



Announcement of regulations for funding International Future Labs for Green Hydrogen

The Federal Ministry of Education and Research (BMBF) announces these regulations to support the establishment of International Future Labs to study current research and development issues in the field of green hydrogen.

This announcement is based on the Federal Government's Strategy for the Internationalization of Education, Science and Research. It serves to implement the Federal Government's High-Tech Strategy 2025 and strengthens the international dimension of the National Hydrogen Strategy.

The National Hydrogen Strategy integrates climate, energy, industry and innovation policies. The aim is to make Germany an international leader in the field of green hydrogen and to position the country as a lead market and lead supplier of hydrogen technologies. Research and innovation play a key role in this context: Innovative ideas and business models provide the basis for Germany's success in international competition. Internationally linked cutting-edge research can give major impetus in this respect. Excellence thrives on competition and on exchange between the world's best minds. Only close involvement in global knowledge flows and value chains will help maintain and enhance Germany's research performance.

The aim of International Future Labs in the field of green hydrogen is to

- Advance excellence-focused international research cooperation along the entire value creation chain (up to Technology Readiness Level 4)
- Broaden the portfolio of German research expertise in hydrogen technology in accordance with current and future needs
- Provide impetus for pioneering climate innovations by German companies based on green hydrogen and establish sustainable international knowledge networks
- Raise Germany's research profile in international competition

The purpose of funding is to enable a team of at least nine but no more than twelve researchers to address the above objective over a period of three years. In addition to German institutions, institutions from at least two partner countries must be involved by sending researchers to a Future Lab.

Object of funding

Funding will be provided for the establishment and work of International Future Labs. The term "International Future Lab" here refers to a centre of excellence at a German university or a research institution in Germany which carries out research of an international appeal, addressing relevant issues of green hydrogen technology in cooperation with the best minds worldwide. The funding supports existing centres of excellence in their efforts to pool international expertise and attract top international researchers for joint work in Germany.

The international teams are expected to make outstanding contributions to research on fundamental issues along the entire hydrogen value chain, ranging from generation and upgrading to transport and use.

BMBF funding will be provided over a period of three years for a team of at least nine but no more than twelve researchers in each Future Lab. In addition to German institutions, institutions from at least two partner countries must be involved by sending researchers to a Future Lab. Preference will be given to partnerships with EU Member States, with countries in North America and Africa and with Israel, Russia and Australia.

The Future Labs must be designed and operated in accordance with the above-listed objectives while taking account of the following aspects:

- Excellence and international networking
 - The Future Labs are expected to focus on fundamental issues regarding pioneering solutions, processes and applications of the next but one generation of green hydrogen technologies (up to Technology Readiness Level 4) where, due to existing gaps in

expertise, German higher education and/or research institutions rely on the involvement of foreign experts who will contribute to strengthening research in Germany and forging international links.

- Normally, two thirds of the team members of any Future Lab will consist of renowned researchers from abroad and one third will be renowned researchers from Germany¹.
- The German and foreign researchers must distinguish themselves by outstanding scientific excellence and high-profile research in the field of green hydrogen technology. The expertise they contribute to the overall scientific approach must be proven by relevant publications, long-standing third-party funded research alliances, awards and discoveries made in the past ten years.
- The Future Lab researchers should ideally work on site at their Lab during the entire funding period.
- A minimum 18 months of on-site work is desirable for all researchers. The minimum duration of on-site work is an important criterion in selecting projects for funding. This period may be divided up into several stays depending on the work schedule.
- Staggered on-site attendance is only allowed to a limited extent for all researchers in order to ensure that the entire team works together on site at the Future Lab over a period of at least six months.
- Participation in scientific and academic debate, knowledge and technology transfer
 - During their work at the Future Labs, the international researchers are expected to become actively involved in formats and measures of scientific and academic debate on current research and development issues in the field of green hydrogen as well as knowledge and technology transfer; these measures are to be developed and implemented by the host institutions – even beyond the BMBF-funded Future Labs.
 - An additional short-term research period per researcher will enable a junior researcher from the home institution to work at the Future Lab. These work periods are to benefit research itself while also enabling active participation in scientific and academic debate, in knowledge and technology transfer and in relevant events in Germany.
- Sustainability, information and visibility
 - The Future Labs will carry out their research activities in Germany. This is why funding is exclusively provided for physical institutions in Germany – not for virtual networks.
 - The Future Labs are expected to establish lasting cooperation between the coordinating German institutions and the home institutions of the international guest researchers which will continue after BMBF funding has ended and involve additional institutions in Germany and abroad as appropriate.
 - The Future Labs are required to regularly inform the scientific community and the interested public in a suitable manner about their work, using a dedicated web platform as well as social media.
 - The German and foreign partner institutions are also expected to actively disseminate information about the Future Labs via their own channels.

Research results are to be communicated in a transparent and comprehensive manner, using various offline (e.g. expert meetings, delegation visits) and online formats (e.g. social media, virtual events). This is intended to lastingly strengthen the international importance and visibility of Germany as a hub of green hydrogen research.

The International Future Labs are expected to

- Demonstrate excellence and international links, e.g. in publications with outstanding research results or conference papers and, in the medium to long term, by implementing new R&D projects, excellence competitions or roadshows

¹ Within the meaning of this announcement, the term "researchers from abroad" refers to researchers of whatever nationality whose main place of work is at a university, research institution or company abroad; "researchers from Germany" means researchers of whatever nationality whose main place of work is at a university, research institution or company in Germany.

- Participate in scientific and academic debate and in knowledge and technology transfer, e.g. by way of cooperation agreements, lectures, workshops, teaching and public relations activities and, in the medium and long term, through the development of product innovations
- Provide for sustainability, information and visibility, e.g. through cooperation agreements (MoU), joint follow-up projects or staff exchange

Funding recipients

Research proposals may be submitted by universities, non-university research institutions and commercial companies, particularly small and medium-sized enterprises (SMEs).

Applicants are required to have a plant or branch (company) or another entity serving the non-commercial activities of the funding recipient (university, research institution) in Germany at the time of payment of the grant.

Special prerequisites for funding

Under this measure, funding will be provided for both individual and collaborative research projects. Organizations from at least three partner countries including Germany will cooperate in the projects. A higher education or non-university research institution in Germany will be responsible for coordinating an International Future Lab. A multinational research group is to be formed in each project. Each group should be composed of nine to twelve researchers from higher education or non-university research institutions as well as commercial companies, particularly SMEs, where appropriate. Normally, two thirds of the team members of any Future Lab will be renowned researchers from abroad and one third will be renowned researchers from Germany.

A minimum 18 months of on-site work is desirable for all researchers. This period may be divided up into several stays. Staggered on-site attendance is only allowed to a limited extent in order to ensure that the entire team works together on site at the Future Lab over a period of at least six months.

The Future Labs will carry out their research activities in Germany.

Type, scope and rates of funding

Funding will be awarded in the form of non-repayable project grants.

As a rule, projects will be funded for up to 36 months. The maximum funding amount per project is EUR 5,000,000 including the potential flat-rate grant.

The BMBF has currently entrusted the following project management organization with implementing the funding measure:

German Aerospace Center (DLR)
DLR Project Management Agency
Heinrich-Konen-Straße 1
53227 Bonn, Germany

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In the first phase, project outlines (of a maximum 12 pages) must be submitted to the DLR Project Management Agency in electronic form **by 27 April 2021** at the latest using the "easy-Online" application system.²

This is an excerpt of the funding announcement. You can find the full version here: <https://www.bmbf.de/foerderungen/bekanntmachung-3370.html> The binding version of the funding announcement is the version published in the German Bundesanzeiger: <https://www.bundesanzeiger.de>

² https://foerderportal.bund.de/easyonline/reflink.jsf?m=IB-ALLGEMEIN&b=ZUKUNFTSLABORE_GW&t=SKI