



Key Features of the DLR Internationalisation Strategy 2030



DLR Internationalisation Strategy 2030 – Vision, Guiding Principles and Objectives –



Internationalisation – Added Value for DLR

In today's world, science and innovation are truly global endeavours. An international approach is a prerequisite for competitiveness, scientific excellence and the ability to contribute to solutions to global challenges. Internationalisation features prominently in *DLR's Strategy 2030*, which emphasises the intention of the organisation to expand and enhance its international profile.

The *DLR Internationalisation Strategy 2030* builds on the successful international cooperation enshrined in DLR's research and development activities and the international activity areas addressed by the DLR Project Management Agency and the DLR Space Administration. The strategy envisions an increasingly international organisational culture that is future oriented, efficient and long range. It shapes DLR's international activities in line with its strategic objectives, reflecting current trends and developments. The result? A sustainable mechanism to ensure that DLR remains influential and flexible within the dynamic operational environment of the future.

Learn more about the basis of the *DLR Internationalisation Strategy 2030* through its key features, set out in the following pages.

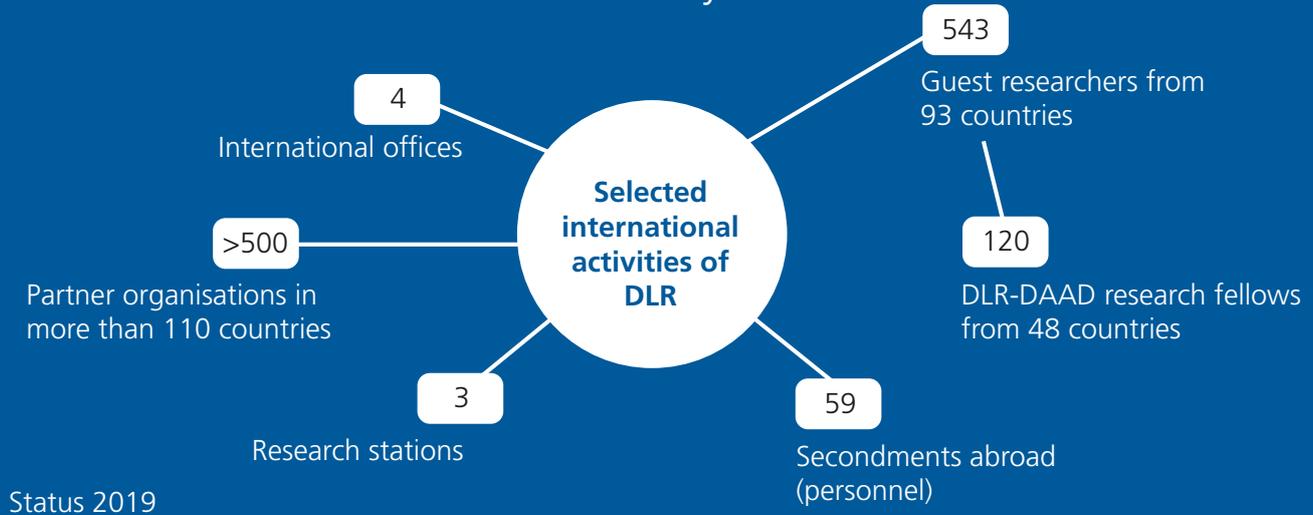
DLR Internationally

Focusing on the **key areas of space, aeronautics, energy and transport research, together with the cross-sectoral areas of security and digitalisation**, the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt e. V.; DLR) is one of the largest and most important research institutions in Europe. DLR is already **a world leader** in many fields and will continue to expand upon and strengthen its position internationally in the future.

DLR has an excellent global network and **cooperates with over 500 institutions in more than 110 countries worldwide¹**, including universities, research institutions, government agencies, industrial companies, and space agencies. Through these, DLR contributes towards finding answers to current research questions and developing innovative technologies and solutions. It is represented internationally by external offices in Europe and abroad, and by research stations in Antarctica, Canada, and Spain. The **DLR Space Administration** is an internationally sought-after partner for ambitious projects and missions. The **DLR Project Management Agency** is a renowned service provider of research, education and innovation management for organisations in Germany and abroad.

¹ Both figures include DLR's own research activities, the DLR Space Administration and the DLR Project Management Agency.

DLR – Well-connected Internationally



DLR has a high success rate within the EU Framework Programmes and is a strong partner for the European Space Agency (ESA).

As a member of the **Helmholtz Association of German Research Centers (HGF)**, DLR has close connections with its other research institutions, thus increasing scientific excellence and enhancing Germany's position as a research location in the face of international competition.

More than **540 visiting scientists from over 90 countries** work at DLR's institutes and facilities every year, including about **120 scholarship holders from more than 40 countries benefitting from the DLR-DAAD² Research Fellowship Programme each year.** International cooperation and internationality are key elements that contribute significantly towards DLR's success.

² German Academic Exchange Service (Deutscher Akademischer Austauschdienst; DAAD).

Strategic Internationalisation

Today's science and technological developments are more complex than ever before. Responding to challenging scientific questions and developing innovative technologies often requires substantial financial resources and advanced infrastructure, as well as highly qualified personnel. At the same time, the globalisation of communications and mobility has greatly increased the opportunities for international cooperation. Research institutions, universities and industrial companies all see this as an opportunity to work more successfully and efficiently at an international level. In this way, **international collaborations serve as catalysts and disseminators of knowledge within the scientific community.** They enhance an institution's own resources and thus contribute towards consolidating Germany's status as a location for innovation. Scientists themselves make the most of attractive opportunities to work in other countries or with people from different cultures. For research institutions, this is a matter of developing competitive offerings in terms of content, funding and staffing resources, so as to attract talented and renowned researchers.

DLR's strategic internationalisation has **two main facets**, one external and one internal: targeted and topic-oriented **collaboration with international partners** (external) and the **internationalisation of personnel, procedures and services** (internal).

The underlying premises of the guiding principles set out in the **DLR Strategy 2030** always apply here – **scientific excellence, contributing to tackle societal challenges, and partnering with industry.** Other aspects include the array of services provided by the DLR Project Management Agencies and the DLR Space Administration to support international networking.

If internationalisation is successfully implemented in **the organisation**, it will fully and sustainably contribute to its success.

Vision and Guiding Principles for Internationalisation

In a Vision and three Guiding Principles, DLR has devised a mission statement for its further internationalisation up until 2030. Based on *DLR's Strategy 2030*, which was published in 2017, it also forms the basis of the corresponding Strategic Objectives for internationalisation.

Vision for Internationalisation

In 2030 ...

... DLR is internationally renowned and prominent in each of its key areas of space, aeronautics, energy and transport. This extends to the DLR Project Management Agency and the DLR Space Administration. It has an internationally oriented organisational culture.

DLR maintains an international collaborative network and cooperates with the best players in Europe and worldwide in line with its programmatic priorities. It sets benchmarks for the development and management of internationally networked research, technological development and innovation, and devises interdisciplinary solutions to major societal and global challenges.

DLR's cooperation with major European partners contributes significantly towards ensuring Europe's leading role in international scientific research and the competitiveness of its economy.

DLR's unique combination of research institution, Project Management Agency and Space Administration, with a diverse research infrastructure, highly qualified staff and long-term experience, offers international partners a **center of excellence** that stands for outstanding success in **bilateral and multilateral collaborations.** The integration of DLR's key areas into the programme of the Helmholtz Association forms an additional basis for international activities. Through its international partnerships, DLR is strengthening the German economy and consolidating Germany as a prime location for business.

Guiding Principles³ for Internationalisation

1. Scientific Excellence

As one of the world's leading research organisations in the key areas of space, aeronautics, energy and transport, DLR aims to cooperate with the best European and international institutions. To this end, it is constantly building upon its cooperative efforts with selected international partners, initiating and furthering collaborations with new and emerging stakeholders, and strengthening its networks and partnerships.

Excellent science requires brilliant minds. DLR seeks out first-class scientists and young talent worldwide, offering them exceptional research facilities and an appealing working environment.

2. Contributing to Tackle Societal Challenges

Societal and global challenges such as climate protection, future mobility, digitalisation, energy supply and civil security are not restricted to individual countries; as such, they can only be addressed through international collaboration. DLR cooperates with partners in Europe and worldwide in line with both national and international political priorities to devise knowledge-based, innovative and sustainable solutions to these challenges.

3. Partnering with Industry

DLR sees itself as a driver of innovation in long-term and success-oriented partnerships with industry. Its applications-oriented, cutting-edge research, funding of excellent industrial consortia, and close collaboration with international organisations and institutions strengthen the German economy and its competitiveness, and consolidates Germany's position as a prime location for business.

³ Note: In compliance with the *DLR Strategy 2030*, the 'Guiding Principles', 'Objectives' as well as 'Priority Countries and International Organisations' set out here apply to DLR research and the DLR Space Administration.

Priority Countries and International Organisations

A comprehensive internal consultation process conducted for the development of the *DLR Internationalisation Strategy 2030* identified priority countries for the years leading up to 2030. In addition, international organisations such as the European Union, the United Nations and the European Space Agency are important partners and play a significant role in DLR's current and future-oriented cross-border cooperation activities.

Global Partnerships

DLR works with over 400 prominent partner organisations from more than 60 countries on its key research topics. It also engages multilaterally, often playing a leading role in EU and ESA projects and participating in programmes and initiatives by UN institutions and other international organisations. Long-term partnerships often emerge from long-standing cooperation and offer value built on mutual trust. DLR has a large number of excellent cooperation partners spread across all continents, on national level as well as amongst international organisations. This collaboration model offers not just scientific experience, but valuable and wide-ranging knowledge about many countries and questions of global concerns. DLR's international offices in Brussels, Paris, Tokyo, and Washington D.C. are key points of contact and important sources of information, initiating collaboration with partners in their respective regions.

The sustainable and strategically oriented expansion of DLR's cooperation networks is an important building block in the *DLR Internationalisation Strategy 2030*. One essential element in strategic internationalisation is an understanding of the potential for cooperation available in specific countries and their institutions. A country's scientific excellence, the innovative drive of its institutions, its level of economic development, and its research and economic policies must all be taken into account.

DLR has identified **almost 30 priority countries and international organisations** for the period up until 2030. Five top countries stand out for various reasons:

DLR Top Countries



USA

For the time being, the USA will be the leading country in research and technology development in all DLR priority areas and thus remain a central partner for DLR.



France

France pursues research and technological activities in DLR's key areas. It remains a strategically important partner for DLR in Europe and is also a key partner in bilateral projects, as well as in the EU and ESA framework.



Japan

Japan's scientific and technological level is continuously increasing. Against this backdrop and on the basis of the many years of trustful cooperation, Japan continues to be an important partner for DLR in all of its key areas.



Russia

Russia remains one of the leading countries in DLR's key areas of space and aeronautics. A close cooperation will continue with this important partner, with which DLR has a good long-standing working relationship.



The Netherlands

DLR maintains a long-standing institutional cooperation with the Netherlands via the German-Dutch Wind Tunnels as well as in air traffic management. This partnership is an important element of its activities in aeronautics.

More in-depth analysis of the priority countries and potential new partners as well as UN institutions and other international organisations will enable a strategic approach to international cooperation in the run-up to 2030. This means **using the required mechanisms for collaboration in a targeted way** and expanding upon them with **new measures**. Arranging these into short-, medium- and long-term activities and monitoring success via **Key Performance Indicators (KPIs)** also allows additional steering. It is important to look at these individually for each of the DLR's key areas of space, aeronautics, energy and transport, in order to be able to devise specific recommendations for action. This will make it possible to both further develop existing partnerships in a targeted way and establish relationships with potential new partners.

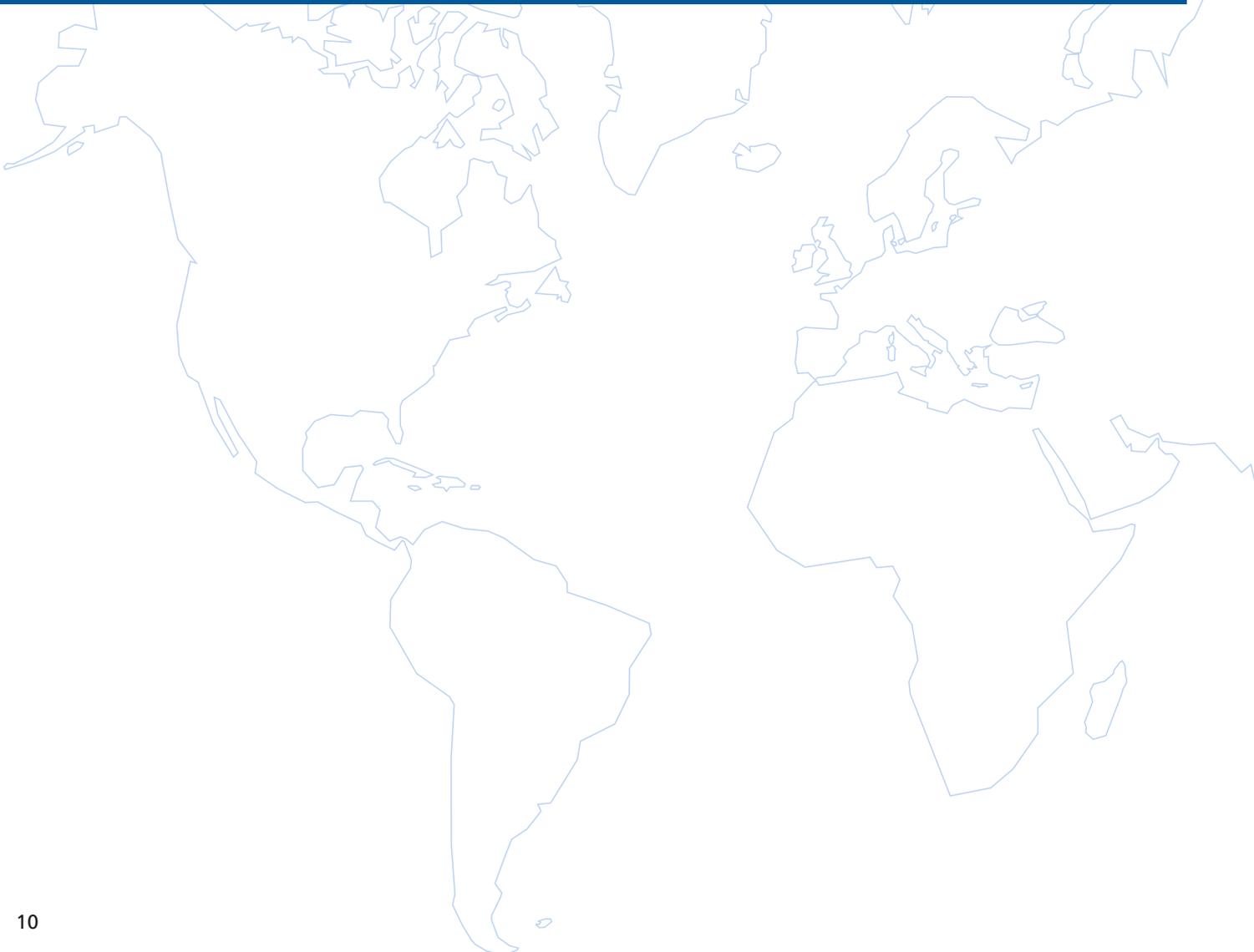
Strategic Objectives and Measures

Four specific Strategic Objectives have been defined, based on the above-mentioned guidelines:

1. Scientific Excellence – Partnering with the Very Best
2. Scientific Excellence – Increasing Internationality
3. Implementing the UN 2030 Agenda for Sustainable Development
4. Partnering with Industry

The four Strategic Objectives are complemented by 21 measures with which the further strategic development of DLR's international activities will be implemented. They are divided into 12 objective-specific measures and nine cross-sectoral measures, for each of which Key Performance Indicators (KPIs) have been designed. These are meant to allow for review and, where necessary, adjustment over time.

The purpose of the objective-specific measures is to contribute to the individual objectives with new tools, analyses and support services. The cross-sectoral measures are aimed at the internationalisation of DLR in general, for example by improving internal processes and increasing DLR's overall external visibility.



Strategic Objective

1

Scientific Excellence – Partnering with the Very Best

Up until 2030, DLR will continue to build upon its collaboration with selected leading-edge research institutions and key partners in a strategic way, particularly in the priority countries. It will also enter into new partnerships with world-leading research and technology institutions in a targeted manner.

Measures

In support of the objective, DLR will, among other things ...

- ... intensify the systematic analysis of potential partner countries and institutions.
- ... steer internal funding with more focus.
- ... analyse new possibilities and formats for international cooperation.

International networking and the common cross-border use of major research infrastructures characterise today's international scientific landscape. Outstanding research results and ground-breaking technology developments are now almost exclusively produced by **international teams**. In this global network of the most prominent research organisations, DLR already occupies a leading position in many of the fields relating to its key areas of research. It is a central player in the Helmholtz Association of German Research Centers (HGF), and is thus actively involved in implementing the **HGF Internationalisation Strategy 2017–2022**.

Many of DLR's cooperative projects are based on a **trusting partnership with mutual benefits**, which is also a cornerstone of long-term, cutting-edge research at DLR.

Research collaborations are not an end in themselves but are usually entered into with a view to the scientific and technological added value expected to be generated as a result.

The developed measures will help to expand DLR's collaborations with the very best international institutions in relation to its key areas of research, while ensuring that DLR staff is even better prepared for international cooperation.

Strategic Objective

2

Scientific Excellence – Increasing Internationality

In the run-up to 2030, DLR will be promoting the mobility and international experience of its staff in a targeted way and stepping up international efforts to recruit outstanding scientists and talent. In order to achieve this, DLR offers an attractive and competitive research environment and world-class infrastructure for international science and industry-related activities.

Germany appeals to leading experts from all disciplines as a location for scientific research. As one of the country's largest research organisations, DLR plays a significant part in this success.

DLR sees itself as a research organisation that meets the demands of growing and dynamic competition in international research, as well as an **attractive employer for highly qualified researchers** from Germany and abroad. A competitive research environment and general conditions, as well as the ability to adapt to new circumstances are the cornerstones of a success-oriented research institution.

Measures

To support this objective, DLR will, among other things ...

... establish an internal 'DLR International Mobility Network' as a service for staff and visiting scientists.

... expand its international recruitment activities.

... intensify international assignments to partner institutions.

When it comes to **young scientists**, DLR wants to build upon the success of its fellowship programme over the coming years in order to support foreign scientists. The programme has been running highly successfully **since 2010 in conjunction with the German Academic Exchange Service (DAAD)**. In 2019 alone, 120 scholarship holders from 48 countries conducted research at DLR institutes. This not only promotes the internationalisation of German science and research, but also forges long-lasting, sustainable ties between highly qualified scientists and DLR as a research organisation, not to mention Germany itself.

In the future DLR will continue to ramp up its efforts to attract outstanding and experienced researchers and international talent, with the aim of attracting the brightest minds. The measures developed will help to position DLR even more effectively as an internationally attractive employer and increase the scientific mobility and intercultural competence of DLR employees.

Strategic Objective

3

Implementation of the UN 2030 Agenda for Sustainable Development

In the years leading up to 2030, DLR will contribute to shaping selected projects and initiatives with the aim of implementing the UN's 2030 Agenda accomplishing the Sustainable Development Goals (SDGs) through science, technology and innovation.

Societal challenges such as climate change, security of energy supply, food security and changes due to digitalisation do not know any national boundaries. As such, they cannot be tackled in isolation on the part of individual countries but must rather be addressed in international and multilateral cooperation.

As a research organisation, DLR is looking to increase its commitment to the implementation of the **UN 2030 Agenda for Sustainable Development and associated agreements such as the Paris Agreement on climate change,** and to contribute towards a more sustainable society through **science-based solutions and policy advice.**

As a leading research institution, DLR is able to contribute the necessary expertise across a whole range of areas in order to promote sustainable development, particularly in emerging and developing countries, but also in Germany and Europe. In particular, this means intensifying its **scientific collaboration with partners from emerging and developing countries,** with a view to making science more international and jointly developing forward-looking visions of technology and innovation. Applied research and technological development as well as knowledge and technology transfer are all essential to achieve the objectives of the UN 2030 Agenda.

As part of the **SDGs@DLR initiative,** in future DLR will increase its cooperation with developing and emerging countries together with international partners and multilateral organisations. It will establish itself over the long term as a solution-oriented partner and advisor for science and innovation.

Measures

To support this objective, DLR will ...

... develop and implement a comprehensive 'SDGs@DLR' initiative.

Strategic Objective

4

Partnering with Industry

By 2030 DLR will have increased the number of projects that strengthen collaboration between German industry and international partners; the projects encompass partners from research, development and innovation, as well as sales, manufacturing and the supply industry.

As a leading international research institution, DLR not only supports Germany's status as a prime location for scientific research and innovation, it has also been serving as a reliable partner for industry for many years. Thanks to DLR's broad-based research expertise and outstanding research infrastructure, German companies can rely on an experienced and accomplished partner. In addition to providing **innovative stimulus** for the development of new solutions and products in the aerospace industry and the energy and transport sectors, DLR also **assists the economy in its international activities.**

Using its wide-ranging networks and expertise, in the future DLR, and the DLR Space Administration in particular, are aiming to step up the international activities of the German space industry. In the process, efforts relating to economic policy do not preclude the setting of development-related objectives. Closely interlinked with the objective of making sustainable contributions towards tackling global challenges, collaborations between research institutions and industry can also be fostered and further expanded in order to reinforce **technology transfer from research to practical applications.** Emerging and developing countries that are particularly affected will be among the beneficiaries of this collaboration. In addition, boosting the stability and capacity of precisely these countries will ultimately benefit Germany's own economic interests.

Measures

To support this objective, DLR will ...

... design and implement an initiative to support economic activity in international partnerships.

As part of the implementation of the *DLR Internationalisation Strategy 2030*, particular attention will be paid to support cross-border cooperation with international partners from industry and the research and development sector. For example, DLR can act as a **catalyst and broker** here, in the formation of business-to-business or science-to-business consortia between German companies and international partners. Innovation collaborations between German companies and DLR help to ensure that products and services based on DLR technology can also be marketed internationally.

Outlook

The measures and recommendations for action will be put into effect as part of the implementation of the *DLR Internationalisation Strategy 2030*.

This includes 21 measures to strategically develop DLR's international activities: 12 objective-specific measures and nine cross-sectoral measures. The implementation plan contains Key Performance Indicators (KPIs) that allow measures to be reviewed and adapted as needed.

Furthermore, evaluations and recommendations for action for priority countries, UN institutions and other international organisations will be identified and implemented under the strategy. Such work will continue to evolve in relation to DLR key research areas and the DLR Space Administration.

Any opportunities for improvement that arise during implementation will be reviewed and integrated as appropriate. Since the international environment is constantly changing and DLR is developing as an organisation, the measures and recommendations for action for priority countries and international organisations may be adjusted over time.

DLR at a Glance

The German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) is the national aeronautics and space research center of the Federal Republic of Germany. Its research and development work in aeronautics, space, energy, transport, security, and digitalisation is integrated into national and international cooperative ventures. In addition to its own research, in its capacity as a space agency, DLR is responsible for the planning and implementation of German space activities on behalf of the federal government. In addition, DLR serves as an umbrella organisation for one of Germany's largest project management agencies.

DLR has approximately 9,000 employees across 27 locations in Germany: Cologne (headquarters and seat of the Executive Board), Augsburg, Berlin, Bonn, Braunschweig, Bremen, Bremerhaven, Cochstedt, Cottbus, Dresden, Göttingen, Hamburg, Hannover, Jena, Jülich, Lampoldshausen, Neustrelitz, Oberpfaffenhofen, Oldenburg, Rheinbach, St. Augustin, Stade, Stuttgart, Trauen, Ulm, Weilheim, and Zittau. DLR also has offices in Brussels, Paris, Tokyo, and Washington D.C.

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