European Commission

ERA Country Report 2024
Austria

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Report

Research and Innovation

ERA Country Report 2024: Austria

European Commission
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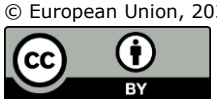

EUROPEAN COMMISSION

ERA Country Report 2024
Austria

This report was prepared by

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2025 Directorate-General for Research and Innovation EN

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Key takeaways

- Austria is strongly committed to the goals of ERA and the ERA policy agenda. National R&I strategic policy documents are well aligned with the policy agenda and referencing it both specifically as well as in connection with the ERA priorities transversally.

- A central document in this regard is the Austrian National ERA Action Plan (ERA NAP). Its structure and content facilitate ERA implementation in Austria, by outlining the countries national ERA initiatives, related measures, goals and indicators as well as how they correspondent to the European ERA Priorities and Actions. The Plan also indicates the relevant national coordinators, policy makers or stakeholders that are responsible for its implementation.

- The ERA National Action Plan was officially approved by the council of ministers in 2022. It is thus an official document of the Austrian Federal Government, increasing its weight and usefulness in policy making and policy implementation.

- Overall, Austria is making good progress against the goals and milestones indicated in the ERA NAP, as evidenced by a currently on-going study commissioned by the Federal Ministry of Women, Science and Resarch (BMFWF) and Federal Ministry of Innovation, Mobility and Infrastructure (BMIMI).

1. National context

Austria is among the *medium-sized* EU-member states with a population of 9.1 million people in 2023. Austria is categorised as a *strong innovator* in the latest 2024 European Innovation Scoreboard.[1] Its researcher base is concentrated in the public sector, in particular in universities. In terms of expenditure on research, Austria performs above the EU average as regards Gross Domestic Expenditure on R&D, Government Budget Allocations for R&D, and Business Enterprise expenditure on R&D. In particular, the relative high share of Business Enterprise expenditure on R&D as a share of GDP stands out.

Table 1 Structural Key Indicators

Indicator	EU27	Austria		
	2023	2023	Average 2018-2020	Average 2021-2023
GDP in euro per capita, current prices	35 790.00	49 490.00	43 230.00	45 840.00
Gross Domestic Expenditure on R&D (GERD) as a share of GDP	2.27	3.18	3.14	3.21
Government Budget Allocations for R&D (GBARD) as share of GDP	0.73	0.87	0.79	0.83
Business Enterprise expenditure on R&D (BERD) as a share of GDP	1.52	2.19	2.20	2.21
Expenditure on R&D procurement as a percentage of GDP	0.06	0.06	/	0.06
Size of the population (million)	448.80	9.10	8.86	9.01
Researchers (in FTE) per million inhabitants	4 681.34	6 642.89	5 824.22	6 538.20
Share of female researchers, all sectors of performance (%)	33.71	/	/	/

Source: see Annex 1

As evidenced by the integration of European Research Area (ERA) priorities into strategic, national policy documents like the RTI Strategy 2030, the strategy for Research, Technology and Innovation of the Austrian Federal Government[2], and the RTI Pacts 2021-2023[3] and 2024-2026[4], Austria is committed to fostering ERA, to the ERA Policy Agenda and to its implementation at national level. ERA is explicitly highlighted in the long-term national R&I strategy and reflected in the national Pacts for R&I, particularly through the mandate to implement the Austrian ERA Action Plan. The goal is to both strengthen the Austrian R&I system and to increase the visibility and effectiveness of the ERA in Austria.

2. Status of the Implementation of the ERA Policy Agenda

Chapter 2 briefly summarises **new developments in Austria since the publication of the ERA Country Report 2023**, based on the commitments to ERA Actions (Table 2). The findings are based on qualitative desk research and interviews.

[1] See https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis-2024#/eis/countries/AT
[2] See https://www.bundeskanzleramt.gv.at/dam/jcr:1683d201-f973-4405-8b40-39dded2c8be3/FTI_strategie.pdf
[3] See https://www.bundeskanzleramt.gv.at/dam/jcr:d238ee64-dddf-4ae1-8067-fe1a5f8a9f48/FTI_pakt.pdf
[4] See https://www.bundeskanzleramt.gv.at/dam/jcr:894f23fe-25a3-4293-a74e-282858a1e79a/42_13_beilage.pdf

Austria has **committed to 15 ERA Actions**, **covering all four of the Priority Areas** (see Table 2). The national implementation of ERA Actions is coordinated through the National ERA Action Plan (ERA NAP)[5] which covers the period from 2022 until 2025. Focus areas of the national ERA implementation are the Priorities 1 and 2, where all Actions are covered. The formal lead in the design of the ERA NAP was with the Federal Ministry of Education, Science and Research (BMBWF), in close collaboration with the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK). For specific areas, the Federal Ministry of Labour and Economy (BMAW) was also involved.

Austria has structured its measures into 12 national ERA Initiatives, some of which cover several ERA Actions. The progress is monitored on the level of Initiatives by the national initiatives' coordinators. The ERA NAP was acknowledged by the national council of ministers in December 2022. It was not revised since then.

Table 2 Commitment to ERA Actions

1: Deepening a truly functioning internal market for knowledge								
1. Enable Open Science, including through EOSC	2. Propose an EU copyright and data legislative framework for research	3. Reform the Assessment System for research, researchers and institutions	4. Promote attractive research careers, talent circulation and mobility	5. Promote gender equality and foster inclusiveness	6. Protect academic freedom in Europe	7. Upgrade EU guidance for a better knowledge valorisation	8. Strengthen research infrastructures	9. Promote international cooperation
2: Taking up together the challenges posed by the twin green and digital transition, and increasing society's participation in the ERA					**3: Amplifying access R&I excellence across the Union**		**4: Advancing concerted research and innovation investments and reforms**	
10. Make EU R&I missions and partnerships key contributors to the ERA	11. An ERA for green transformation	12. Accelerate the green & digital transition of Europe's key industrial ecosystems	13. Empower Higher Education Institutions	14. Bring Science closer to citizens	16. Improve EU-wide access to excellence	17. Enhance public research institutions' strategic capacity	19. Establish an ERA monitoring system	

Source: European Commission (Note: Actions 15, 18 and 20 were not implemented)

ERA Priority 1: Deepening a truly functioning internal market for knowledge

ERA Action 1) Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)

Since the last reporting period, both the EOSC support office and Open Science Austria (OSA) continued their operations implementing various types of events and activities to raise awareness on their mandate. Both are central institutions to advance EOSC and Open Science in Austria. Activities include, e.g., to maintain a homepage[6] or organise events at universities. Furthermore, various studies have been commissioned, i.e. "New Technology Roadmap Data", "Impact analysis of Data Space Activities" (both EOSC) or "Quality Assessment in Recruitment Processes at Higher Education Institutions in Austria. An analytical review of practices, perspectives and challenges".[7] The latter study reflects also on how aspects such as third mission and open science are re-

[5] See https://www.bmbwf.gv.at/Themen/Forschung/Forschung-in-der-EU/Leitthemen-der-EU-Forschung/Europ%C3%A4ischer-Forschungsraum-(ERA)/ERA-NAP.html

[6] See https://eosc-austria.at/news

[7] Felt & Fochner (2024). Quality Assessment in Berufungsprozessen an Higher Education Institutions in Österreich. Eine analytische Bestandsaufnahme von Praktiken, Perspektiven und Herausforderungen.

flected in recruitment processes. The results were taken up by the Austrian Higher Education Conference Working Group on careers in research in the context of the European Research Area.[8]

ERA Action 2) Propose an EU copyright and data legislative and regulatory framework fit for research

At the beginning of 2023, the BMBWF commissioned a study on legal and administrative framework conditions for Open Science in Austria focusing on copyright and the usage of data.[9] Framework conditions analysed include e.g. copyright related exploitation rights such as secondary publication right, right retention strategies or open educational resources and open licenses. The study was concluded in October 2023 and presented in January 2024. The study outlines a set of legal and non-legal recommendations to be implemented on national and international level.

ERA Action 3) Advance towards the reform of the Assessment System for research, researchers and institutions to improve their quality, performance and impact

Austria tackles ERA Action 3 and 4 comprehensively in one national initiative. One specific activity is to develop recommendations and concrete measures to reform the Assessment System. To this end, in 2023, a dedicated working group was established by OSA Austria followed by a study on quality assessment in appointment procedures at Higher Education Institutions (HEI) in Austria.[10] Dimensions to be tackled include, e.g., building up and sharing procedural and evaluation expertise among key personnel, improving the design of the institutional interfaces in order to foster the flow of information, and developing an explicit, shared understanding of quality based on detailed criteria.

ERA Action 4) Promote attractive and sustainable research careers, balanced talent circulation and international, transdisciplinary and intersectoral mobility across the ERA

Similarly, a working group on careers in research in the context of ERA has been established in May 2022 by Universities Austria. A study on academic career paths, barriers, cross-sectoral mobility, and the current practice of evaluating research in the context of appointment processes was conducted. The study recommends, among others, for HEI to more actively foster innovative career models, to offer more pro-active career advice, and more leadership training for researchers.[11] The study was presented and discussed at several dissemination events at Austrian universities. Currently, HEI and research organisations consider implementing its recommendations. Additionally, Austria is committed to further develop Euraxess Austria.

ERA Action 5) Promote gender equality and foster inclusiveness, taking note of the Ljubljana declaration

Austria implements activities as part of four measures to promote gender equality and foster inclusiveness: (1) currently, the three relevant Austrian Federal Ministries (BMBWF, BMK, BMAW) develop a concept to coordinate the continuous development and implementation of equality plans for HEI, Research Performing Organisations (RPO) and Research Funding Organisations (RFO). Furthermore, they (2) develop and start implementing guidelines for research funding organisations as to how to treat gender in selection processes. In parallel (3), they plan various activities building up on a survey on gender-based violence and sexual misconduct at HEI, RPO and RFO. Lastly, the Ministries (4) initiated and continue to implement a cross-sectoral gender equality dialogue (organised in 2023, next iteration planned for 2025).

[8] See Uniko (2024). Research Assessment and Career Paths for Researchers: National recommendations for Austria in the context of the European Research Area.
[9] See https://zenodo.org/records/10174613
[10] See again Felt & Fochner (2024) above.
[11] See Uniko (2024) above.

ERA Action 6) Deepening the ERA through protecting academic freedom in Europe

Austria is committed to protect academic freedom by – among others – minimising foreign interference in R&I. In this regard, Austria successfully participated in the Mutual Learning Exercise (MLE) on Foreign Interference through all MLE steps (2022 to December 2023) and implemented a group of national stakeholders at HEIs and RPOs committed to the matter. The BMBWF fostered community building through various events and awareness measures among Austrian HEIs.

ERA Action 7) Upgrade EU guidance for better knowledge valorisation

Implementation of ERA Action 7 follows a two-fold approach: within the performance-based contracting (2021-2026) between the BMBWF and Universities and RPOs, the BMBWF strengthens the dimension "knowledge transfer", while in parallel, fostering support programmes like "Spin-off Fellowships" to increase university spin offs. Additionally, through the national contact point for IP in open knowledge transfer (NCP.IP), BMBWF, BMK and BMAW together continue to raise awareness and support a better knowledge valorisation through knowledge- and technology transfer activities, including providing promotion of and reflection on the Commission's principles on better knowledge valorisation[12] in a series of workshops during 2024.

ERA Action 8) Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA

Central cornerstone of ERA Action 8 is the development and implementation of the Austrian Research Infrastructure (RI) Action Plan 2030.[13] The plan was published in Q1/2023. Currently, its implementation is monitored by the BMBWF and the BMK. A core element of the plan is Austria's research infrastructure data base that won several prizes (e.g. the European Public Sector Award (EPSA) 2023-24, category Innovation in Public Administration. For 2026, an interim evaluation is planned.

ERA Action 9) Promote a positive environment and level playing field for international cooperation based on reciprocity

Austria plans, among others, to implement a national Science Diplomacy Roundtable as well as further activities to disseminate the EU Science Diplomacy Agenda on national level. So far, Austria has participated in the development of the Agenda that was finalised in Summer 2024.

ERA Priority 2: Taking up together the green transition and digital transformation and other challenges with impact on society and increasing society's participation in the ERA

ERA Action 10) Make EU R&I missions (10.1) and partnerships (10.2) key contributors to the ERA

Austrian activities focus on partnerships and, in this reporting period, included participation in related EU activities such as the Partnership Knowledge Hub and national coordination through two national Partnership Forums per year. Additionally, since Q4/2022, a national working group monitors Austria's participation in R&I partnerships. It is planned to publish a national monitoring report in 2025.

ERA Action 11) An ERA for green transformation

Activities undertaken in Austria focus on the topic green hydrogen and on participation in the refinement of the Strategic Energy Technology (SET) Plan. In September 2024, the Austrian Research Promotion Agency (FFG) launched a Clean Energy Transition Partnership call to

[12] See https://www.ncp-ip.at/events/vergangene-events
[13] See https://www.bmbwf.gv.at/Themen/Forschung/Forschung-in-%C3%96sterreich/Forschungsinfrastruktur.html

develop technology and foster community building also in the field.[14] Austrian representatives continue to take part in European and international partnerships, e.g., the International Partnership for Hydrogen and Fuel Cells in the Economy Steering Committee Meeting in New Delhi (March 2024). Additionally, the BMK continues to stimulate a national market for green hydrogen, e.g. through funding programmes on hydrogen technology in mobility or by organising regular workshops as part of the platform H2Austria. Lastly, Austria contributed to its development on EU level and sent national experts to working groups of the initiative "Enabling hydrogen because it matters".

ERA Action 12) Accelerate the green/digital transition of Europe's key industrial ecosystems

Several measures aim at fostering the green and digital transformation of the industry. Within ERA Action 12, several roadmaps are developed on which further activities are planned. So far, Austria mapped national experts and their activities in the area and fostered exchange among national experts and stakeholders on various topics, in particular circular economy and low-carbon technologies.

ERA Action 14) Bring Science closer to citizens

The main instruments to bring science closer to citizens in Austria are various citizen science activities, leveraging Austria's strong experiences with this mode of research. Since September 2022, the University of Natural Resources and Applied Life Sciences (BOKU) implements Plastic Pirates[15] in Austria. Austria continues to fund citizen science projects mostly with schools through the programme Sparkling Science 2.0 with a second call launched in 2023. Austrian stakeholders participated both in the MLE on Citizen Science and organised the European Citizen Science Association Conference 2024 in Austria.

ERA Priority 3: Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union

ERA Action 17) Enhance the strategic capacity of Europe's public research-performing organisations

Austria committed to ERA Action 17, but the action was formalised too late to be reflected in the national ERA action plan. However, Austrian delegates participated in ERA activities, and the topic was prominently featured on the 2024 national ERA Symposium.[16] Additionally, as already indicated in the ERA Country Report 2023, several activities on national level enhance the strategic capacity of Austrian RPO. Several of these are included in other national ERA initiatives and measures, as RPO are target groups e.g. for activities on knowledge valorisation, such as awareness raising activities and workshops through the National Contact Point for IP. Other national activities that contribute to the ERA Action are embedded in RPO funding programmes such as the COMET programme by FFG.[17]

[14] https://www.ffg.at/CETPartnership

[15] Plastic Pirates is a European Citizen Science project on plastic litter. By applying the citizen science approach to investigate the importance of rivers as pathways to ocean pollution, the citizen science initiative enables researchers to identify sources of and mitigation measures for plastic pollution. See https://www.plastic-pirates.eu/

[16] See https://www.ffg.at/veranstaltung/era-symposium-2024

[17] See e.g. KOOP https://stip.oecd.org/stip/interactive-dashboards/policy-initiatives/2023%2Fdata%2FpolicyInitiatives%2F99995835

ERA Priority 4: Advancing concerted research and innovation investments and reforms

ERA Action 19) Establish an efficient and effective ERA monitoring mechanism

The Austrian ERA NAP includes milestones, aims and indicators to measure goal attainment for all included measures. This allows to assess state of implementation as well as goal attainment for many of the measures implemented. In Summer 2024, the BMBWF commissioned an independent evaluation to assess the state of implementation of national ERA initiatives and measures and to evaluate the national ERA NAP overall regarding governance, relevance and effectiveness. The evaluation is expected to conclude in the first half of 2025.

3. Contribution of ERA Actions to national performance in reaching ERA objectives

This chapter provides a qualitative assessment of how the joint ERA Actions contributed to Austria's performance in achieving the ERA objectives as defined in the Pact for R&I during the period 2022-2024.

ERA Priority 1 is addressed through a range of initiatives focusing on **ERA Actions 1-9** which aim to create structural reforms and other interventions. The implementation of these activities is largely on track and supported by dedicated investments, either explicitly or implicitly dedicated through the national ERA action plan. The activities build on previous activities in the ERA areas, since Austria has been active in many related topics since at least 2001.

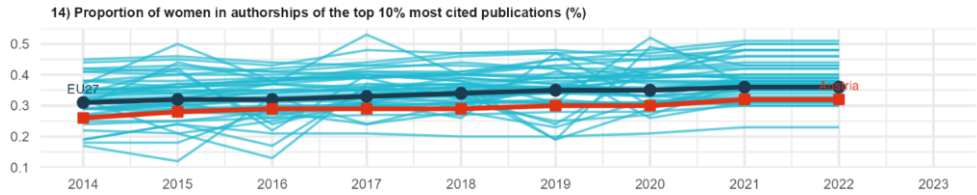
Several Austrian measures tackle the topic of **Open Science, EOSC** and related aspects. ERA Dashboard indicators 6 and 7 but also 8, show positive developments in this area over the last five years. In particular, the number of open-access research data sets more than doubled between 2020 and 2023. Another long-standing topic in ERA, in Austria's R&I policy and in the national ERA action plan is **gender equality** in research and innovation. The related ERA Dashboard Indicators 12-15 all show an overall positive trend in recent years, e.g. regarding the proportion of mixed-gender teams or women of Grade A among academic staff/researchers. However, Austria ranks below the EU27 average in all but one ERA Dashboard Indicator (15 Women in Digital). Its development appears to be aligned with the EU27 average, indicating that it is currently not catching up.

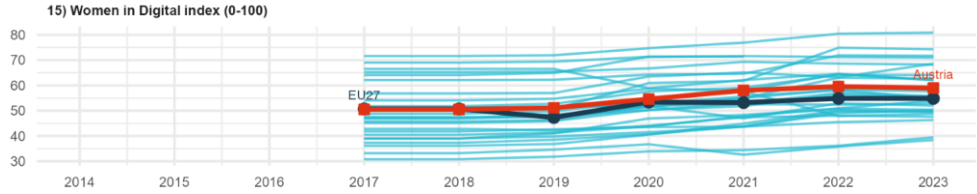
In the area of **knowledge valorisation**, several ERA Dashboard Indicators show that Austria is performing above the EU27 average and often continues to improve, in particular in the more traditional vein of knowledge and technology transfer and business-academia cooperation (ERA Dashboard Indicator 19, 21-24). In comparison to larger countries such as Germany or France, Austria has provided a good number of best practice examples (ERA Dashboard Indicator 20). Other topics and indicators that show a positive development include the 'share of foreign doctorate students' that is above the EU27 average and increasing (ERA Dashboard Indicator 17) and 'ERC grants received per 1 000 R&D personnel' (ERA Dashboard Indicator 29).

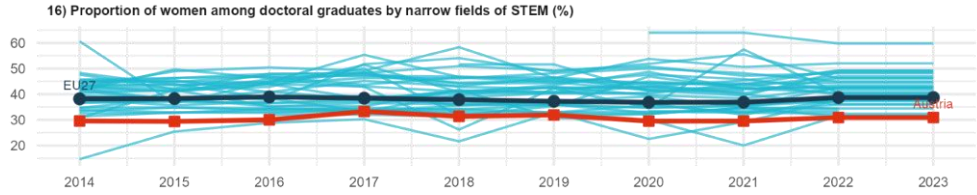
In other ERA Priority 1 areas, ERA Dashboard Indicators suggest a need for further and continuous action. This concerns for example academic freedom, considering Austria's position in the Academic Freedom Index has decreased. In 2023, Austria performed at the EU27 average level (ERA Dashboard Indicator 27). It also concerns the area of Research Infra-

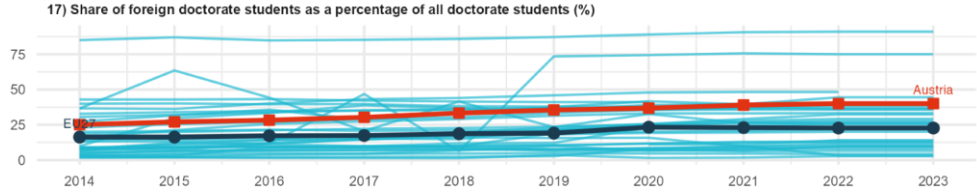
structures, for which ERA Dashboard Indicator 11 highlights that Austria participates in European RIs below the EU27 average and below countries such as Belgium, the Netherlands or Czechia.

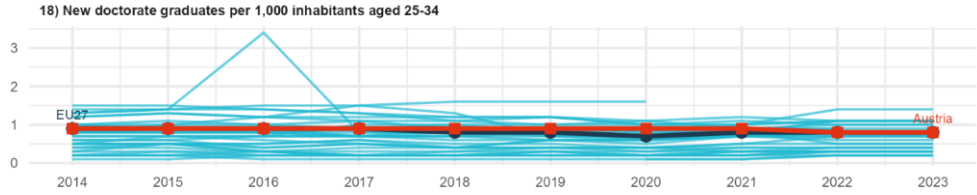
Figure 3-1 Indicators for ERA Priority 1

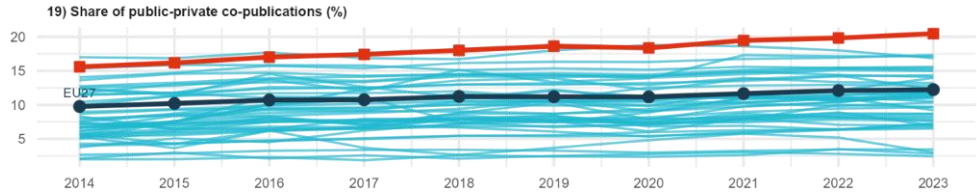

14) Proportion of women in authorships of the top 10% most cited publications (%)
0.5
0.4
0.3
0.2
0.1
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


15) Women in Digital index (0-100)
80
70
60
50
40
30
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

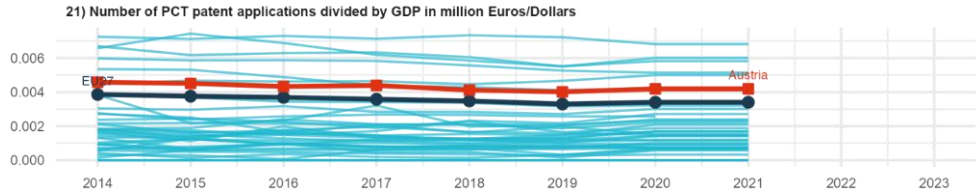

16) Proportion of women among doctoral graduates by narrow fields of STEM (%)
60
50
40
30
20
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

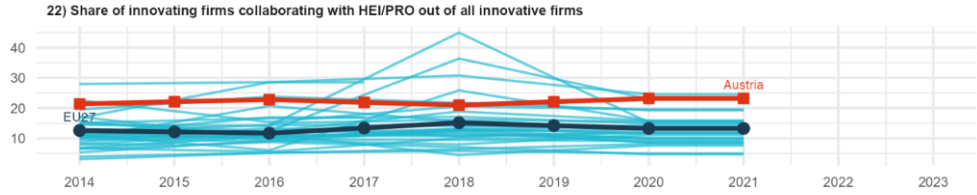

17) Share of foreign doctorate students as a percentage of all doctorate students (%)
75
50
25
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

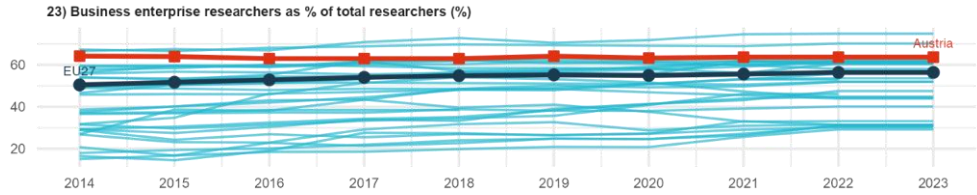

18) New doctorate graduates per 1,000 inhabitants aged 25-34
3
2
1
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

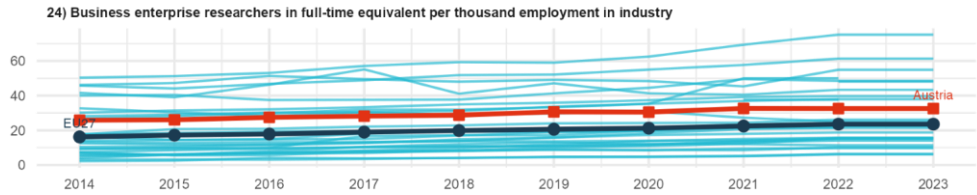

19) Share of public-private co-publications (%)
20
15
10
5
EU27
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

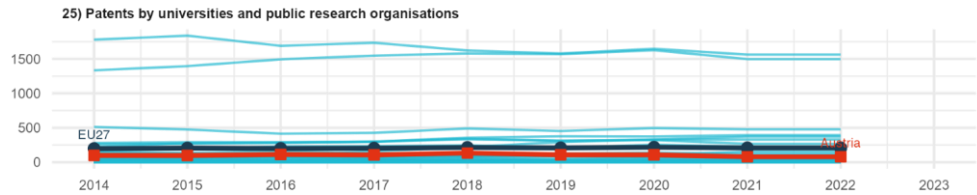

20) Best practice examples and methodologies for knowledge valorisation - 2023
30
20
10
0
10
25
2
2
6
4
1
7
9
11
2
1
7
13
3
4
3
1
21
1
11
1
1
1
6
13
6
6
Austria
Belgium
Croatia
Cyprus
Czechia
Denmark
Estonia
EU27
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
United Kingdom

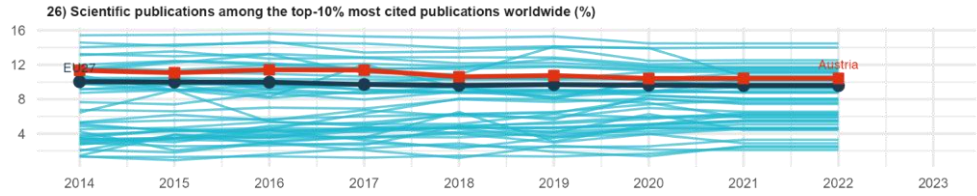

21) Number of PCT patent applications divided by GDP in million Euros/Dollars
0.006
0.004
0.002
0.000
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

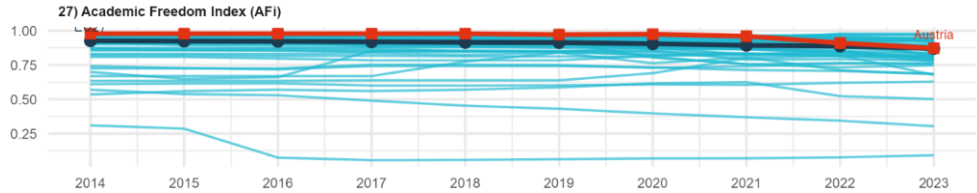

22) Share of innovating firms collaborating with HEI/PRO out of all innovative firms
40
30
20
10
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

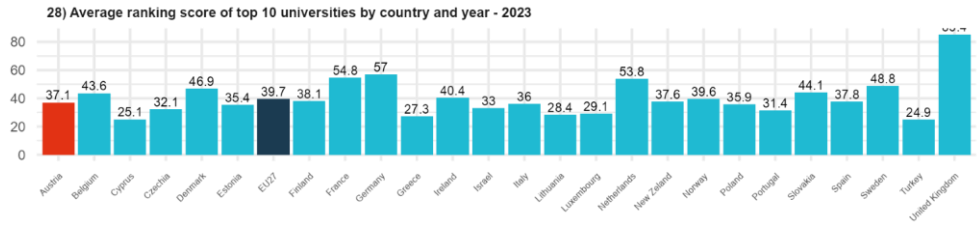

23) Business enterprise researchers as % of total researchers (%)
60
40
20
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

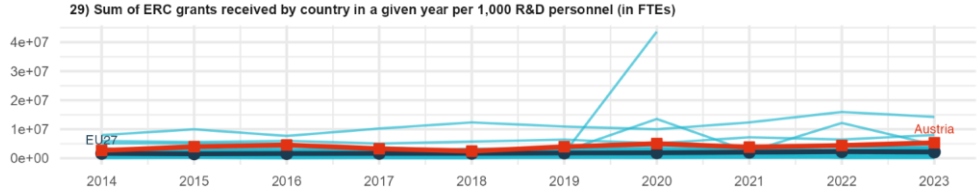

24) Business enterprise researchers in full-time equivalent per thousand employment in industry
60
40
20
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

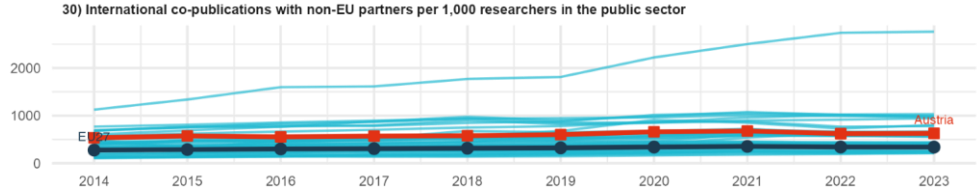

25) Patents by universities and public research organisations
1500
1000
500
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

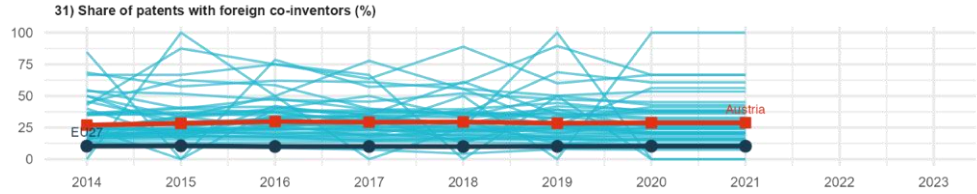

26) Scientific publications among the top-10% most cited publications worldwide (%)
16
12
8
4
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

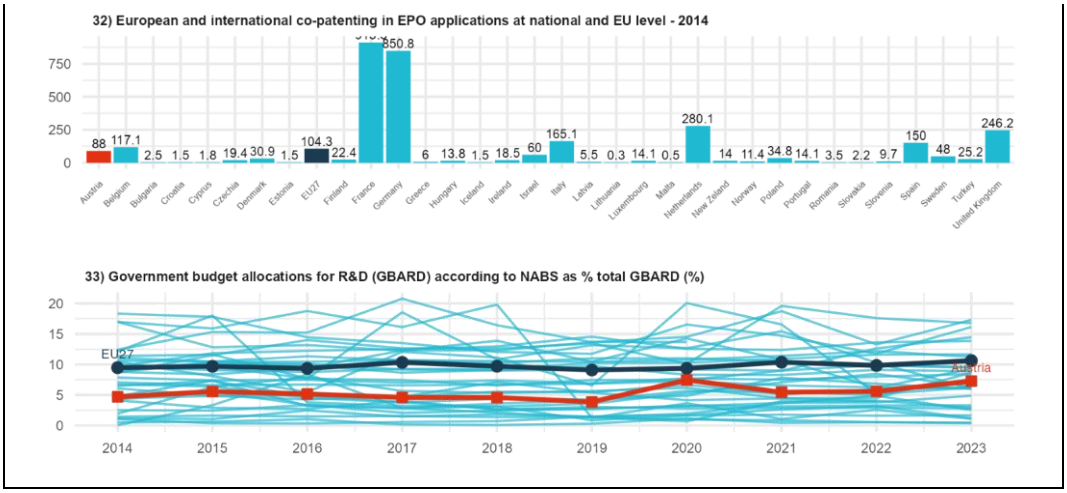

27) Academic Freedom Index (AFi)
1.00
0.75
0.50
0.25
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


28) Average ranking score of top 10 universities by country and year - 2023
80
60
40
20
0
37.1
43.6
25.1
32.1
46.9
35.4
39.7
38.1
54.8
57
27.3
40.4
33
36
28.4
29.1
53.8
37.6
39.6
35.9
31.4
44.1
37.8
48.8
24.9
Austria
Belgium
Cyprus
Czechia
Denmark
Estonia
EU27
Finland
France
Germany
Greece
Ireland
Israel
Italy
Lithuania
Luxembourg
Netherlands
New Zealand
Norway
Poland
Portugal
Slovakia
Spain
Sweden
Turkey
United Kingdom


29) Sum of ERC grants received by country in a given year per 1,000 R&D personnel (in FTEs)
4e+07
3e+07
2e+07
1e+07
0e+00
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


30) International co-publications with non-EU partners per 1,000 researchers in the public sector
2000
1000
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


31) Share of patents with foreign co-inventors (%)
100
75
50
25
0
EU27
Austria
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023



Source: see Annex 1

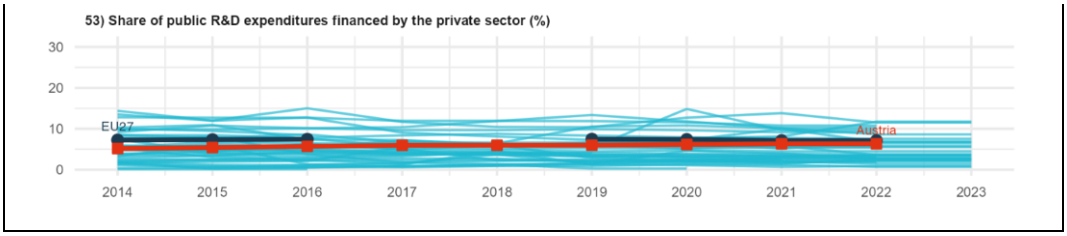
ERA Priority 2 is addressed through various activities and measures through national initiatives on all ERA Actions (Missions, Partnerships, Green transformation, green/digital transition of industrial ecosystems, and Science to Citizens). Regarding **challenge-based ERA actions,** the related ERA Dashboard Indicators 35-37 show a mixed picture, partly also because data points for more recent years are missing. It seems that overall, Austria is mostly performing better than the EU27 average. However, in recent years, several indicators show more often a decline than an increase (see, e.g., ERA Dashboard Indicator 37). With regards to bringing 'Science closer to Citizens', for many years, Austria focusses on activities related to citizen science. ERA Dashboard Indicator 42 shows that these remain important, as in Austria the trust in science is slightly lower than in the EU27.

Figure 3-2 Indicators for ERA Priority 2

Source: see Annex 1

ERA Priority 3 is addressed through a commitment to enhancing the strategic capacity of Europe's public research-performing organisations. In Austria, many interventions tackle specifically the interface between industry, business and academia. ERA Dashboard Indicators 47 and 52 illustrate Austria's consistent performance above the EU27 average from 2017 until the latest available data, with a trend of continued improvement.

Figure 3-3 Indicators for ERA Priority 3

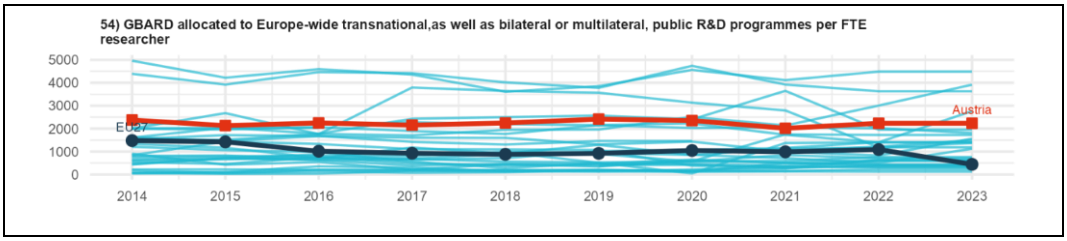


Source: see Annex 1

ERA Priority 4 consists of Action 19 on implementing an efficient and effective ERA monitoring mechanism. The overall monitoring approach and the mechanism are outlined in the national ERA action plan that also is structured in a way to facilitate both. A study assessing progress and evaluating the plan is expected to conclude in the first half of 2025.

The related indicator (see figure below) shows that Austria constantly allocates resources above the EU average to Europe-wide transnational public R&D programmes per FTE researcher.

Figure 3-4 Indicators for ERA Priority 4



Source: see Annex 1

4. Effects of ERA Action implementation on the national R&I system

This chapter presents a **qualitative assessment of the ERA Action commitments** of Austria and their effects on the national R&I system, including the quantitative performance in the ERA Dashboard. ERA, the ERA Policy Agenda and the ERA national action plan are all reflected in central national R&I policy documents, covering both the long and the medium term. Thus, ERA Actions implementation and national R&I priorities are well aligned and operate in synergy. The fact **that ERA NAP was acknowledged by the national council of ministers in December 2022 supports implementation** at national level, as does the fact that the **ERA NAP assigns responsibility to those national policy makers or stakeholders** that are crucial to implement the outlined measures.

The RTI Strategy 2030 formulates three objectives with several corresponding fields of activities. These are **Objective 1 -** Become an international innovation leader and strengthen Austria's position as an RTI location, **Objective 2 -** Focus on effectiveness and excellence and **Objective 3 -** Focus on knowledge, talents and skills. While one of the core fields of activities relating to Objective 1 ('1.1.2 Use and develop Europe for Austria: Increase participation in EU missions, EU partnerships and Important Projects of Common European Interest') specifically highlights the importance of ERA and of the implementation of the ERA policy agenda, the national implementation of ERA contributes to various fields of activities in all of the three objectives.

For instance, while **Austria has yet to achieve its goal to become an innovation leader** and in fact seems to stagnate in recent years (see also ERA Dashboard Indicator 46), activities to reach this goal include, e.g., to expand research and technology infrastructure and facilitate access, amongst other through EOSC, Gaia-X or other and through the implementation of the Austrian Research Infrastructure Plan 2030 (also part of national ERA action plan). Other measures to achieve this objective are, e.g., the targeted development and expansion of bi- and multilateral research and international cooperation with an awareness of potential security risks, corresponding to national ERA initiatives both on international collaboration in research and to research security.

Regarding **Objective 2 – a focus on effectiveness and excellence –** measures include, e.g., open innovation and citizen science methods, or the continuous support of spin-off creation which relate to the ERA Actions 14 “Bring Science to Citizens” and 07 “Upgrade EU guidance for a better knowledge valorisation”, respectively. In Austria, the latter includes e.g. to implement central indicators into the performance agreements with the universities. As ERA Dashboard indicator 25 shows, there is still room for improvement as the number of patents by universities and PRO remains under the EU27 average.

Lastly, the national implementation of the ERA NAP contributes in several ways also to the **third objective to focus on knowledge, talents and skills.** Among others, measures include to strengthen gender equality and diversity in R&D and enhance the attractiveness and promotion of research careers, particularly for women, by intensifying equal opportunity programmes and measures in human resources and career planning, as well as to give greater consideration to gender and diversity criteria in the evaluation/review of funding applications. Both directly relate to several measures of the ERA NAP, e.g., to the developing of a concept for equality plans of HEU, RPO and RFO on how to treat gender in selection processes (see above for ERA Action 5). As discussed above, the respective ERA Dashboard Indicators 12-15 show a positive development in recent years in Austria, while still being below the EU-average.

5. Conclusions

Austria is strongly committed to the goals of ERA and the ERA policy agenda. National R&I strategic policy documents are well aligned with the policy agenda and mention it specifically as well as relating to the ERA priorities transversally. **A central document in this regard is the Austrian ERA NAP,** the national ERA action plan 2022-2025 outlining the country’s national ERA initiatives, related measures, goals and indicators as well as how they correspondent to the European ERA Priorities and Actions. As **the ERA NAP was officially acknowledged by the council of ministers in 2022,** it is an official document of the Austrian Federal Government, increasing its weight in everyday policy making, also for the different, national coordinators of the single actions, that are responsible for its implementation.

As shown above and based on a current study on the progress of the national ERA NAP and its evaluation overall, **Austria is making good progress** against the goals and milestones indicated in the ERA NAP. The analysis of relevant ERA Dashboard Indicators underlines that the country has made progress towards the ERA objectives and towards the country’s own objectives as outlined in the nation R&I strategy 2030, although the objective to become innovation leader has not yet been achieved.

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ERA NAP: https://www.bmbwf.gv.at/Themen/Forschung/Forschung-in-der-EU/Leitthemen-der-EU-Forschung/Europ%C3%A4ischer-Forschungsraum-(ERA)/ERA-NAP.html

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Annex 1 – Full list of ERA Dashboard Indicators

The indicators used in the report are taken from the ERA Dashboard 2024. The full ERA Dashboard Report and the supporting Data Replication Package can be downloaded at https://european-research-area.ec.europa.eu/era-monitoring-reports. However, *GDP (in million €)*, *Size of the population (million)*, and *Share of female researchers, all sectors of performance (%)* were added to provide additional context and directly retrieved from the Eurostat website.

Additionally, EU and country averages are for 2023, except *Share of female researchers, all sectors of performance (%)* (2021).

Table 1 Structural Key Indicators:

Indicator number	Indicator	Source
/	GDP in euro per capita, current prices	Eurostat https://doi.org/10.2908/TEC00001
1	Gross Domestic Expenditure on R&D (GERD) as a share of GDP	Eurostat
2	Government Budget Allocations for R&D (GBARD) as share of GDP	Eurostat
4	Business Enterprise Expenditure on R&D (BERD) as a share of GDP	Eurostat
5.2	Expenditure on R&D procurement as a percentage of GDP	EC/European Innovation Procurement Observatory
/	Size of the population (million)	Eurostat, https://doi.org/10.2908/TPS00001
3	Researchers (in FTE) per million inhabitants	Eurostat
/	Share of female researchers, all sectors of performance (%)	Eurostat, https://doi.org/10.2908/TSC00005

Figure 3.1 Indicators for ERA Priority 1

Indicator number	Indicator	Source
6	Share of publications available in open access (green, gold, and diamond)	OpenAIRE
7	Number of open-access research datasets by country	OpenAIRE
8	Number of repositories by country	EOSC - Re3data
9	Country investments in EOSC and Open Science (in ranges of investment)	EOSC Observatory
10	Share of national public R&D expenditure committed to European research infrastructures	ESFRI
11	Number of European RIs in which a Member State or an Associated Country participates	ESFRI
12	Proportion of women of Grade A among academic staff/researchers	Women in Science - She Figures
13	(Corrected) Proportion of mixed-gender teams	EC_Scopus
14	(Corrected) Proportion of women in authorships of the top 10% most cited publications	EC_Scopus
15	Women in Digital index (0-100)	EC-Women in Digital Scoreboard

16	Proportion of women among doctoral graduates by narrow fields of STEM	Eurostat
17	Share of foreign doctorate students as a percentage of all doctorate students	Eurostat
18	New doctorate graduates per 1,000 inhabitants aged 25-34	Eurostat
19	Share of public-private co-publications	EC_Scopus
20	(Cumulative number of) Best practice examples and methodologies for knowledge valorisation	Knowledge Valorisation Platform
21	Number of PCT patent applications divided by GDP in million Euros/Dollars	OECD, Eurostat & World Bank
22	Share of innovating firms collaborating with HEI/PRO out of all innovative firms	Eurostat CIS (own calculations)
23	Business enterprise researchers as % of total researchers	OECD
24	Business enterprise researchers in full-time equivalent per thousand employment in industry	OECD
25	Patents by universities and public research organisations	EPO PATSTAT - Fraunhofer ISI calculations
26	% of scientific publications among the top-10% most cited publications worldwide	EC_Scopus
27	Academic Freedom Index (AFi)	V-Dem Varieties of Democracy
28	Average ranking score of top 10 universities by country and year	QS World University Ranking
29	Sum of ERC grants received by country in a given year per 1,000 R&D personnel (in FTEs)	EC-ERC
30	International co-publications with non-EU partners per 1,000 researchers in the public sector	EC_ScienceMetrix and Eurostat/OECD
31	Share of patents with foreign co-inventors	OECD
32	European and international co-patenting in EPO applications at national and EU level	Eurostat
33	Government budget allocations for R&D (GBARD) according to NABS as % total GBARD	Eurostat

Figure 3.2 Indicators for ERA Priority 2

Indicator number	Indicator	Source
34	Note: The ERA Dashboard Indicator 34 was removed from the Dashboard in January 2025. As a consequence, the indicator has also been omitted from the Country Report, while, however, keeping the original numbering of the indicators.	
35	Environmentally related government R&D budget, as % of total government R&D	Eurostat
36	National public and private investments as suggested in the SET Plan progress report 2021 (EUR million)	SETIS R&I data
37	% Patents on environmental technology	OECD
38	Share of innovative firms cooperating with higher education institutions or public/private research institutions	Eurostat CIS
39	Enterprises that purchased or licensed-in patents or other IPRs from public research organisations, universities or higher education institutions	Eurostat CIS

40	Direct government support and indirect government support through R&D tax incentives as a % GDP	OECD
41	Green bond issuance as a percentage of total bond issuance	Eurostat - EEA
42	Trust in Science	Eurobarometer 95.2
43	Increase in total R&D expenditure in widening countries, expressed as a percentage of GDP	Eurostat, OECD, UNESCO

Figure 3.3 Indicators for ERA Priority 3

Indicator number	Indicator	Source
44	*Number of participations in Horizon Europe (of Widening countries) measured in terms of 1,000 R&D personnel (in FTEs)*	Cordis - Eurostat
45	*Sum of Horizon Europe grants (€) received by Widening countries in terms of 1,000 R&D personnel (in FTEs)*	Cordis - Eurostat
46	*Summary Innovation Index (Widening countries)*	EC_EIS
47	*Share of enterprises using public funds from different governance levels (local or regional, national, and EU) for R&I activities*	Eurostat CIS
48	*Number of Seal of Excellence projects on the InvestEU Portal per 1,000 R&D personnel (in FTEs)*	EC - Invest EU
49	*Number of collaboration networks of RPOs in Widening countries with other EU countries*	Cordis - Horizon Dashboard
50	*Average number of partners from non-widening countries per institution from a Widening country participating in the Horizon programme each year*	Cordis - Eurostat
51	*Share of patents registered by a Widening country together with partners from other EU countries*	OECD
52	*Share of innovative enterprises that cooperated with RPOs located in other countries*	Eurostat CIS
53	*Share of public R&D expenditures financed by the private sector*	Eurostat

Figure 3.4 Indicators for ERA Priority 4

Indicator number	Indicator	Source
54	*GBARD allocated to Europe-wide transnational, as well as bilateral or multilateral, public R&D programmes per FTE researcher*	Eurostat

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ERA Monitoring 2024: ERA Country Report Austria.

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