



Factsheet

Austrian Research and Technology Report 2024

RTI Strategy 2030, RTI Pacts, Future Austria Fund, FWIT Council and FoFinaG Monitoring

Austria's and Europe's prosperity and growth are closely linked to research, technology and innovation (RTI), which contribute significantly towards strengthening the location and are a central basis for ensuring a good coexistence despite the global challenges.

The **RTI Strategy 2030** provides a long-term framework and is supported by the RTI Task Force as the central coordination and steering body for RTI policy at federal level.

The objectives of the RTI Strategy 2030 are operationalised through the respective three-year **RTI Pact**. In accordance with the Research Financing Act (FoFinaG), the **RTI Pact** represents the link between the RTI Strategy 2030, RTI funding and the implementing institutions and is an integrative element in the Austrian RTI landscape that creates a stable and reliable framework for RTI actors.

In 2023, performance and funding agreements for the years 2024–2026 were negotiated with all central institutions in accordance with the Research Financing Act. The agreements focus on the implementation of key sub-strategies and major initiatives in the RTI area in order to pursue the goals of the RTI Strategy 2030 in a well-coordinated manner and implement the priorities of the RTI Pact 2024–2026.

The **Future Austria Fund (FZÖ)**, which is administered by the National Foundation for Research, Technology and Development, is used by the Federal Government to set strategic priorities and is intended to fund cutting-edge research in the fields of basic and applied research as well as technology development and innovation, complementing the RTI pacts.

On 1 July 2023, the FWIT Council Establishment Act (FREG) came into full force with the FWIT Council Act (FWITRG) at its core. The new **Research, Science, Innovation and Technology Development Council (FWIT Council)** was established on this basis. With this, the existing councils in the areas of research, technology development, science and innovation were merged.

The tasks of the FWIT Council include:

- Advising the Federal Government on matters relating to Austrian and European science, research, technology and innovation policy, higher education institutions and the development and opening up of the arts;
- Submission of proposals for the RTI Pact;
- Analyses and recommendations to strengthen the Austrian RTI system.

The implementation of the RTI Pacts requires that the central research and research funding institutions are subject to monitoring in accordance with the Research Financing Act, which is an integral part of the Austrian Research and Technology Report and includes eleven central institutions.

Research Institutions 2023	Income in €1,000	Employees
Austrian Institute of Technology (AIT)	208,865	1,453
Institute of Science and Technology Austria (ISTA)	102,500	1,106
Austrian Academy of Sciences (OeAW)	218,961	1,805
Silicon Austria Labs GmbH (SAL)	51,944	323
Ludwig Boltzmann Society (LBG)	30,828	567
GeoSphere Austria (GSA)*	–	514

* GSA only operational since 2023

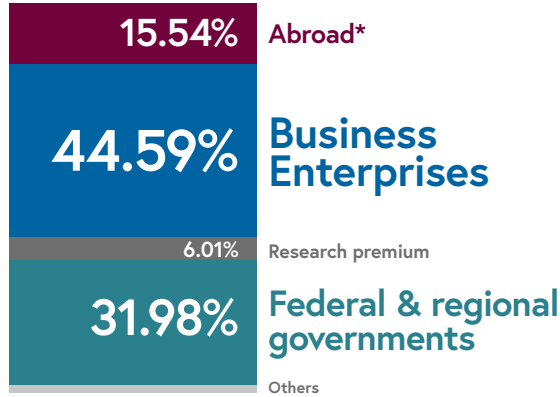
Research funding institutions 2023	Funding/present value in €1,000
Austria Wirtschaftsservice GmbH (aws)	178,000
Christian Doppler Research Association (CDG)	24,524
Austrian Science Fund (FWF)	381,504
Austrian Agency for Education and Internationalisation (OeAD)	105,970
Austrian Research Promotion Agency (FFG)	683,618

Funding of R&D and innovation

Record R&D expenditures

According to the global estimate for 2024, expenditure on research and experimental development will amount to

€16.64 billion



Despite the restrained economic situation, **R&D funding from the business enterprises sector** is rising significantly as a proportion of GDP from 1.40% in 2023 to 1.49% in 2024.

Funding from the **Federal Government** will as well increase significantly, from 0.88% to 0.93%.

Note: The percentages in the bar chart relate to funding. * Mainly comprises R&D funded by foreign-based companies on behalf of their Austrian subsidiaries as well as return flows from the EU's Research and Innovation Framework Programmes.

Research intensity

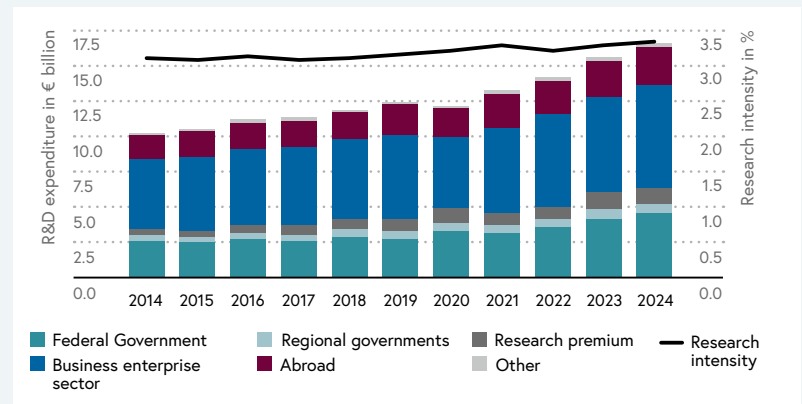
3.34%

is Austria's estimated R&D intensity for 2024; this is a new high

11x

in a row, Austria has been above the European target value of 3%

Funding of R&D carried out in Austria and development of the research intensity, 2014–2024



Source: Statistics Austria, global estimate from 24 April 2024, illustration: WPZ Research

High success rate with Horizon Europe

Austria has been very successful in its participation in the European Research Framework Programme.

Austrian institutions have so far raised €990 million from the European research framework programme Horizon Europe, which corresponds to around 3.3% of the funds distributed by the European Commission. In comparison, the corresponding figure for Horizon 2020 was 2.9%. The proportion of Austrian coordinators among all coordinators is 3.4%; a figure that is also significantly higher than that of Horizon 2020 (2.7%). Austria has therefore been able to significantly improve its performance at European level.

Most of the funds were raised by Austrian stakeholders in the second Pillar "Global Challenges and EU Industrial Competitiveness", totalling €632.9 million, followed by €272.8 million in Pillar 1 "Scientific Excellence".

Relevant RTI sub-strategies

With the RTI Strategy 2030, Austria is pursuing the goal of positioning itself internationally as a technology and innovation leader. Numerous sub-strategies launched in the RTI sector and at federal level support this overarching goal.

These RTI sub-strategies and initiatives include, for example:

Funding initiative excellent=austria

The Excellence Initiative was launched by the Federal Ministry of Education, Science and Research (BMBWF) to promote top-level research in combination with the promotion of early career researchers and collaborations. Two funding programmes will be implemented until 2026:

- Clusters of Excellence (COE): bundling existing areas of strength
- Emerging Fields (EF): Enabling new fields of research and topics with high innovation potential

Projects in Emerging Fields are characterised by the fact that they carry out pioneering work in basic research and pursue particularly innovative, original or high-risk ideas. Five projects selected for funding will be launched in 2024.

Climate and Transformation Initiative

With the Climate and Transformation Initiative, the Federal Government, under the leadership of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Federal Ministry of Labour and Economy (BMAW), has set itself the goal to support the Austrian industry in its transformation towards a sustainable economy, based on renewable energies and digitalisation in all sectors.

Austrian Research Infrastructure Action Plan 2030

The Austrian Research Infrastructure Action Plan 2030 was developed across all ministries as part of the RTI Research Infrastructure Working Group to support the RTI Strategy 2030.

The guiding principle of the action plan is the coordinated procurement and cooperative use of research infrastructure at national, European and international level. The research infrastructure database serves as a central instrument for support.

Science and democracy are part of our DNA

Democracy and science are closely linked, similar to a DNA double helix. This gave rise to the name of the campaign DNAustria, which bundles all activities that are intended to contribute to strengthening trust in democracy and science.



These include BMBWF initiatives such as Sparkling Science 2.0, the Children's and Youth Universities and the Science Ambassadors.

STEM Action Plan and STEM Regions

The BMBWF action plan "MI(N)Tmachen" for more STEM specialists in Austria was presented in June 2023. In line with the RTI Strategy 2030, the aim is to achieve a 20% increase in the proportion of graduates in STEM subjects and a 5% increase in the proportion of women graduates in technical subjects by 2030 to sustainably counter the shortage of skilled labour.

Hydrogen Strategy for Austria

The Hydrogen Strategy pursues a number of objectives, including the use of climate-neutral hydrogen, capacity building, market development and the establishment of a 100% renewable energy system.

The Hydrogen Strategy is being implemented in eight different fields of action along the entire hydrogen value chain, from production and infrastructure to demand and from research to market launch.

Excellence and innovation in life sciences and health

The Federal Government has taken numerous measures to strengthen Austria as a life sciences location.

This includes the “Uni-Med-Impuls 2030” programme, which aims to further develop the Austrian medical universities, the Faculty of Medicine Linz and the University of Veterinary Medicine Vienna. Pursued objectives include the expansion of medical study places, making general medicine more attractive and the establishment of new professorships in areas such as infectiology, epidemiology and public health. About €1 billion is available for implementation.

Expansion of non-university players

With the Institute of Molecular Biotechnology (IMBA), the Research Centre for Molecular Medicine (CeMM) and the Gregor Mendel Institute of Molecular Plant Biology (GMI), the **OeAW** is one of the flagships of the life sciences in Austria – and far beyond. This is illustrated not least by the 38 highly endowed ERC grants that have been acquired by the three OeAW institutes since 2007.

While research at the **ISTA** is interdisciplinary from the outset, 25 of the more than 80 professors and their research groups can be categorised as life sciences. They work at the interface of theory and experiment and use multidisciplinary, quantitative approaches in molecular and developmental cell biology, structural biology and biochemistry, genomics, evolutionary biology, ecology and the neurosciences.

Since 2020, new Ludwig Boltzmann Institutes have been founded exclusively in the field of medicine and health sciences. Since 2022, the **LBG** has been assigned the “Clinical Research Groups” (KFG) programme with the aim of enabling Investigator Driven Clinical Studies on a scale necessary for clinical research.

Actors in the field of life sciences include: **Vienna BioCenter**, **AIT**, **Competence Centres for Excellent Technologies (COMET)**, **Competence Centre Climate and Health**.

Relevant **clusters and network initiatives** have been established in the federal states in order to further develop regional strengths in a targeted manner, to network players in science and industry and to promote thematic priorities. These include: LISAvienna, HUMAN.TECHNOLOGY.STYRIA, Cluster Life Sciences Tirol and Medical Technology Cluster; Ecoplus (Lower Austria) and Innovation Salzburg are responsible for life sciences in the federal states. Life Science Austria (LISA) acts as an umbrella organisation for the various life sciences clusters in Austria.

Research funding for excellence, basic research, applied research, translation and innovation

Various instruments are used by the public sector to support research and innovation activities in the life sciences, both on an open and thematic basis.

The **FWF** plays a central role in promoting excellent basic research and supports research activities in the life sciences in a variety of thematically open funding programmes and specific programmes such as the “Clinical Research” funding programme. Across all programmes and initiatives, a total of around €502 million in funding was approved in the field of life sciences between 2019 and 2023.

Funded by the **CDG**, 19 research units are currently active in the “Medicine” cluster and 13 research units in the “Life Sciences and Environment” cluster, this means that around a quarter of the CD Laboratories and Josef Ressel Centres are active in the life sciences. The focus is diverse and includes biotechnological research and development and drug development, or the development of new diagnostic procedures and therapeutic approaches.

The **FFG** approved a total of around €544 million across all programmes and initiatives in the field of life sciences between 2018 and 2023. Most life sciences projects were funded as part of the general programme. A total budget of €50 million was available for the Austrian Life Science Programme in 2022 and 2023 – with the aim of supporting R&D along the entire value chain.

At **aws**, the Austrian promotional bank, life sciences form a separate thematic focus in the promotion of start-ups. In the period 2018–2023, a total of 96 funding commitments with a financing volume of around €41 million and total project costs of around €243 million were approved via the Preseed & Seedfinancing programmes.

Crises, pandemics and demographic developments make it necessary for **clinical research** to once again take centre stage in RTI policy.

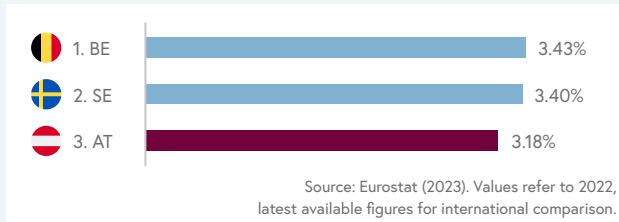
In addition, the last fully integrated **penicillin production facility** at the Kundl site has been secured. Together with the state of Tyrol, the Federal Government is providing a package of measures totalling up to €50 million for this purpose, thereby making a significant contribution to strengthening autonomous penicillin production and the security of supply of pharmaceuticals in Austria and Europe.



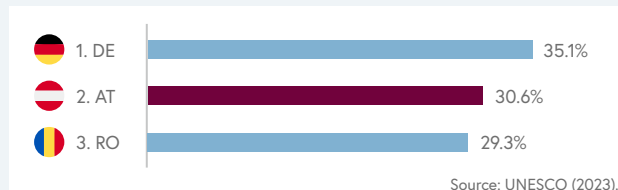
International position

Austria as a strong innovator in the upper midfield

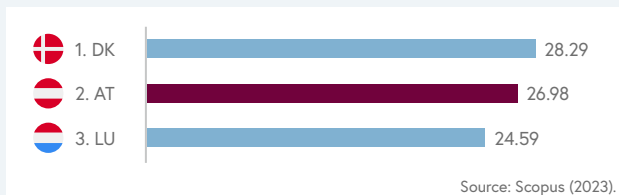
With a **research intensity** of 3.18%, Austria ranked 3rd in 2022 behind Belgium and Sweden. This puts Austria in 3rd place, as in the previous year.



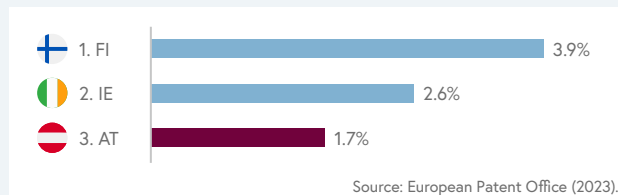
Austria continues to perform very well regarding the **share of graduates** in STEM subjects. With 30.6%, Austria ranks 2nd after Germany. Graduates in STEM subjects are important future specialists in technology-based industries.



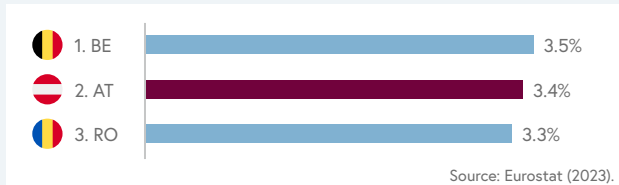
Quantum research is a topic that attracts a lot of attention worldwide. With around 27 publications per million inhabitants in 2022, Austria ranks 2nd in the EU in terms of scientific publications.



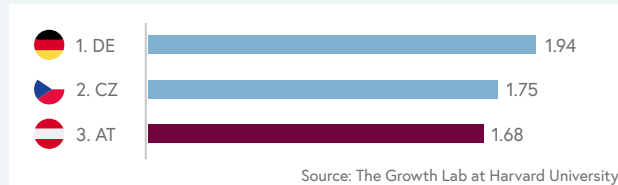
Austria shows strong results in **patent applications in the field of quantum technologies**. With 1.7 patent applications per 10,000 R&D employees, Austria ranks 3rd in the EU in 2021 (2020: 8th place).



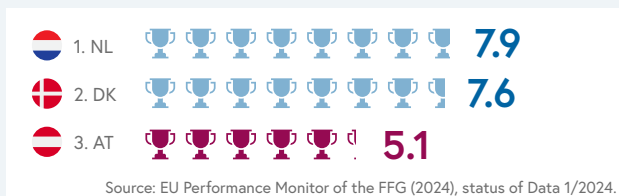
With regard to sustainability, Austria holds a leading position in international comparison in terms of the share of national **expenditure on environmental protection** as a percentage of gross domestic product at 3.4% and ranks 2nd.



Austria's economy is characterised by a **very high level of complexity** and is ranked 3rd in the EU, which shows that Austria is able to manufacture complex products and has a range of highly developed, specialised skills.



ERC grants per million inhabitants: Adding together ERC Starting Grants, ERC Consolidator Grants and ERC Advanced Grants, Austria was able to acquire 5.1 ERC grants per million inhabitants in 2022, putting it in 3rd place. The goal defined in the RTI Strategy 2030 of being among the top 10 has been achieved with this ranking.



In terms of the **share of R&D personnel in the labour force**, Austria ranks 5th in the EU in 2022 with 2.02%. This puts Austria among the leaders and – as in the previous year – behind Belgium, Denmark, Sweden and Finland. Austria thus continued its growth in R&D staff of recent years and achieved a share of over 2% for the first time.

In the life sciences, Austria is one of the leading nations in terms of **excellent scientific publications** in the field of “Biochemistry, Genetics and Molecular Biology” and ranks 4th in the EU.

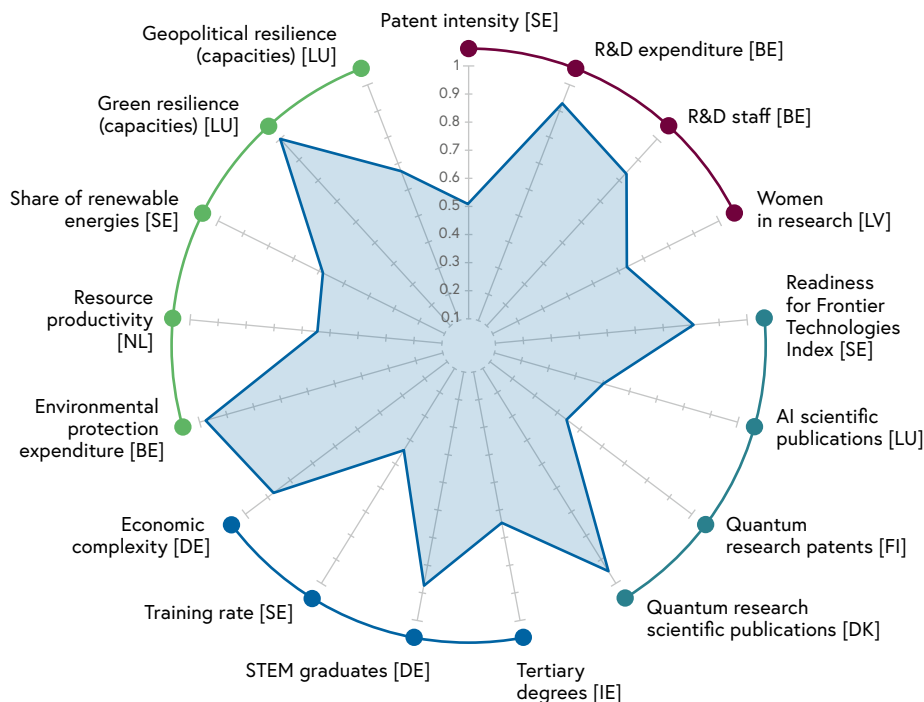
At a glance: Austria's innovation capability

Austria's share of the highest value in selected RTI and science indicators

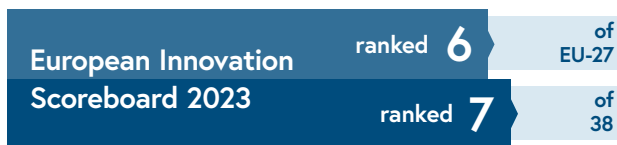
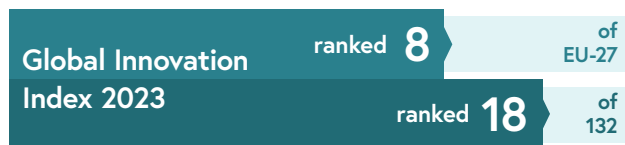
- Indicators of performance in research and development
- Indicators of the status of digitalisation
- Indicators of innovation capability
- Indicators of environmental sustainability and resilience

Reference value 1 corresponds to the peak value of the leading nations.

The spider chart shows **Austria's excellent position** in R&D expenditure, R&D staff, publications on quantum research, STEM graduates, economic complexity, the Readiness for Frontier Technologies Index, national expenditure on environmental protection and green resilience.



Austria's position in global/international rankings



Far-reaching implementation of European initiatives

With initiatives in key areas such as “Knowledge Valorisation” and “Open Science”, measures are being implemented as part of the National Action Plan for the European Research Area. Furthermore, the implementation of the European Innovation Agenda and the EU Chips Act is of central importance. In an EU comparison, Austria has the highest share of microelectronics production in total value added, total employment and research and development by business enterprises. In order to increase security of supply and strengthen competitiveness, a total of €2.8 billion in public funds will therefore be released for investments in chip production in Austria by 2031 to trigger more than €7 billion in private investments.