



Fun facts about Germany

Capital: Berlin

Government: Federal
Parliamentary Republic

Population: 81 million

Language: German

65% of the highways (Autobahn)
in Germany have no speed limit

University is free for everyone
(even non-Germans)

EURAXESS members in focus: Germany

Germany is one of the most attractive locations for mobile researchers. The excellent infrastructure, wide variety of disciplines, well-equipped research facilities and competent staff attract scientists and researchers to Germany from all over the world.

Research-performing institutions and organisations

In Germany, research takes place in a number of different settings including universities and centres for applied sciences, non-university research institutions, in companies and at institutions run by federal or state (Länder) authorities.

There are close to 400 higher education institutions (HEIs) offering a wide range of academic disciplines, including 120 universities, 213 centres of applied sciences and 57 colleges of music and art. Unique to the German higher education system is the close link between learning, teaching and research – a principle which goes back to Wilhelm von Humboldt, the founder of the Universität zu Berlin in 1810, which is today the Humboldt University in Berlin. The [Research Map](#) of the German Rector's Conference details the key research priorities of HEIs in Germany.

Other important research-performing organisations in Germany include the [Fraunhofer-Gesellschaft](#) (FhG) which currently operates 74 institutes and research institutions within Germany, the [Helmholtz Association](#) (HGF), Germany's largest scientific association with about 7,000 foreign scientists working at Helmholtz Centres, the [Leibniz Association](#) (WGL) which connects 96 research institutions that address issues of social, economic and ecological relevance, and the [Max Planck Society](#) (MPG), Germany's most successful research organisation, as 20 Nobel laureates have emerged from the ranks of its scientists since its establishment in 1948.

Known for their innovation, German companies collaborate closely with universities, science institutions and non-university research organisations. Germany's industry carries out and funds at least two-thirds of research and development (R&D) activities. The automotive sector, followed by the electrical engineering and mechanical engineering sectors make the largest investments. Companies such as Volkswagen, Siemens and Bayer are known for their high R&D spending.

Since January 2020, companies that are active in R&D and taxable in Germany can benefit from a tax incentive for research. The new R&D allowance for enterprises conducting research is 25% of eligible expenses. The goal behind the tax is to enhance Germany's competitiveness in innovation and to stimulate more R&D activities, particularly by small and medium-sized enterprises, which employ 16 million people in Germany.

Germany's federal ministries fund 40 R&D institutions that conduct research in almost all areas. An example is the [Robert Koch Institute](#) (RKI) in Berlin, which is the government's central scientific institution in the field of biomedicine. Research and prevention of infections is one of RKI's classic fields of work, and the Institute has played a prominent role in the current Covid-19 pandemic.

On the state level, the 16 German *Länder* act as research funding bodies and operate over 160 institutions that conduct research on a broad range of areas. One example is the [German Research Centre for Artificial Intelligence](#).



City of Tuebingen, Source: DLR



R&D strategies and policy framework

Germany's research and innovation policy framework document, the High-Tech Strategy (HTS), was first introduced in 2006 and has since been renewed and developed further. The latest version, [HTS 2025](#), consolidates R&I funding across all ministries and concentrates on three crucial fields of action: 1) tackling major challenges for society, 2) strengthening Germany's future competencies, and 3) establishing an open innovation and risk culture. The HTS 2025 strives for concrete goals through 12 missions which require the science community, the private sector as well as civil society to join forces.

Building on the Federal Government's Internationalisation Strategy of 2008, under the leadership of the Federal Ministry of Education and Research (BMBF), a new [Strategy for the Internationalisation of Education, Science and Research](#) was developed and adopted in 2017. The Strategy focuses on five target areas such as "strengthening excellence through global cooperation" and "developing Germany's strength in innovation on the international stage".

The Pact for Research and Innovation, first adopted in 2005, was recently extended and will now run for ten years. Until 2030, the Federal Government and the *Länder* will grant the individual research organisations (DFG, MPG, FhG, HGF, WGL) an annual increase in funding of 3%, giving them long-term financial planning security.

The [Excellence Strategy](#), which was adopted in 2016, builds upon its predecessor programme – the so-called Excellence Initiative which ran from 2007 to 2017, and is planned for the long term. The Strategy aims to strengthen cutting-edge research at universities in two funding lines: 'clusters of excellence' and 'universities of excellence'. Since 2018, the Federal Government and the *Länder* have provided funding of €553 million annually to support cutting-edge research at ten universities of excellence, one excellence network and 57 clusters of excellence.

R&D spending

Germany has invested more funds in R&D in recent years than ever before. In 2018, a total of €105 billion was invested in R&D by the Federal Government and the private sector. This represents 3.13% of Germany's gross domestic product (GDP). Germany accounts for 31% of all R&D expenditure in the European Union (based on the EU28). For the year 2025, the Federal Government has set the ambitious target of investing 3.5% of the GDP in R&D.

R&D personnel

In 2018, almost 708,000 individuals were employed in R&D (full-time equivalents) of which more than 63% worked in the private sector. This marks a new peak and an increase of 45% in the last 12 years. Germany lies also well above the EU average in the share of R&D personnel in the total number of employed persons. Over 402,000 worked at German universities as academic staff in 2018. A total of 49,600 of them came from outside of Germany. The number of foreign academic staff doing research at the four largest non-university research institutions (Fraunhofer-Gesellschaft, Helmholtz Association, Leibniz Association, Max Planck Society) in Germany added up to 11,830 in 2017.



Bonn University, Source: DLR



EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by 42 countries, of which we will profile one in each quarterly e-newsletter.



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Innovation aspects

Germany is one of the leading innovation countries, which is also reflected in the European Innovation Scoreboard, produced by the European Commission, which places Germany in the group of 'strong innovators'. The Global Innovation Index also puts Germany among the most pioneering countries. Germany is a leader when it comes to patent applications. Almost 400 patents relevant to the world market per million inhabitants were filed in 2017 from Germany.

Funding tools/opportunities

There are various organisations in Germany funding research projects as well as individual researchers.

The largest funding organisations are the [Deutsche Forschungsgemeinschaft \(DFG\)](#), the [German Academic Exchange Service \(DAAD\)](#) and the [Alexander von Humboldt-Foundation \(AvH\)](#).

There are also a number of foundations which support research projects, research institutions as well as individual researchers, such as the [Robert Bosch Stiftung](#), the [Volkswagen Foundation](#) or the [German Federal Environmental Foundation \(DBU\)](#), among others.

The following databases are recommended when searching for research funding opportunities:

[DAAD Scholarship Base](#)

[EURAXESS Germany: Jobs & Funding](#)

Contact details and list of important links

Germany is part of the European initiative EURAXESS. Currently, 91 German EURAXESS centres advise international mobile researchers on mobility-related questions.

[EURAXESS Germany](#)

[Federal Ministry of Education and Research \(BMBF\), Education and Research in Figures 2020](#)

[German Rector's Conference \(HRK\), Higher Education Institutions in Figures 2020](#)

[German Centre for Higher Education Research and Science Studies \(DZHW\) / German Academic Exchange Service \(DAAD\), Wissenschaft weltoffen kompakt 2020 English edition](#)

[Research in Germany](#)



Research cooperation between Germany and LAC

In this edition of our newsletter, we provide a quick roundup of the main elements and opportunities for cooperation in research and innovation (R&I) between the Latin American Countries (LAC) and Germany.

For the German Federal Ministry of Education and Research (BMBF), Latin America has long been an important partner region for collaboration in research, technology and innovation. Focus countries are **Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba** and **Mexico**. The BMBF is a member of the **EU-LAC Interest Group**, which involves more than 30 funding agencies from both regions with the aim of conducting joint actions fostering R&I collaboration. Indeed, BMBF regularly publishes joint calls with partner institutions in the above countries.

Brazil is Germany's principal education and science partner in Latin America and both countries can look back on more than 50 years of cooperation. The 29th Meeting of the Brazilian-German Joint Commission on Cooperation in Science, Technology and Innovation, held in November 2020, provides new inputs for future cooperation. Among the main **fields of common interest** are the bioeconomy, climate, biodiversity and ocean research, industry 4.0, smart cities and artificial intelligence.

With the opening of the **German Centre for Research and Innovation São Paulo (DWIH São Paulo)** in 2012, as an initiative of the Federal Foreign Office, people and institutions from Brazil and Germany in the areas of higher education, science, research and scientific innovation gained an important platform. The DWIH São Paulo offers representatives of numerous German research and funding institutes the chance to collaborate with partners in Brazil and to promote the visibility of German innovation. There are five DWIHs Worldwide: São Paulo, New York, Moscow, New Delhi and Tokyo.



[Watch the 1:40 minute video on DWIH.](#)

Again in terms of science, technology and innovation, **Colombia** is one of Germany's most important partners in Latin America. The German Research Foundation (DFG), the German Academic Exchange Service (DAAD) as well as the BMBF regard Colombia as one of their priority countries in the region. Since 2012, regular talks focusing on science and technology cooperation, or STC, endeavour to strengthen these ties even further. Some 220 cooperation treaties have been signed between Colombian and German universities; 60% of these have been signed within the last six years. The DFG nurtures two cooperation relationships with Colombian universities, the Universidad de Antioquia (UdeA) and the Universidad de los Andes. New projects, especially in the field of the **bioeconomy, sustainability** and **digitalisation**, will be the focus in the coming weeks, opening the door to new and exciting opportunities for cooperation.

Between **Mexico** and Germany there is close collaboration in the field of science, technology and innovation (STI). This is illustrated by more than 460 cooperation agreements between German and Mexican universities. They encompass a wide range of topics from student mobility to state-of-the-art research. Also, thanks to these cooperation agreements around 3 000 Mexicans are pursuing their studies in Germany. This makes Mexico the third-largest 'sending' country in Latin America. At the same time Mexico is an attractive destination for German students and researchers to pursue their studies. German scientists are highly appreciated in Mexico as they work together with their Mexican colleagues on topics of joint interest.

The BMBF regularly organises North and South America Country Days ('BMBF-Ländertag') with the aim of connecting German researchers with counterparts in the respective target country of the BMBF-Ländertag ([Colombia Day March 2019](#))



The most important programmes and projects in/with Latin America funded by BMBF are listed below:

German-Argentinean Centre of Universities (Deutsch-Argentinisches Hochschulzentrum DAHZ/Centro Universitario Argentino-Alemán): Funds binational university programmes resulting in double degrees accepted both in Germany and in Argentina. [Website](#)

Mexican-German University Cooperation (in the framework of the German University Consortium for International Cooperation, DIHK): Involves more than 30 universities in Germany and TEC de Monterrey in Mexico and offers an exchange programme for German and Mexican students and double degree programmes in several thematic areas. [Website](#)

Amazon Tall Tower Observatory, ATTO: A research site located in the middle of the Amazon rainforest in northern Brazil, about 150 km north of Manaus. It is run by scientists from Germany and Brazil. Its aim is to continuously record meteorological, chemical and biological data, such as the concentration of greenhouse gases. [Website](#)

Two Maria Sibylla Merian Centres for Advanced Studies in Social Sciences and Humanities with Latin America:

MECILA (Maria Sibylla Merian Centre Conviviality-Inequality in Latin America): Located in São Paulo, Brazil, the consortium is composed of Freie Universität Berlin (coordination), Universität zu Köln, Ibero-Amerikanisches Institut, Universidade de São Paulo, Centro Brasileiro de Análise e Planejamento, El Colegio de México, and Instituto de Investigaciones en Humanidades y Ciencias Sociales (CONICET / Universidad Nacional de La Plata). [Website](#)

CALAS (Maria Sibylla Merian Centre for Advanced Latin American Studies in the Humanities and Social Sciences): Headquartered at the University of Guadalajara, Mexico, there are also three regional offices: one at the Facultad Latinoamericana de Ciencias Sociales (FLACSO) in Quito, Ecuador; one at the Universidad de Costa Rica in San José, Costa Rica; and a third at the Universidad Nacional San Martín in Buenos Aires, Argentina. The German Universities Bielefeld, Kassel, Hanover and Jena are responsible for the project management. [Website](#)

The CDEA (Centre of German and European Studies): Information and research centre promoted by Deutscher Akademischer Austauschdienst ([DAAD](#)), which is the German Academic Exchange Service, and with funding from the German Federal Ministry of Foreign Affairs. The centre is in Porto Alegre, Rio Grande do Sul, and is located in two local universities; the Pontifical University of Rio Grande do Sul (PUCRS), and the Federal University of Rio Grande do Sul (UFRGS). It is a five-year project designed to foster a new generation of Brazilian scientists and researchers in interdisciplinary studies on current topics in Europe and Germany. [Website](#)

Several large BMBF funding programmes enhance research and innovation collaboration with partner institutions in Latin America, such as [Bioökonomie-International](#) ([info in English](#)); <https://www.bmbf-client.de/en> and [Clusters-Networks-International](#).

In 2019, the **DAAD** supported a total of 10,263 graduates and researchers in its various programmes from and to LAC. With its offices in Mexico, Colombia, Brazil, Argentina and Chile, and its network of lecturers, the DAAD is strongly represented throughout the region. The training of young scientists from developing countries and the strengthening of their higher education systems are important concerns for the DAAD in LAC. Funding also seeks to intensify



research cooperation through the Centres of Excellence for Marine Research (CEMarin) and Peace Research (CAPAZ) in Colombia.

Also in 2019, the DAAD enabled 895 German scholarship holders – from students to university teachers – to stay in Brazil and 1,073 Brazilians were able to study, teach and conduct research in Germany thanks to DAAD support. In addition to the DAAD-funded Martius Chair at the Universidade de São Paulo, there were eight DAAD Lektorships spread across the country, which were supported by six DAAD Language Assistants.

Germany's largest funding organisation for basic research is the **German Research Foundation** (DFG), which holds 14 cooperation agreements with various Latin American funding organisations for financing bilateral projects. Calls for proposals are published either with a deadline or on a rolling basis (proposals can be submitted at any time). The DFG currently co-finances numerous projects related to Latin America and across all fields of research. In order to further strengthen the close relations with Latin America, the DFG has also maintained an office in Sao Paulo since 2011. Further information on DFG's [Latin America office](#) and its [partner organisations and agreements in the region](#).

Max Planck Liaison Office for Latin America in Buenos Aires helps young researchers to apply for doctoral and postdoctoral programmes at [Max Planck Institutes](#). It encourages bilateral and multilateral research collaboration by organising symposia and workshops, preparing collaborative agreements, coordinating project calls and fellowship programmes with partner organisations, as well as establishing independent research groups at universities and research centres in the region. More [information on the Liaison Office](#).

The **Helmholtz Association** values its longstanding and close relationships with numerous partners in Latin America. Nearly half of Helmholtz's 19 centres maintain cooperative relations with partner organisations in a dozen LACs. Most of the cooperation projects are carried out with universities and non-university research institutions in Brazil, Argentina, Mexico and Chile. The exchange of scientific personnel with these countries is also extensive. Earth sciences and the environment are a common joint field of research. Individual research cooperation projects also cover the areas of health, energy, matter, information, as well as aeronautics, space and transport. More information on [Helmholtz's research for grand challenges](#).