

# Innovation Policy

## **Innovation Policy of the Federal Ministry of Economics and Technology**

European Challenges for Innovation  
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Session on Innovation in Regions

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[www.bmwi.de](http://www.bmwi.de)

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# Overview

- » **General remarks on the innovation system in Germany**
- » **Regional aspects**
- » **Cluster politics**
- » **Promoting innovative SMEs**
- » **Perspectives for the Innovation and Technology Policy**

# German innovation system (1)

## Strengths:

- » High proportion of R&D in firms (approximately two-thirds of all R&D)  
(30 tsd R&D firms and 110 tsd innovative firms)
- » high proportion of research-intensive industry  
(especially advanced technology)
- » World class research institutions  
(Max-Planck, Fraunhofer, Helmholtz, ...)
- » Leading exporter of technology products
- » High number and dynamism of patent registrations  
(38% of all European patent registrations come from Germany [2008])

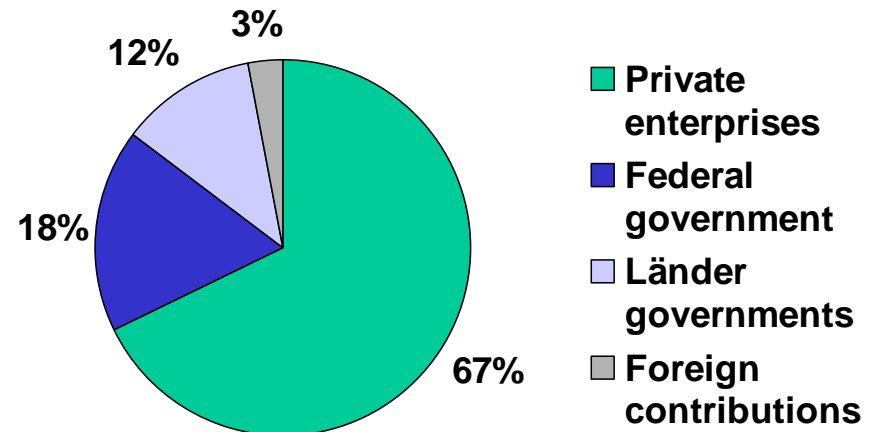
## German innovation system (2)

### Challenges:

- » Concentration of R&D on a few sectors of advanced technology
  - ▶ automotive, mechanical engineering
- » Bottlenecks in financing SMEs
  - ▶ e.g. too little venture capital
- » Education system under funded
  - ▶ OECD: overall 6.1%, in Germany 5.1% of GDP
- » lack of engineers
  - ▶ 90 young engineers for 100 outgoing retired engineers;  
OECD average 190 for 100

## Financial Sources of Research in Germany (2009)

- » Private enterprises: (est.) 46bn €
  - » Federal government: 12bn €
  - » Länder governments: (est.) 8bn €
  - » Foreign contributions: (est.) 2bn €
- 68bn €



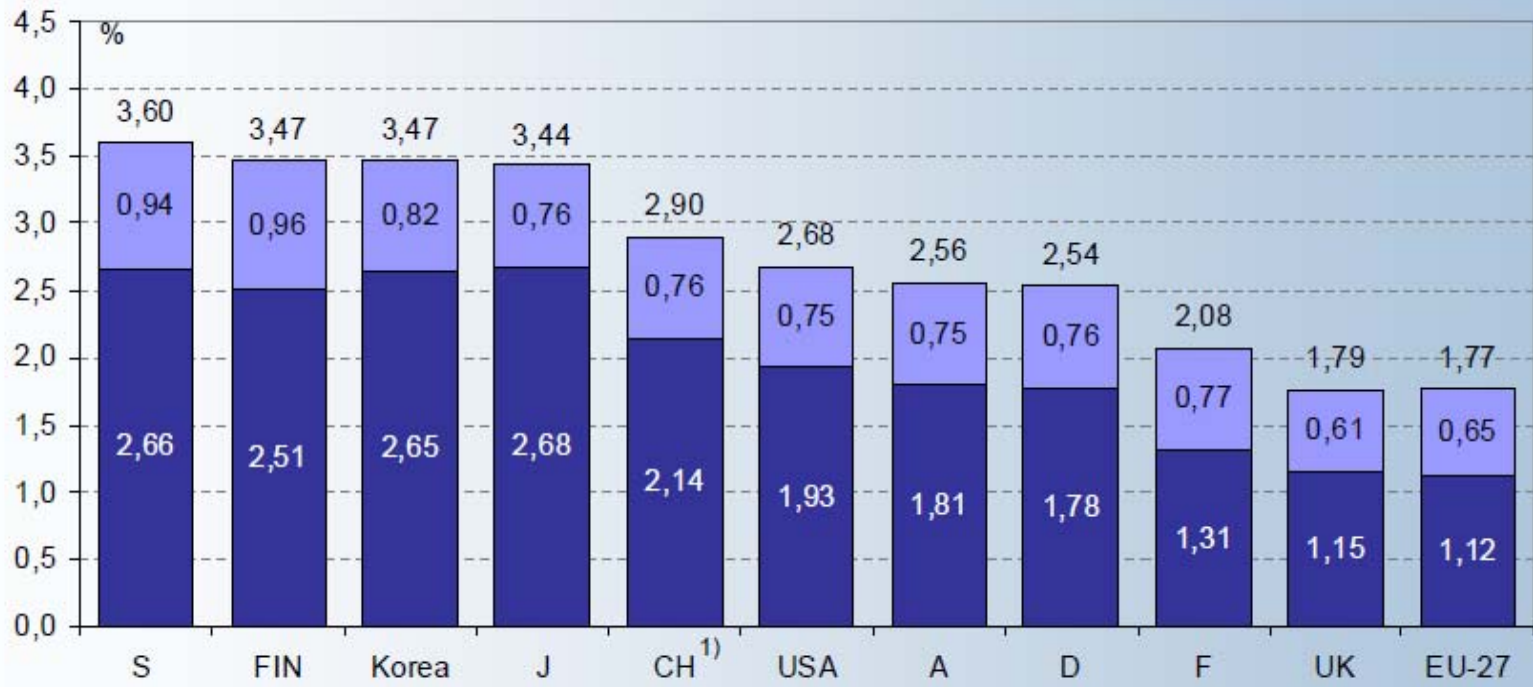
## „Inshoring-Destination“ Germany

**Germany became more and more an „Inshoring-Destination“ in the R&D sector for foreign firms**

- » Innovation cluster
- » High potential on R&D
- » Other factors besides R&D, e.g. qualified and motivated employees, geografic location

Investments on R&D of foreign firms in Germany in 2007 were higher (13,5 bn €) than investments of German firms in R&D abroad (9,5 bn €)

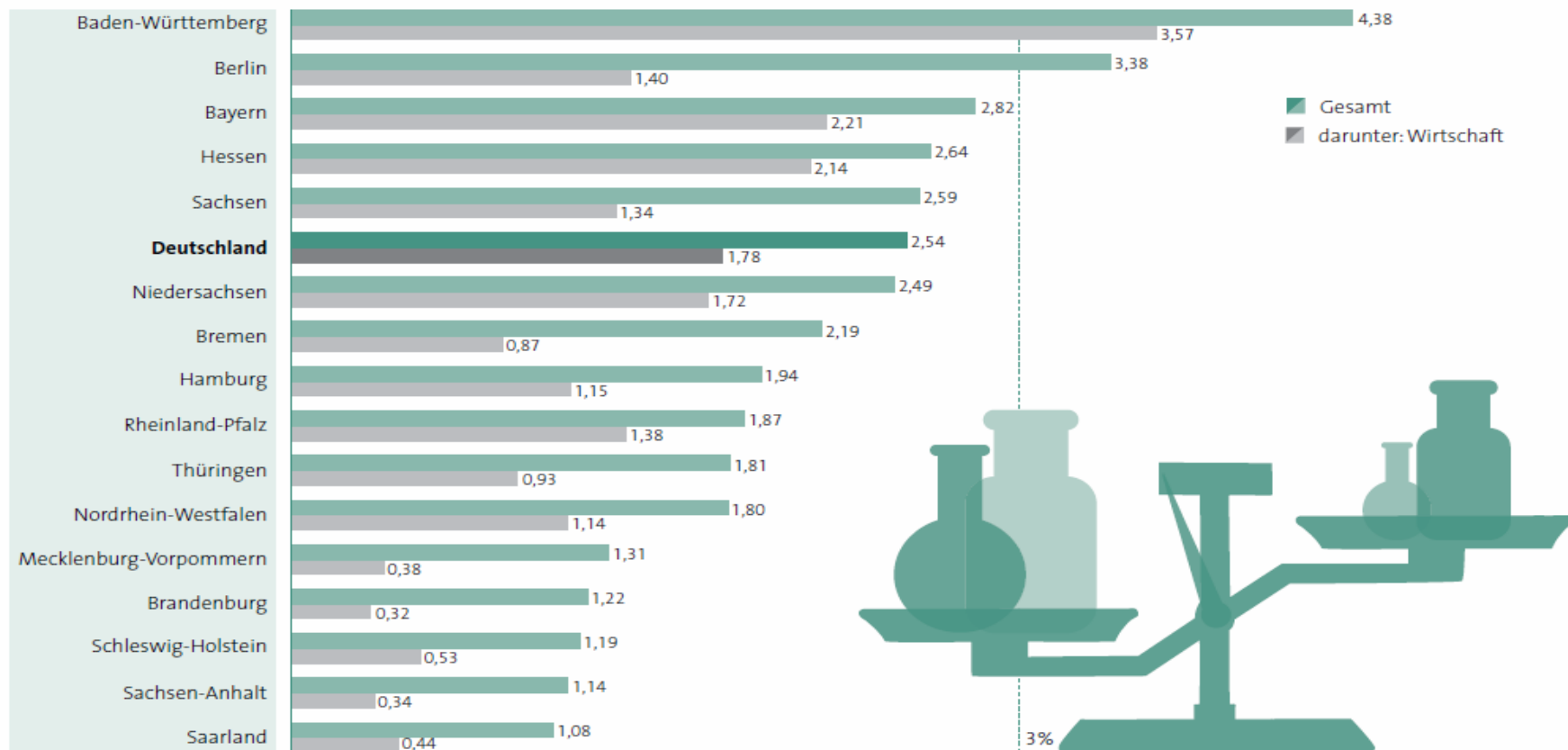
# R&D quotas in selected countries



Source: Stifterverband

# Regional aspects: R&D quotas in the German Länder

Grafik 1: FuE-Aufwendungen in Deutschland als Anteil am regionalen BIP – nach Sektoren und Bundesländern 2007



Quelle: Stifterverband Wissenschaftsstatistik, VGR d L

## Supportive actions by the BMWi for the „new“ Länder

- » **Promoting external collective research institutions („INNO-KOM-Ost“) - 2010: 65 mio. €  
[www.fue-foerderung.de](http://www.fue-foerderung.de)**
- » **Higher reimbursement rates and earmarked funding for the promotion of innovative SMEs in the „new“ Länder (Zentrales Innovationsprogramm Mittelstand ZIM) – 2010: 150 Mio. € earmarked  
[www.zim-bmwi.de](http://www.zim-bmwi.de)**

## Responsibilities of the Länder in Germany

- » **Regional research institutions and universities**
- » **Region-specific technology promotion**
- » **Technology-oriented innovation  
and new start-up centres**
- » **approx. 1 bill. € per year co- financed by EU Funds**

## Main Cluster activities by the Federal Government

### Competence networks Germany (BMWFi)

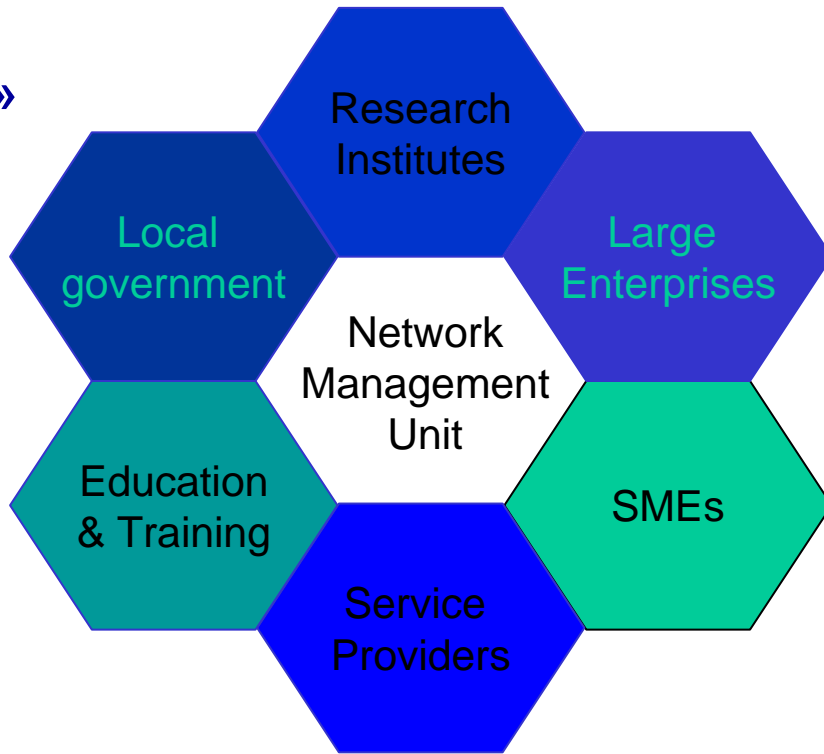
- » “League of the best innovation networks” in Germany
- » networking between industry and research
- » support development of (internationally) visible clusters
- » market the innovative location Germany both nationally and internationally

### Cutting-edge cluster competition (BMBF)

- » development of hightech-clusters in all technology sectors
- » financial aid for 5 cutting-edge clusters (max. € 50 million) per call
- » prerequisite: significant investment held by private sector
- » budget: max. € 200 million for each of the 3 calls

## Organisation of Competence Clusters - Ideal Structure

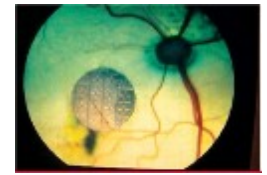
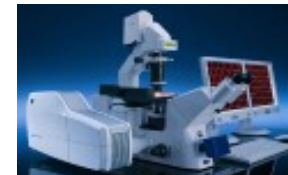
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- Thematic Focus
- Regional Concentration
- Complete Coverage of Value Chain



Manufacturer  
 Supplier  
 Partner (finance, marketing, logistic)  
 Developer  
 Researcher



## Competence Clusters in Germany – Status quo

In Germany, there are 102 Competence Networks in 9 fields of Innovation



Involved with the  
competence clusters of this  
initiative are:

- More than 5,000 SMEs
- More than 1,000 mid- and large-size enterprises
- More than 1,700 research institutes

# International Networking of Innovation-Clusters

## Examples for existing cooperations between French and German clusters

Sector	French-German transnational initiatives
<b>Biochemistry and Pharmaceutics</b>	<i>BIOVALLEY</i> : a trinational Initiative incl. Switzerland
<b>Bio- and Medicin- Technology</b>	<i>Alps Bio Cluster</i> with 6 countries of the Alps, incl. Rhone-Alpes and Munich HGF
<b>Photonics</b>	<i>Rhenaphotonics Alsace</i> : a binational cluster
<b>Information Technology</b>	<i>IT2Rhine</i> : a trinational IT-Cluster incl. Switzerland
<b>Maritime Technology</b>	<i>InterMareC</i> : a trinational project incl. Poland

# Leading Edge Cluster Competition

## Concept and selection criteria:

1. Strong scientific and economic starting position, high development potential
2. Strategy and management ensure sustainability of cluster
3. Substantial contribution of industry (min. 50%)
4. Ambitious goals to establish the cluster in the international top league
5. No pre-determination of topics, high level, independent jury

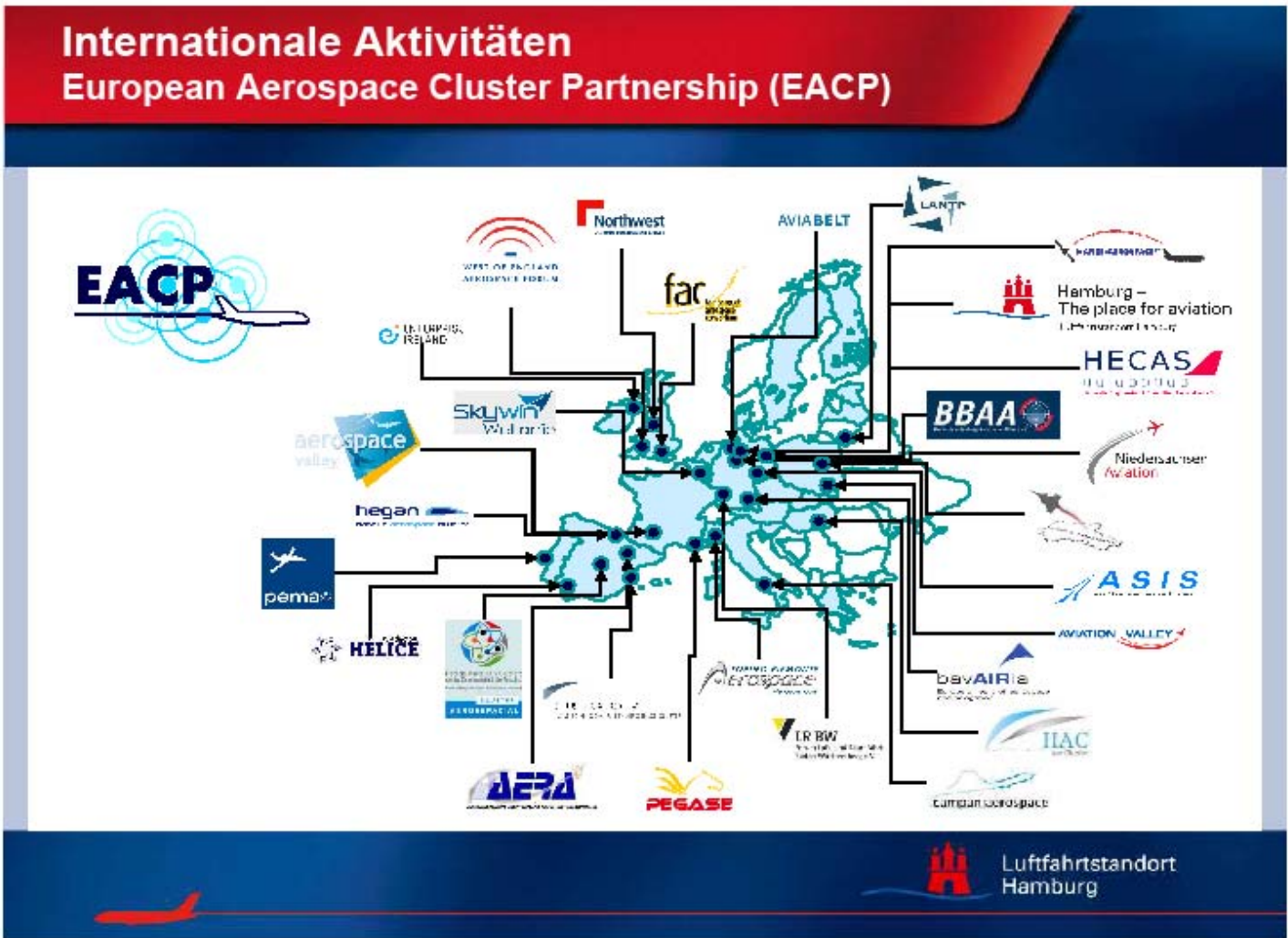
## Winners 1st round:

1. BioRN, BW
2. Cool Silicon, SN
3. Forum Organic Electronics, RP/BW/HE
4. Luftfahrtcluster, HH
5. Solarvalley Mitteldeutschland, ST/SN/TH

[www.spitzencluster.de](http://www.spitzencluster.de)



# Aerospace Cluster Hamburg – International Cooperation



## Promotion of innovative SMEs: Central Innovation Programme for SMEs (ZIM)



### **Modul 1: ZIM-KOOP**

Research  
cooperations  
between  
companies and  
research institutes

Project manager:  
AiF

### **Modul 2: ZIM-NEMO**

Networking projects  
of innovative SMEs

Project manager:  
VDI/VDE-IT

### **Modul 3: ZIM-SOLO**

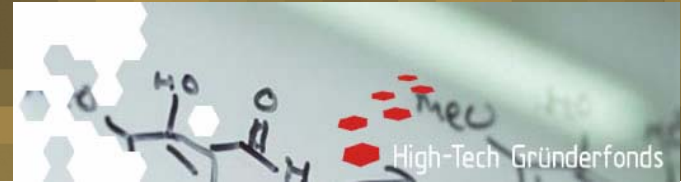
Research projects  
of individual  
companies

Project manager:  
EuroNorm GmbH  
in cooperation with  
VDI/VDE-IT

## Promotion of innovative SMEs: Central Innovation Programme for SMEs (ZIM)

- » Budget 2010: 750 mill. € (with economic stimulus package)
- » Grants of up to 50 % (SME) and 100 % (research institutes), max. 175.000 €
- » Open for all technologies
- » **International co-operations possible**
- » Almost 9000 applications last year
- » Open call, fast administrative procedures

# Promotion of innovative SMEs: High-Tech Gründerfonds



## Private/Public Venture Capital Fund for investments in young technology firms

**Fund:** € 272 million, est. market share of about 40%



**Participants:** Federal German government (€ 240 million), KfW banking group and the industrial enterprises BASF, Telekom, Siemens, Daimler, Bosch, Carl Zeiss



### Support:

- in the start-up phase: € 500.000,
- follow-up funding possible up to € 1 million



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# Perspectives for the Innovation and Technology Policy

**Innovation Vouchers (May 2010)**

**Hightech Strategy (May / June 2010)**

**Increase federal spending on R&D and Education by 12 Bill. € for the years 2010-2013 (750 Mio. € already included in the budget, the rest under fiscal reservation)**

**R&D tax incentive (under fiscal reservation)**

**Contribution to EU 2020's innovation flagship**

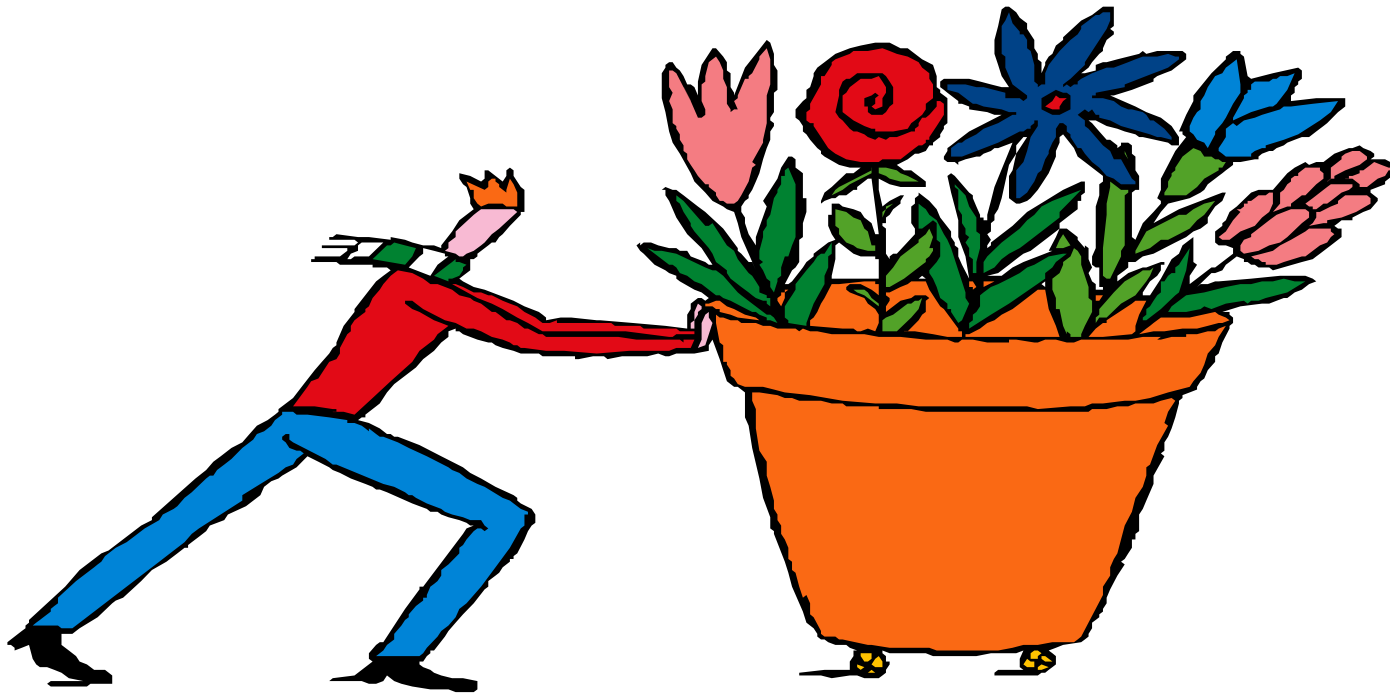
## Further information

### Federal "Research and Innovation" Funding Advisory Service

- » Central point of contact for any questions concerning research and innovation funding
- » Informs about the research structure and funding programmes at Federal, Länder and European level.
- » <http://www.foerderinfo.bund.de/>



Thank you for your attention!



Please visit our website <http://www.bmwi.de>