



Factsheet

Austrian Research and Technology Report 2023

The world is changing. A complex transformation is taking place at different levels, driven by societal challenges that not only change the innovation behaviour of companies and scientific actors, but also bring about changing framework conditions. The Twin Transition is omnipresent.

RTI Strategy 2030, RTI Pacts and FoFinaG Monitoring

The societal challenges are manifold: research, development and innovation is the only way to tackle them and support economic and socio-economic transformation.

The goal of the RTI Strategy 2030 is to position Austria as a leading research, technology and innovation country by 2030. The RTI Strategy 2030 is operationalised through three-year RTI Pacts. After the first RTI Pact for 2021–2023, the Federal Government adopted the second RTI Pact 2024–2026 in December 2022. The focus in the coming years will be on the following priorities:

- Accelerate the sustainable transformation of the economy
- Increase trust in science and democracy
- Encourage excellence in research
- Promote top young talent
- Accelerate research to achieve the climate targets
- Expand cooperation between science and business
- Encourage technological sovereignty and openness

To achieve these goals, the Federal Government is providing a budget of €5,048.673 million for the years 2024–2026. This budget is intended to sustainably strengthen research funding and non-university research in the area of responsibility of the BMBWF, BMK and BMAW with an increase of approximately 31% compared to the first Pact.

The implementation of the RTI Pacts is accompanied by the fact that the **central research and research funding institutions** are subject to monitoring in accordance with the **Research Financing Act (FoFinaG)** as part of the annual research and technology report. This is presented in Chapter 3 and will include eleven central research and research promotion institutions (new: GeoSphere Austria) as of 2023.

The central research and research funding institutions at a glance

Research institutions	2022: Income in €1,000	2022: Employees
Austrian Institute of Technology (AIT)	190,926	1,396
Institute of Science and Technology Austria (ISTA)	78,518	999
Austrian Academy of Sciences (OeAW)	210,245	1,851
Silicon Austria Labs GmbH (SAL)	40,992	289
Ludwig Boltzmann Society (LBG)	31,371	654
GeoSphere Austria (ZAMG)	35,071	362
GeoSphere Austria (GBA)	11,273	126

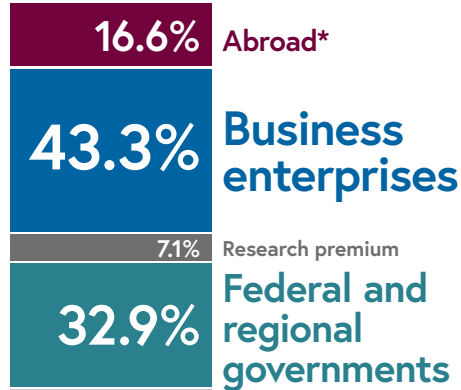
Research funding institutions	2022: funding/pre-sent value in €1,000
Austria Wirtschaftsservice GmbH (aws)	247,000
Christian Doppler Research Association (CDG)	20,485
The Austrian Science Fund (FWF)	286,092
Austrian Agency for Education and Internationalisation (OeAD)	96,103
Austrian Research Promotion Agency (FFG)	559,810

Funding of Research and Development

Record R&D expenditures

According to the global estimate for 2023, expenditure on research and experimental development will amount to

€15.5 billion



In addition to open-topic research funding, RTI policy focuses on concepts to strengthen **technology sovereignty and resilience.**

* 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 2023

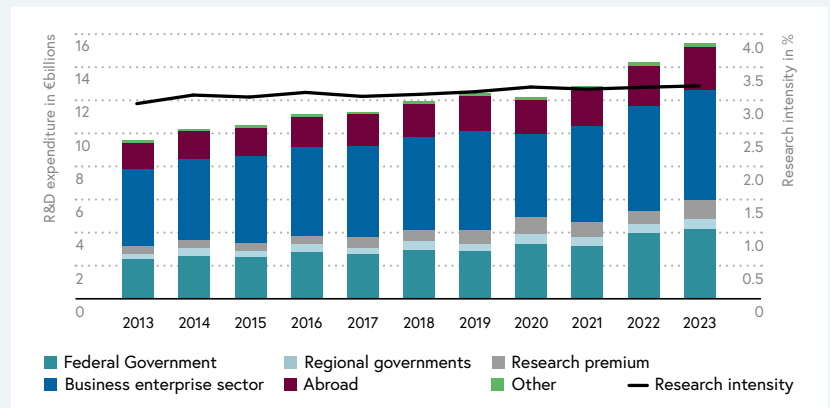
3.22%

is Austria's estimated R&D intensity for 2023. This is a new high, also in view of the rising GDP.

10x

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 2013–2023 in comparison of representative EU countries



Source: Statistics Austria, global estimate as of 21 April 2023.

With Excellence to the top

The ten-year **Excellence Initiative** comprises three funding tracks:

- i. Clusters of Excellence (strengthening outstanding research areas by means of collaborations across institutions, disciplines, and national borders)
- ii. Emerging Fields (identifying and supporting high-potential, forward-looking research topics)
- iii. FWF Distinguished Professor (recruiting and appointing renowned researchers at Austrian universities)

The Clusters of Excellence within the framework of excellent=austria were launched with the funding commitments in March 2023. €135 million will be available to the research teams for the next five years, 60% of which will be funded by the FWF. After evaluation, an extension of another five years is possible.

Embedding in European research, technology and innovation policy

The European Union forms a central framework far beyond RTI policy. With the Recovery and Resilience Facility, the core element of NextGenerationEU, important research and infrastructure projects are being driven forward, including Quantum Austria or the Important Projects of Common European Interest (IPCEI). **Horizon Europe plays a central role for RTI.** Austrian participa-

tion in all three pillars of the EU Framework Programme is to be further increased.

In particular, the implementation of the European Innovation Agenda, the EU missions, the EU partnerships and the 12 initiatives of the National Action Plan for the European Research Area (ERA-NAP) 2023–2025 are of particular relevance.

Austria above the European average

Although the existing data are only of limited value due to the relatively short monitoring period at the beginning of Horizon Europe, it shows that Austrian research institutions and researchers perform well in it. **Austria's success rate is clearly above the European average.** In relation to the participation figures, the **returns to Austria** in particular have increased in comparison to Horizon 2020. Austria is represented in particular with its basic research-oriented institutions in Pillar 1 – Ex-

cellent Science, with the non-university research institutions extremely active in Pillar 2 – Global Challenges and European Industrial Competitiveness, and with the companies strongly present in Pillar 3 – Innovative Europe.

Within the most highly endowed Pillar 2, Austria is extremely successful compared to the European average in the clusters “Climate, Energy and Mobility” and “Culture, Creativity and Inclusive Society”.

Participation in Horizon Europe

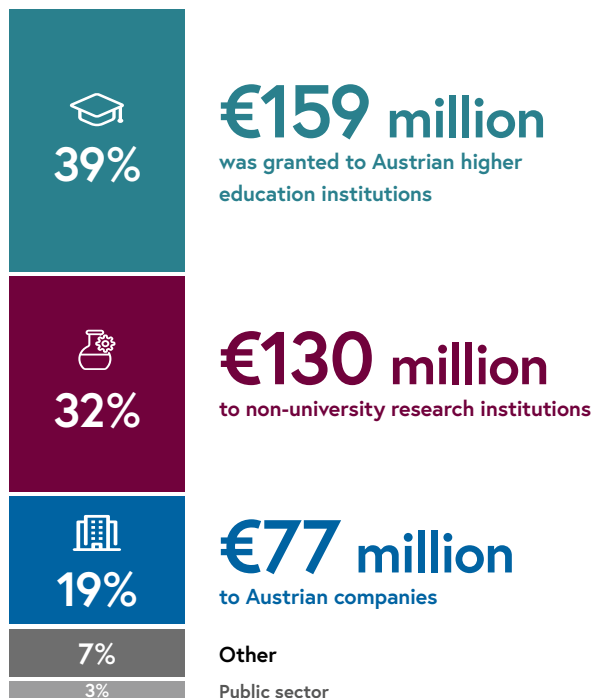
€404 million

has been granted to Austria so far in the new European framework programme Horizon Europe

22.4%

is Austria's success rate in the new Horizon Europe programme

Austria's success rate is thus significantly higher than in the predecessor programme Horizon 2020 and just above the EU average of 22%.



Supporting the Green Transformation in research and the economy

The major societal challenges of our time – especially in the areas of climate protection and resource use – create new demands on RTI policy. These cannot be addressed adequately with the traditional portfolio of instruments and measures. In addition to open-topic research funding, the Federal Government is therefore increasingly relying on a new generation of policy measures that are summarised under the term “**transformative innovation policy**”. This is accompanied in particular by greater coordination with other policy fields and their instruments – with the aim of achieving more sustainable, systemic effects.

In EU comparison, Austria belongs to the **leaders of climate-relevant patents**.

Climate and Transformation Initiative

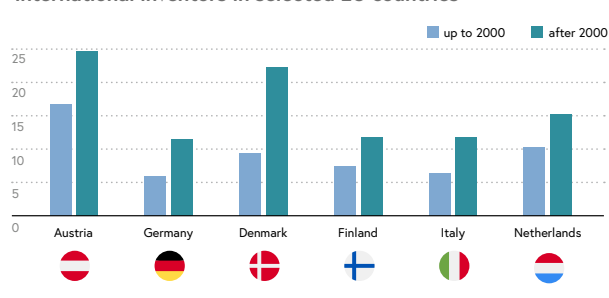
The measures of the Climate and Transformation Initiative support Austrian industry in its transformation to a sustainable, renewable energy-based and digitalised economy. The initiative addresses technology-developing leading companies as well as SMEs and start-ups. An additional budget totalling €5.7 billion is available for the thematic priorities until 2030.

Austria on the way to a sustainable and circular society

The transformation of the Austrian economy and society into a climate-neutral, sustainable circular economy by 2050 requires accelerated action at a wide range of levels. This requires the interaction of numerous actors from business, science, administration and civil society. The central goals of the Austrian circular economy strategy are:

- Reduction of resource consumption
 - Domestic material consumption (DMC): max. 14 tonnes per capita/year (2030)
 - Material footprint (MF): max. 7 tonnes per capita/year (2050)
- Increasing domestic resource productivity by 50% (2030)
- Increasing the circularity rate to 18% (2030)
- Reduction of material consumption of private households by 10% (2030)

Share of climate-relevant patent applications with international inventors in selected EU countries



Source: OECD (2022e).

Since 2000, most Austrian patent applications (32.5%) have been in the field of energy. In addition, Austria has a focus on the field of production compared to the other EU countries.

Sustainability and transformation are also an issue at **Austrian Higher Education Institutions**. The Austrian Higher Education Plan (HOP), for example, includes a commitment of Austrian Higher Education Institutions to sustainable action, which includes the appreciation of nature, careful stewardship and sustainable action in dealing with limited natural resources. In the performance agreements of the BMBWF with all universities, individual goals and projects for sustainability were agreed in the current period 2022–2024, which take into account the heterogeneous starting position of the organisations. One focus is the creation of university sustainability strategies based on the model of the Alliance for Sustainable Universities in Austria. Most of these universities are also active in the UniNETZ project (Universities and Sustainable Development Goals).

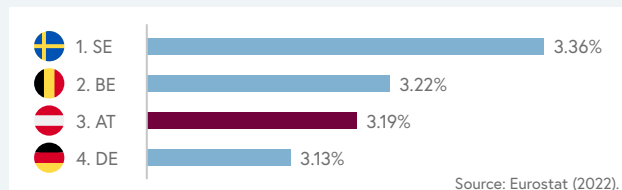
Furthermore, Austria’s non-university research institutions show high ambitions to work in the field of sustainability and transformation. On the one hand, organisational development measures are being implemented, such as strategies, infrastructural changes, etc. with the aim of becoming a sustainable, climate-neutral organisation. On the other hand, research institutions are increasingly setting sustainability priorities in their research activities.

An **evaluation culture based on high quality standards** is a fixed component of Austrian RTI policy and community. For insights, see www.fteval.at.

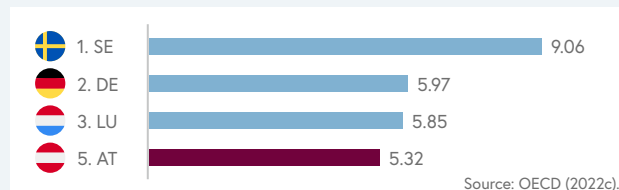
Austria's position in EU comparison

Austria as a strong innovator in the front midfield

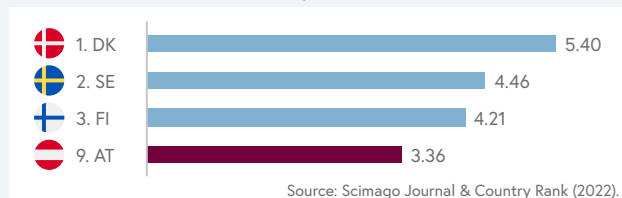
With a **research intensity** of 3.19% in 2021, Austria was in third place in the EU comparison behind the leader Sweden. Austria has been able to continuously improve its ranking since 2019 and narrow the gap to Sweden in 2021.



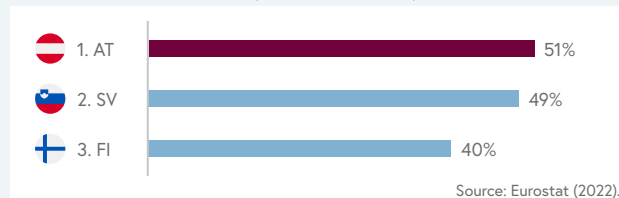
Austria's patent intensity (triadic patents, standardised by country of origin with the number of R&D employees) increased between 2019 and 2020. Austria was able to improve to fifth place in 2020 and is thus clearly above the EU average.



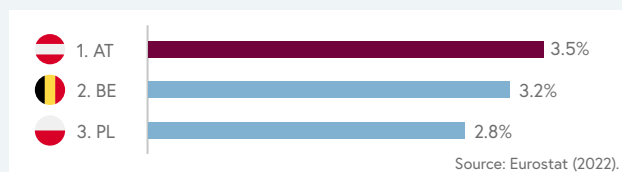
The number of **scientific (citable) publications** in all disciplines per 1,000 inhabitants increased slightly between 2020 and 2021 and is also above the EU average.



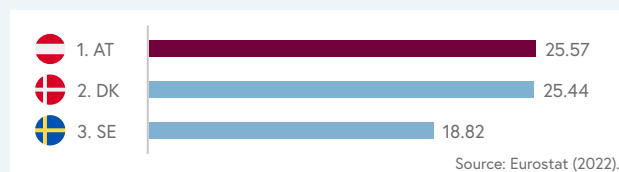
Austria did particularly well with regard to the percentage of **companies using applications in the field of the Internet of Things (IoT)**. In Austria, about every second company used IoT in 2021 (51%).



In 2019, Austria ranks first among the EU-27 and other comparable countries with regard to the share of national **expenditure on environmental protection** in gross domestic product.



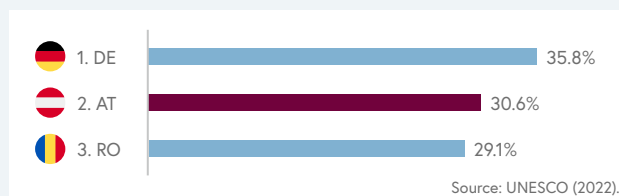
In terms of the number of **scientific publications in the field of quantum research** per million inhabitants in 2021, Austria takes first place ahead of Denmark and Sweden.



In terms of the indicator "Number of **European science awards (ERC grants)** in Horizon Europe per million inhabitants", the goal formulated in the RTI Strategy 2030 of being among the top 10 in the EU-27 was once again achieved in 2021 with third place.

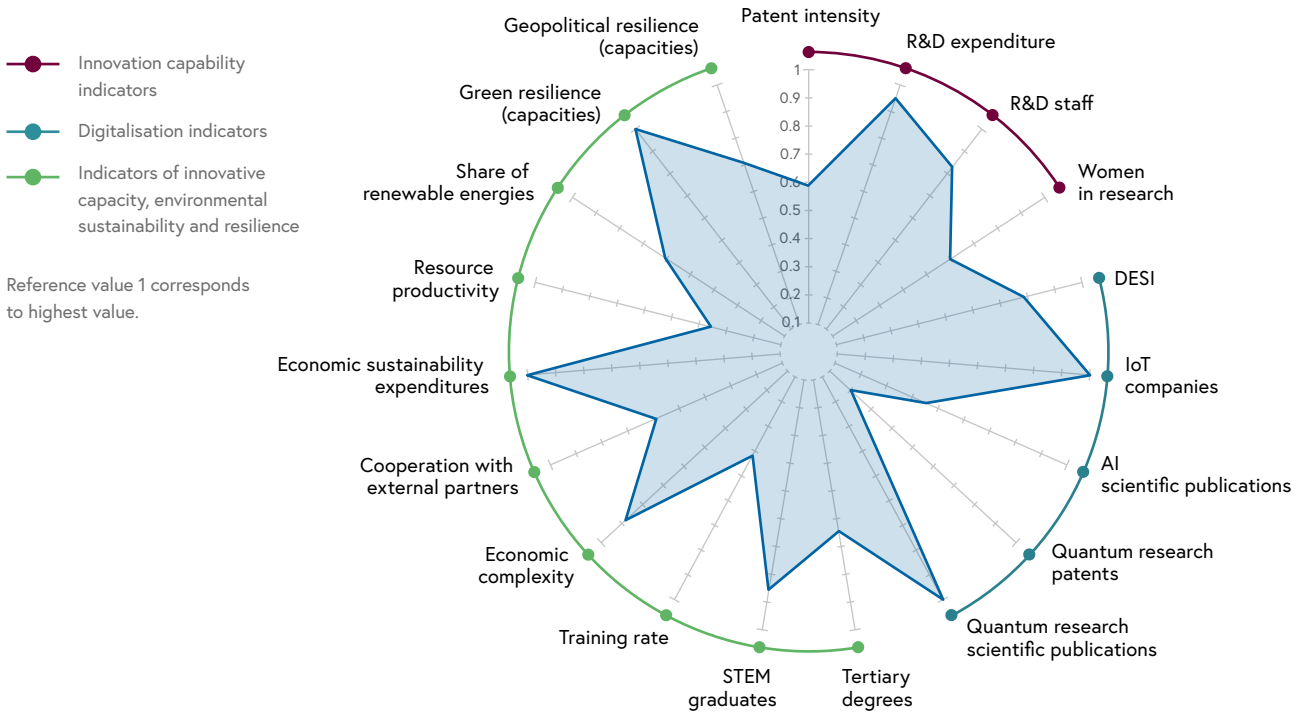


Austria continues to perform very well in terms of the share of **graduates in STEM subjects**. In 2020, as in 2019, Austria ranks together with Germany and Romania at the top of the rankings and takes second place among the EU-27.



Austria's innovation capability

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



Austria's position in global/international rankings

Austria shows an above average performance in the areas of

R&D indicators

Scientific publications in quantum research

Expenditure on environmental protection

Green resilience

