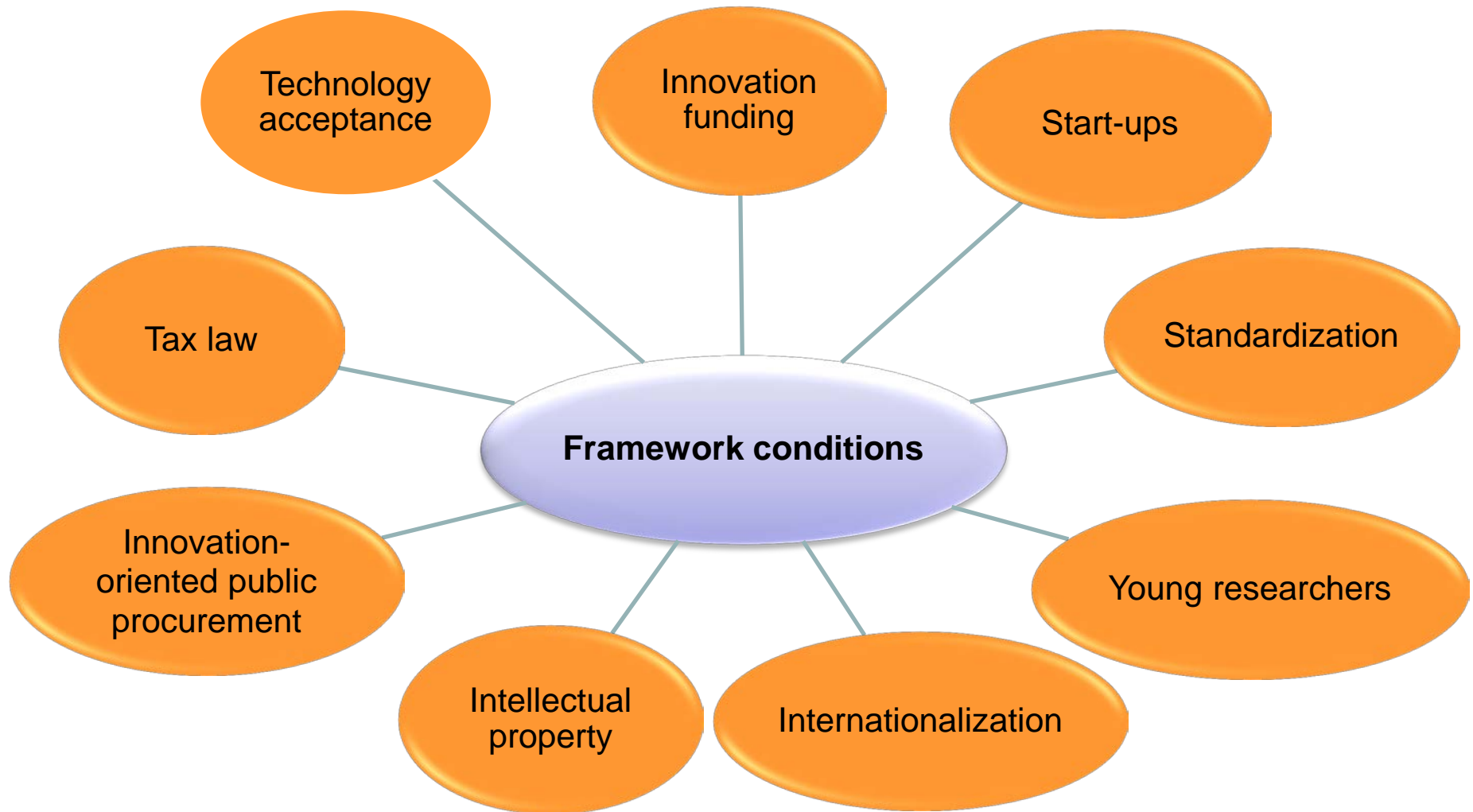
Communi-  
cation

Key technologies

Interdisciplinary issues/framework conditions



## Framework conditions promote or hamper innovation





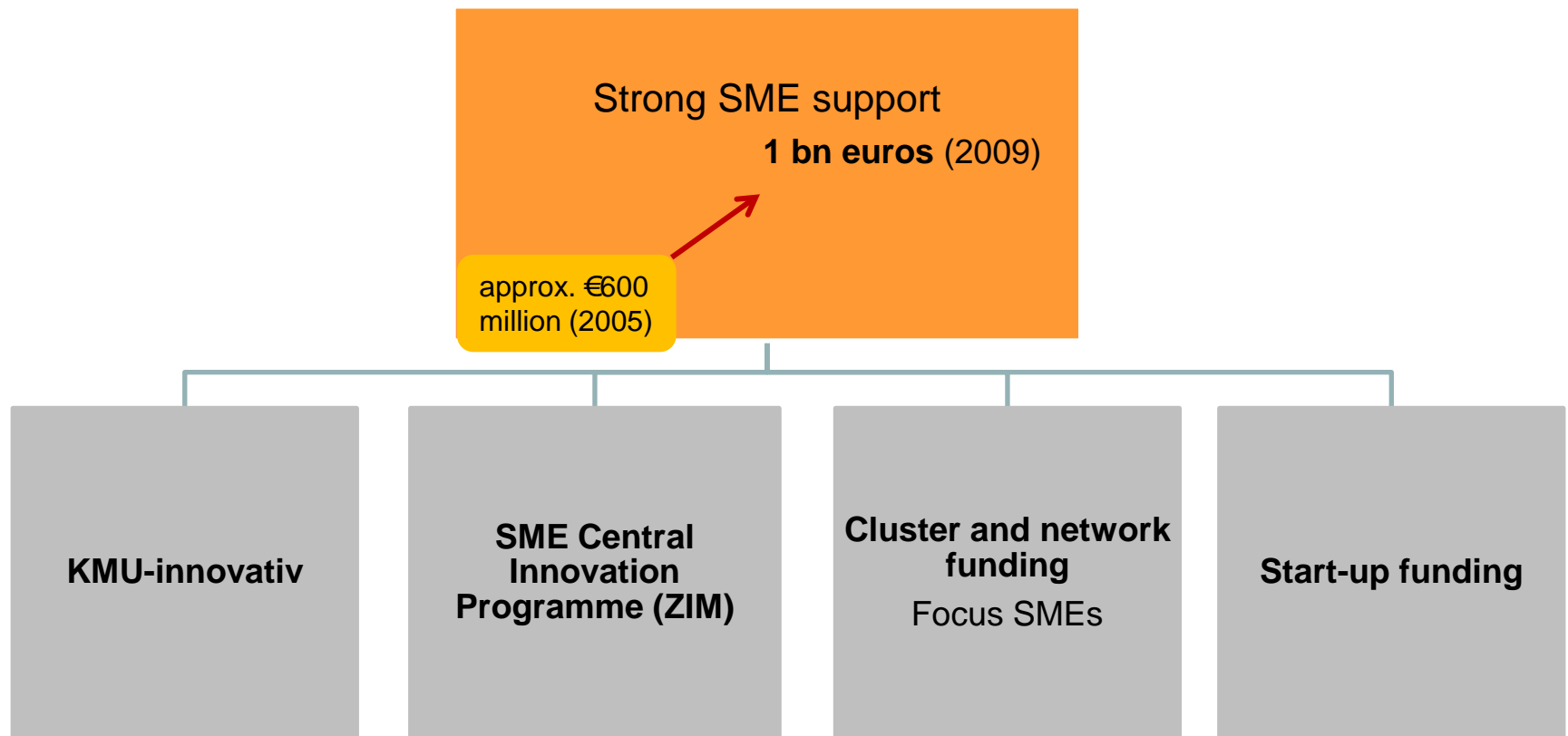
International comparisons show that different innovation strategies can lead to success. Germany is putting emphasis on its **innovative “Mittelstand” (SME), system integration and strong cooperation between industry and research.**

**The analysis of the last ITIF study “International Benchmarking of Countries’ Policies and Programs Supporting SME Manufacturers” is confirmed by other experts:**

- Strong innovative Mittelstand (SME)
  - Recent European evaluation in the context of “Small Business Act”: Germany is leading in several innovation-oriented indicators with regards to SME
- System integration:
  - Ongoing “Innovation Dialogue” mentions system integration as the main strength of the German innovation system
- Close cooperation between industry and research:
  - DIW Study comparing German and US innovation system (in preparation) identifies this cooperative relationship as a major advantage of Germany



## SMEs at the Focus of Innovation Policy



**In addition, the participation of SME in technology oriented funding is in general considerably high (54% of total industry funding)**



## **System Integration is a success model for Germany**

### **Examples of industry specialization in innovation oriented system integration:**

- Mechanical Engineering Sector: 15,2% of industrial gross value added
- Car Manufacturing Sector: 14,6% of industrial gross value added
- Renewable Energies / Medical Devices

### **Prerequisites:**

- Innovation orientation of market strategies
- Relevant home market (“lead market”)
- Domestic supply chain orientation
- Intense cooperation between industry and research



**Cooperation between Industry and Science is a prerequisite for innovation success**

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**Public innovation strategy supports cooperation between industry and research by specific instruments**

- Collaborative research funding
- Cluster Policy (Leading Edge Cluster Competition)
- New measure: Research Campus („Forschungscampus“)

**Prerequisites:**

- Qualified workforce (technical universities / vocational training)
- Rich infrastructure of industry oriented research institutes (Fraunhofer Institutes/ Universities of Applied Sciences “Fachhochschulen”)



We need smart specialization, but also **strong international cooperation in** innovation policy. We need intensified **exchange** of innovation strategies and new approaches to address **global challenges**.

- The Hightech-Strategy has oriented the innovation policy towards global challenges.
- **Core Projects** („Zukunftsprojekte“) will address specific aspects with particular relevance for Germany.
- These core projects will cooperate with similar processes in other countries

**Examples:**

CO<sup>2</sup> neutral, energy-efficient and climate-adapted cities

Living an independent life well into old age



## German – US Dialogue on Innovation Policy has to be continued

### Last 12 Month:

Two conferences on ***Innovation Policy in Germany and the US***

- Washington - November 1<sup>st</sup> , 2010
- Berlin – May 24-25, 2011

[by NAS and DIW, support by BMBF]

### Today:

Lunch Briefing on ***Boosting Competitiveness by Connecting Science and Industry: Insights from Germany's Innovation Model***

- Washington -October 18, 2011

[by ITIF, German Embassy , GCRI]

### Next Year: ?



# Thank you for your attention

**Engelbert Beyer**

Head of Directorate 11 Innovation Strategies

Federal Ministry of Education and Research  
Hannoversche Straße 28-30; 10115 Berlin