

# THE GERMAN RESEARCH SYSTEM



An initiative of:



Federal Ministry  
of Research, Technology  
and Space

Research in  
Germany



Land of Ideas

Status: Septembre 2025

[www.research-in-germany.org](http://www.research-in-germany.org)



# R&D in Germany in a nutshell

## Key facts

# FACTS

Broad range  
of research  
institutions:  
roughly  
**29,000**  
research  
companies

**Record spending on R&D: €130bn = 3.1% of GDP in 2023**

**Broad range of research institutions:**

- **more than 420** higher education institutions
- approx. **1,000** public and publicly funded research institutions
- roughly **29,000** research companies

**International excellence:**

approx. **17,000** PCT international patent applications  
(5<sup>th</sup> place)

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# Who does research in Germany?

- Higher education institutions (HEIs)/universities
- Non-university and government research institutions
- Research companies



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# Higher education institutions (HEIs)/universities



more than

**54,900** HEIs

staff, incl. 10,000 research staff, 12,000 researchers incl. professors

more than 20 UASs

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# Non-university and government research institutions

Roughly 1,000 public and publicly funded research institutions, including

- 43 federal research institutions
- 138 state (Länder) research institutions
- 11 academies of sciences and humanities
- 121,000 staff in R&D including 64,000 researchers

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Max-Planck-  
Gesellschaft

18  
HELMHOLTZ

Helmholtz  
Association



Leibniz Association

THE BIG FOUR

76  
Fraunhofer  
Fraunhofer-  
Gesellschaft

# Companies and industrial research

Roughly  
**29,000**  
research companies

**69%**  
of all R&D investment  
in Germany comes from  
business and industry

- Innovation-driving sectors:**
- pharmaceuticals
  - DP/electronics/optics
  - automotive
  - independent, scientific & technical services/scientific R&D

**505,000**  
staff in R&D  
including  
**298,000**  
researchers

**Germany offers researchers in science and industry a unique space to develop and explore new ideas.**

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# Research policy

## Goals and measures

Germany is to become the leading location for new technologies

- Increased investment in future technologies
- Quicker research into and development and exploitation of technologies
- Cooperation between science, business, politics and society
- Interweaving of German and European research and innovation policy
- Combination of research policy with industrial, regional, employment market and security policy
- Avoidance of technological dependencies and undesirable technology leakage

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# Innovative Germany

## Key facts

- Germany ranks 9<sup>th</sup> overall in the **Global Innovation Index**
- Germany is one of the “**strong innovators**” in Europe
- R&D intensity** (3.1%) above the OECD average (2.7%)

## Innovation actors

- approx. **29,000 R&D companies**
- 61,000** innovation- and growth-oriented **start-ups**
- more than **420 higher education institutions**
- 1,000** public and **publicly funded research institutions**
- approx. **500** regional **clusters/research alliances**
- private sector institutes**
- civil society**

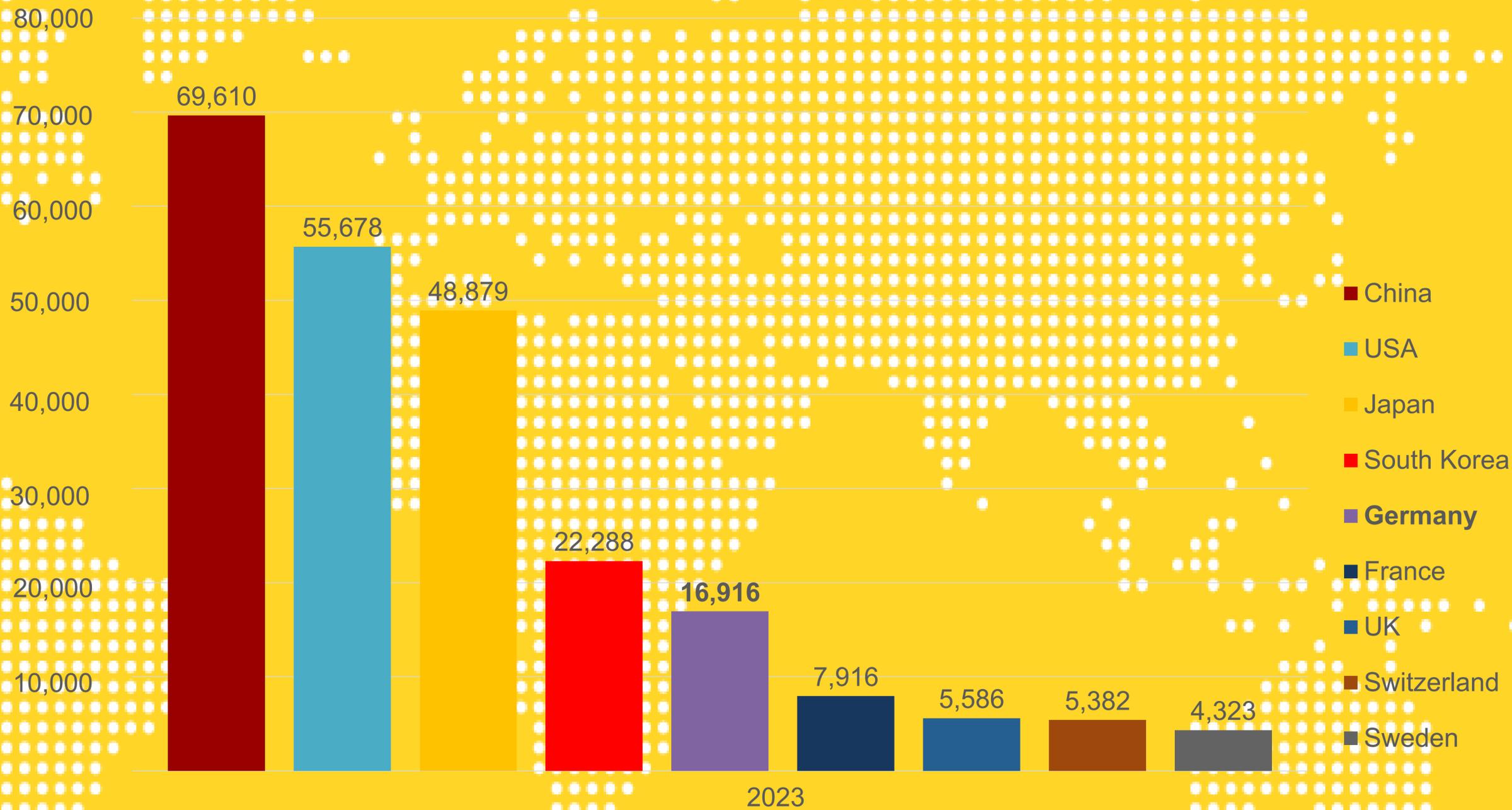
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# Patents with global market relevance



2023; PCT applications registered with the World Intellectual Property Organization (WIPO)  
Source: WIPO, PCT Yearly Review 2024

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# Framework programmes



- High-Tech Agenda Germany
- Excellence Strategy
- Internationalization Strategy

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# High-Tech Agenda Germany

## Goals:

- Strengthen Germany's innovation and economic power
- Position Germany at the forefront of global technological competition
- Focus on six key technologies
- Establish detailed roadmaps for each key technology

Source: BMFTR

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# High-Tech Agenda Germany

The High-Tech Agenda Germany drives innovation by investing in key technologies and strategic research fields that secure the country's technological leadership for the future.

## Six key technologies:

- Artificial intelligence (AI)
- Quantum technologies
- Microelectronics
- Biotechnology
- Fusion and climate-neutral energy
- Technologies for climate-neutral mobility

## Five strategic research fields:

- Aerospace research
- Health research
- Security and defense research
- Marine, climate and sustainability research
- Humanities and social sciences

More: <https://www.bmfr.bund.de/EN/Technology/HightechAgenda>

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# Excellence Strategy

- funding for cutting-edge research at universities
- two funding lines: **Clusters of Excellence** and **Universities of Excellence**
  - 70 Clusters of Excellence
  - 10 Universities of Excellence/  
1 Excellence Alliance
- €533m per year,  
€687m per year from 2026



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- Universities of Excellence
- Excellence Alliance
- University sites with Clusters of Excellence

# Internationalization Strategy

## Goals

To develop Germany's strength in innovation on the international stage

To work with emerging and developing countries to shape the global knowledge society

To strengthen excellence through global cooperation

To develop the international aspects of vocational training and qualifications

To overcome global challenges together

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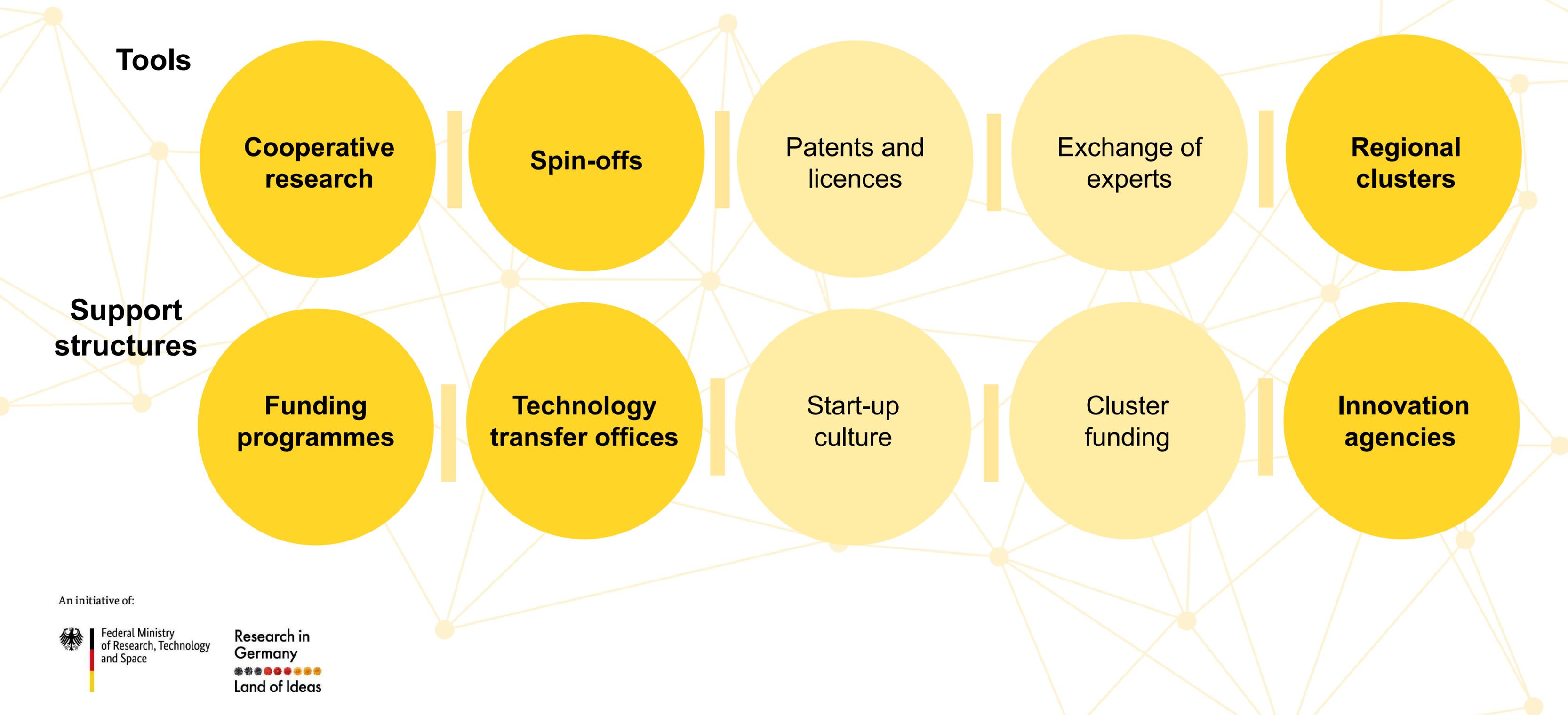


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# Knowledge and technology transfer

## Tools – measures



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# Research funding

## Key facts

# FACTS

30%

of expenditure on  
R&D from tax  
revenue

- **3.1%** of GDP in R&D = €130bn in 2023
- **30%** of expenditure on R&D from tax revenue
- more than **30,000** international guest researchers supported with scholarships

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# Who supports scientists?

The most important funding organisations

- Alexander von Humboldt Foundation
- German Academic Exchange Service (DAAD)
- Deutsche Forschungsgemeinschaft (DFG)



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# Alexander von Humboldt Foundation



Alexander von  
**HUMBOLDT**  
STIFTUNG

approx.

**\$105.4m**

international associations  
in 2023  
funded for the 70 countries

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# German Academic Exchange Service



more than  
scholarships  
**145,000**  
& grants

through 100+ centres  
for international  
cooperation  
worldwide

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# DFG

offices in Bonn and Berlin

# €23,000

for all disciplines  
funded projects annually  
1 joint institution in Beijing

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# Funding for international researchers

Different programmes for different purposes and levels, e.g.:



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# Funding for international researchers

Different programmes for different purposes and levels, e.g.:

## HELMHOLTZ

Helmholtz Young Investigator Groups

### Level

Postdocs/  
early career  
researchers

### Duration

5 years with the  
option of a  
permanent position

### Type of funding

A total of at least  
€1.75m, incl. expenses  
for materials, supplies  
and investments and  
work contracts

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# Funding for international researchers

Different programmes for different purposes and levels, e.g.:



Leibniz  
Leibniz Association

Leibniz Programme  
for Women Professors

**Level**

**Established  
researchers**

**Duration**

5 years, with tenure  
or permanent position  
afterwards

**Type of funding**

Up to €1.7m to fund  
a professorship,  
personnel and  
equipment

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# European Research Area

## Pact for Research and Innovation in Europe



### Priorities:

- deepening the internal market for knowledge
- mastering the green transition and digital transformation
- enhancing access to excellence across the EU
- advancing research and innovation investments and reforms

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### Horizon Europe

- most important tool for implementing the ERA
- world's largest transnational research funding programme
  - **€95.5bn** by 2027

### Research and innovation funding at national level

- target: 3% of GDP to be spent on R&D in all EU countries

### ERA pilot measures

- e.g. transformation of EURAXESS into an ERA talent platform
- European Open Science Cloud
- “Green hydrogen” initiative
  - Plastic Pirates – Go Europe!

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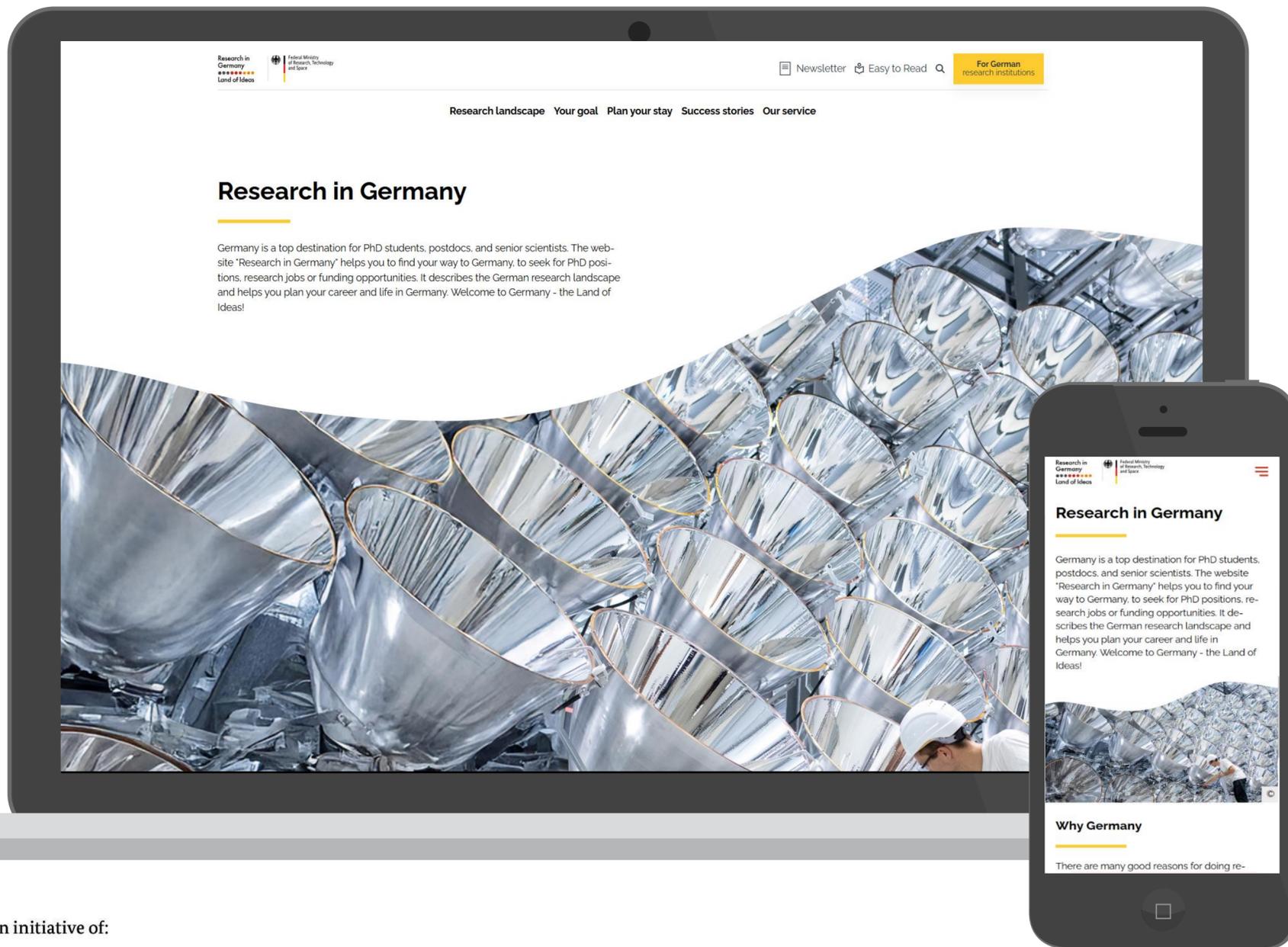


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# Need more information?

www.research-in-germany.org



- ### Your goal
- Bachelor or master
  - PhD
  - Postdoc
  - Advanced research
  - A research position

**PhDGermany database**  
Find a selection of open PhD positions in Germany in the PhDGermany database!

**Search PhD offers**

Search

Subject  Working language

### Pinned topics

[Back to top](#)

- Agriculture and food sciences
- Science Year 2025 ENERGY OF THE FUTURE Energy of the future
- WELCOME Plan your Stay
- New Skilled Immigration Act at a glance
- "Pathfinder" to your PhD journey

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# Sources of information

Explore the range of events we offer for international aspiring researchers:

**“Find Your Future Research Destination”-series:**  
each session presents a different region or research institution(s) in Germany



[www.research-in-germany.org/  
research-destination](http://www.research-in-germany.org/research-destination)

[www.research-in-germany.org](http://www.research-in-germany.org)

**“Meet Your Future You”-series:**  
experienced international researchers share personal insights into their paths to Germany



[www.research-in-germany.org/  
meet-your-future-you-series](http://www.research-in-germany.org/meet-your-future-you-series)

# Useful links

## Websites and databases

[www.research-in-germany.org](http://www.research-in-germany.org)

[www.funding-guide.de](http://www.funding-guide.de)

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

[www.gerit.org](http://www.gerit.org)

[www.higher-education-compass.de](http://www.higher-education-compass.de)

[www.dfg.de/en/research-funding](http://www.dfg.de/en/research-funding)

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# Thank you!

Name

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E-Mail

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