Austrian Action Plan for the European Research Area (ERA-NAP) 2022-2025

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1 Introduction

The RTI Strategy 2030[1] (Strategy for Research, Technology and Innovation) of the Austrian Federal Government cites the principle of "leveraging the opportunities of a common Europe" as a central element of its implementation and stipulates that Austria's active involvement in the European Research Area (hereinafter abbreviated to ERA) should be emphatically pursued. The RTI Pact 2021-2023, which was developed to implement the RTI Strategy, therefore provides for the development of an "Austrian Action Plan for the European Research Area" as a concrete measure.

The BMBWF, as the ministry responsible for the ERA, has therefore developed a national ERA Action Plan (hereinafter referred to as ERA-NAP 2022-2025) in close cooperation with the Federal Ministry of Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) and other federal ministries as well as national stakeholders. In terms of timing, the ERA-NAP 2022-2025 follows the restructuring of the ERA at European level, which was formally concluded with the adoption of the ERA Policy Agenda 2022-2024[2] by the Council of the EU in November 2021. The Austrian ERA-NAP 2022-2025 builds on the ERA Policy Agenda 2022-2024 and serves to implement it at national level.

1.1 Context and general purpose

In 2000, with its Communication "Towards a European Research Area"[3], the European Commission laid the foundations for a process to establish a common European research policy and create an internal market for knowledge in Europe. Following this Communication, a series of initiatives was launched to reduce fragmentation of research in Europe and increase cooperation between Member States in order to raise European competitiveness and the effectiveness of the research and innovation system in terms of the impact of research on major social and economic challenges. The European cooperation in the area of large research infrastructures[4], the improvement of the general framework conditions for careers and the mobility of researchers, and the creation of the European Research Council are particularly noteworthy.

Since the Treaty of Lisbon came into force in 2009, the goal of creating a European Research Area (ERA), where there is freedom of movement for researchers and free exchange of scientific knowledge and technologies, has been enshrined in EU primary law (Art. 179 para. 1 AEUV - Treaty on the Functioning of the European Union).

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[1] Research Coordination - Research, Technology and Innovation (RTI) - Federal Chancellery of Austria

[2] https://era.gv.at/public/documents/4616/st14308.en21_newERA_governance_CC_EN_final.pdf

[3] https://era.gv.at/era/era-2000-2021/towards-a-european-research-area-2000/

[4] www.esfri.eu

In 2018, the Council of the EU decided that the ERA should be restructured in order to make the ERA more visible, more relevant and more effective. Three years later, on 26 November 2021, with the decision on the "Pact for Research and Innovation in Europe"[5], the Council conclusions on the future ERA governance and the ERA Policy Agenda 2022-2024,[6] the Council laid the foundations for a new Research Area under the title "New ERA".

The central document for the development of the ERA-NAP 2022-2025 is the ERA Policy Agenda 2022-2024, which contains 20 concrete packages of measures ("ERA Actions"), some of which are extensive, for the further development of ERA. The implementation of the ERA Policy Agenda 2022-2024 is only possible through joint efforts at EU level and in the 27 EU Member States. Most Member States have already started planning national implementation. In Austria, this is being done through the ERA-NAP 2022-2025.

The Conclusions on the future ERA Governance specified that the Member States should make commitments to all the ERA actions of the ERA Policy Agenda 2022-2024 that they wish to actively participate in implementing. Austria made a commitment to 15 of the 20 ERA actions. All of these 15 ERA actions are addressed accordingly by the ERA-NAP.

The implementation of the ERA Policy Agenda through the ERA-NAP follows the general objective of further developing the national RTI system in a joint European context. The close international and especially European interdependence and networking of the national RTI actors, the high degree of European integration in many areas of life and business, and the necessary cooperation on common social and economic challenges require close European cooperation in this further development of the national RTI system.

The ERA Policy Agenda at EU level addresses important developments, transformations and challenges to make science, research, technology and innovation fit for the future, and to increase the effectiveness and efficiency of the RTI system. At the same time, the ERA Policy Agenda is about jointly promoting research and innovation where crises, threats, transformations and other major challenges require new approaches and solutions.

The measures of the ERA-NAP 2022-2025 therefore primarily focus on developments at national level and in national institutions, but in close cooperation and coordination with European partners and the European Commission. The aim is both to launch new initiatives and reforms, and to use already ongoing or adopted measures to implement the ERA Policy Agenda. At the same time, it must be emphasised that, in addition to the measures listed in the ERA-NAP 2022-2025, a multitude of activities by many

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[5] https://era.gv.at/era/era-policy-agenda/a-pact-for-research-and-innovation-in-europe/

[6] The ERA Policy Agenda is an appendix to the Council conclusions for future ERA governance: https://era.gv.at/era/era-policy-agenda/era-policy-agenda/

organisations contribute to the implementation of the ERA Policy Agenda and the European R&I Pact in Austria.

1.2 Structure and embedding in the national RTI environment

The structure of the ERA-NAP 2022-2025 does not follow that of the ERA Policy Agenda 2022-2024, but is based on the national RTI environment. The following overview compares the 12 initiatives of the ERA-NAP 2022-2025 with the ERA Policy Agenda 2022-2024 and shows which national initiatives relate to which ERA actions, with some national initiatives relating to more than one ERA action. This is due to the high complexity of some of the ERA actions and the multifaceted nature of the ERA-NAP initiatives. In this overview, the full designation of the ERA actions is given only when they are first mentioned. A more detailed description of the ERA actions can be found in the "Explanatory Documents" created by the European Commission under the following LINK[7].

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[7] https://era.gv.at/era/era-policy-agenda/explanatory-documents

ERA-NAP 2022-2025 – 12 initiatives	Corresponding "ERA Actions" (ERA Policy Agenda 2022-2024)
01_Towards an Open Science	01_ Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC) 02_ Propose a EU copyright and data legislative framework fit for research
02_Develop the European Open Science Cloud (EOSC)	01_ Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)
03_Strengthen human resources for science and research in Austria	03_ Advance towards the reform of the Assessment System for research, researchers and institutions to improve their quality, performance and impact 04_ Promote attractive and sustainable research careers, a balanced talent circulation and international, transdisciplinary and inter-sectoral mobility across the ERA
04_Set of measures on "Gender equality and inclusiveness"	05_ Promote gender equality and foster inclusiveness, taking note of the Ljubljana Declaration
05_Strengthen trust in science	14_ Bring science closer to citizens
06_EU Partnerships in Austria	10_ Make EU R&I missions and partnerships key contributors to the ERA
07_Green hydrogen for Europe	11_ An ERA for green transformation
08_Revise the Strategic Energy Technology Plan (SET-Plan)	11_ An ERA for green transformation
9_Green and digital transition in industry	12_ Accelerate the green/digital transition of Europe's key industrial ecosystems
10_Austrian Research Infrastructure Action Plan	08_ Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA
11_Measures for knowledge valorisation	07_ Upgrade EU guidance for a better knowledge valorisation

12_Measures in the context of international cooperation in research	06_ Deepen the ERA by protecting academic freedom in Europe 09_ Promote a positive environment and level playing field for international cooperation based on reciprocity.

The respective key stakeholders for implementation are listed under each individual ERA-NAP initiative. The basic idea of the entire ERA-NAP is to implement the reforms together with the stakeholders. Therefore, the ERA-NAP initiatives were developed with the involvement of stakeholders.

Universities, universities of applied sciences, non-university research institutions, research funding bodies, social partners and interest groups are the main stakeholders involved in the development of the individual chapters, to varying degrees and in varying compositions. They will play key roles in the implementation.

2 The 12 chapters of the ERA-NAP 2022-2025

The initiatives are presented according to a uniform pattern; however, the character of the initiatives varies greatly. While in some areas, already ongoing initiatives or specifically planned initiatives are described which serve to implement the ERA Policy Agenda in Austria, in other areas, new initiatives and processes are presented in which concrete measures will only be developed in the course of their implementation.

Budgetary coverage: All planned measures are covered by the RTI Pact 2021-2023 and the RTI Pact 2024-2026. In addition, participating institutions will use their own resources.

The EU Missions in Horizon Europe, an important topic in the ERA Policy Agenda, are not included in the current ERA-NAP. The reason for this is that the national implementation of the missions is still being worked on, and it was not possible to present the concept at the time of going to press for the ERA-NAP 2022-2025.

2.1 Towards an Open Science

➢ **Coordination:**   **Caroline Schober**

Chair of the Steering Board of OSA - Open Science Austria, Universities Austria; Vice Rector for Research and International Affairs, Medical University of Graz

➢ **ERA actions to be addressed by the initiative:**

01_ Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)

02_ Propose an EU copyright and data legislative framework fit for research

➢ **Description of the initiative:**

The initiative is intended to support and accelerate the transformation process of the Austrian science and research system towards Open Science within and beyond the academic sector by improving framework conditions and providing greater incentives for Open Science (Open Access, Open Data, open educational resources). To this end, concrete measures are to be jointly developed and implemented with the institutions concerned and in coordination with the EU level and partner countries.

This is based on the following understanding of Open Science:

Open Science means that research is conducted with a strong collaborative approach: this includes the generation, evaluation and interpretation of data and results (i.e. the "production process") as well as the re-use and sharing of methods and research data or the free accessibility of publications and findings (the dissemination and (further) use). This collaborative creation and use of research results is not limited to scientists from various disciplines, but also includes companies, authorities, affected parties and the public. If knowledge and data are shared with all relevant actors as early as possible in the research process, it not only helps the dissemination and application of the latest knowledge, but also accelerates the research and innovation process, increases creativity and trust in science as well as helping to increase Europe's competitiveness.

➢ **Objectives:**

1. Further development of OSA – Open Science Austria[8] as an interdisciplinary stakeholder platform, and strengthening of the exchange and expertise within the Open Science Community

2. Increasing the level of knowledge and awareness, particularly at universities and institutions involved in OSA, beyond the Open Science Community

3. Establishing concepts, planning and steering instruments, to create incentives for the application of Open Science practices

4. Strengthening the "OSA" brand and in-depth work on specific subject areas

➢ **Actors and Stakeholders:**

Key actors:

The initiative is coordinated by Open Science Austria (OSA) in cooperation with the BMBWF. Other key actors are: UNIKO, FFG, FWF, ISTA

Stakeholders:

The Austrian universities and universities of applied sciences, non-university research institutions, research funding bodies, interest groups

➢ **Action 1.1:**

"Develop and operate Open Science Austria (OSA)"

Description:

Development and operation of Open Science Austria (OSA) as an interdisciplinary stakeholder platform under the umbrella of Universities Austria (uniko), dedicated to the

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[8] https://www.osa-openscienceaustria.at

topic of Open Science. OSA is supported by universities as the key actors, but members and focus go far beyond the academic sector.

Milestones:

1. <u>Information campaign for universities</u>

   Holding information events on Open Science at university locations in Vienna, Graz, Salzburg and Innsbruck with a broad target group, even outside the Open Science Community (decision-makers and members of higher education institutions, researchers, young researchers and students).
   Period: 01.2023 – 12.2023

   Online event for young researchers
   Period: in autumn/winter 2023/24

2. <u>Preparation and dissemination of current publications in the field of Open Science</u>

   Provision of key Open Science documents on the OSA website with brief explanations to facilitate orientation and demonstrate relevance. Expansion of the functionality of the website for this purpose.
   Period: ongoing from 09/22

3. <u>Establishment of a blog as a communication platform for the community</u>

   Initiation of a low-threshold, open and constructive exchange in the blog by a growing community (broad target group including young researchers)
   Period: 09/22 - 12/24

4. <u>OSA Community Day</u>

   Exchange and networking meetings with 100+ people from the community (leaders, research management, libraries, scientists, and especially young researchers, etc.). Keynote speeches by international experts (from the Sounding Board or external) on key topics
   Period: 1 event in 2023

Expected impact:

Significant increase in awareness in the Austrian scientific community of the potential benefits and opportunities that Open Science can offer. Increased implementation of Open Science practices and active exchange of ideas between universities and other stakeholders.

Goals/indicators:

1. Information offensive: Event tour at four university locations in 2023

2. Preparation and dissemination of current publications: Curated structure as a valuable information resource for the community

3. Blog: Increase in number of registered users to >100 by the end of 2022, >250 by the end of 2023

➢ Action 1.2:

"Use of steering instruments to create incentives for the application of Open Science"

Description:

Within the framework of OSA, concepts for targeted steering measures are to be developed in order to create incentives for the application of Open Science and the use of relevant infrastructures in both the academic and non-academic sectors. The baseline report "Open Access in Transition"[9], commissioned by the BMBWF in 2021 and completed in February 2022, is to be used as a basis, along with other preliminary work. The research assessment reform and the associated broadening of the recognised performance portfolio of scientists should play a key role here.

Milestones:

1. Submission of concrete proposals for incentive and steering measures by April 2024

2. Discussion on further necessary steps and any required funding from mid-2024

3. Implementation of measures from mid-2024

Expected impact:

The creation of incentives for increased use of Open Science by researchers within and outside the academic sector is intended to significantly accelerate the transition towards Open Science in Austria.

Goals/indicators:

Submission of concrete proposals for incentive and steering measures by April 2024

➢ Action 1.3:

"Study on the legal and administrative framework for Open Science in Austria"

Description:

The Baseline Report "Open Access in Transition", commissioned by the BMBWF in 2021 and presented in February 2022, highlights - among other things - the importance of the legal and administrative framework for the development of Open Science. Therefore, as

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[9] https://www.osa-openscienceaustria.at/wp-content/uploads/2022/05/Open-Access-im-Wandel_bf.pdf

part of a follow-up study to the Baseline Report, the legal and administrative framework for Open Science in Austria should now be analysed, and options for action proposed.

By the end of 2022, the EU Commission will conduct an analysis of the EU legal and regulatory framework for copyright and data, with regard to how suitable it is for research. The result of this analysis should be taken into account in the study.

Milestones:

1. Commissioning of the study in the 1st quarter of 2023

2. Submission of the final report and presentation within the framework of a workshop: 4th quarter of 2023

Expected impact/goal

The aim of the study is to establish a clear overview of the current legal and administrative framework for Open Science in Austria and develop corresponding recommendations for action. Concrete measures to be taken in this regard shall be discussed at a later stage.

2.2 Development of the European Open Science Cloud (EOSC) – Austrian involvement in the EOSC process

➢ **Coordination:**   **Stefan HANSLIK**

Federal Ministry of Education, Science and Research, General Directorate V, Unit for Basic Research (MINT) and Research Infrastructures

Kerstin ZIMMERMANN

Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Department III/5 – Key Technologies for Industrial Innovation: ICT, Production and Nanotechnology

➢ **ERA actions to be addressed by the initiative:**

01_ Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)

➢ **Description of the initiative:**

The European Open Science Cloud (EOSC) is a virtual, federated network that transcends borders and scientific disciplines to store, share, process and re-use digital research objects (such as publications, data and software) that are FAIR (Findable, Accessible, Interoperable and Re-usable).

In February 2022, the Council of Ministers adopted the "Open Science Policy Austria and the European Open Science Cloud".

Austria participates in the development of the EOSC by

1. establishing functionalities and services of the EOSC;

2. introducing Austrian (research) data structures;

3. collaborating on the European management structures.

➢ **Objectives:**

The following goals are pursued as part of the Austrian involvement in the EOSC process:

1. Networking national EOSC initiatives and interest groups;

2. Establishing and expanding research infrastructures according to the FAIR principle;

3. Creating service structures for the re-use of research data.

➢ **Actors and Stakeholders:**

Key actors:

The ACONET Association as the Austrian mandated organisation in the European EOSC Association, the EOSC Support Office Austria at the Vienna University of Technology, and the Austrian members in the EOSC Association.

List of partners of the EOSC Support Office and members of the European EOSC Association, including status:

• ACONET Association [Legal entity of the Austrian mandated organisation]
• Climate Change Center Austria [Observer]
• Johannes-Kepler University Linz [Observer]
• NHM - Natural History Museum Vienna [Member]
• Graz University of Technology [Member]
• Vienna University of Technology [Member]
• University of Vienna [Member]
• BBMRI ERIC [Member]

Associate partners of the EOSC Support Office:

• Federal Ministry of Education, Science and Research (BMBWF)
• ACOnet Science network (NREN)
• FAIR Office Austria
• Open Knowledge Maps - association for the promotion of the visibility of scientific knowledge
• University of Veterinary Medicine Vienna
• Forum of Austrian University Libraries (ubifo)
• Academy of Fine Arts Vienna.

➢ **Action 2.1:**

"Continuation/expansion of the EOSC Café"

Description:

The EOSC Café is an open networking and communication platform at the invitation of the BMBWF for the most important stakeholders in the Austrian EOSC landscape to discuss EOSC-relevant activities and developments. Like BMK and BMAW, all of the above-mentioned institutions and EOSC Association members are part of the EOSC Café.

The aim is to provide low-threshold access to the EOSC process, which makes it easier for potential future users to obtain information and subsequently participate in EOSC activities.

Milestones:

Milestone 1:   2022 – 2025: At least 3 meetings per year, partly involving representatives of other Member States and an extended group of European EOSC stakeholders, as well as those generally interested in EOSC.

Expected impact:

The Austrian EOSC actors are informed of current EOSC developments at European level and can participate in the EOSC process in the best possible way.

Goals/indicators:

Implementation of the European EOSC at national level.

Indicator: Number of Austrian participations in European EOSC projects

➢ **Action 2.2:**

"Austrian EOSC Support Office"

Description:

In the period of 2021 to 2024, Austria is participating in the "co-programmed EOSC partnership" with EOSC/FAIR relevant in-kind projects under the BMBWF "Digital and Social Transformation" programme. To date, Austrian research institutions have managed to obtain about EUR 5 million from Horizon Europe within EOSC projects (with this figure still increasing).

Milestones:

Milestone 1:   Working groups in the EOSC Support Office Austria:

Each institution contributes through specific infrastructures or competences.

List of established working groups and coordinating institutions:

- Austrian Country Profile, TU Wien
- Key Performance Indicators, NHM, TU Wien
- Researcher Engagement in Austria, TU Wien
- Data Stewardship, TU Graz
- Collections, NHM
- Stakeholder Engagement, Univ. Vienna
- Technical Infrastructure, TU Graz
- Training, Univ. Vienna

Milestone 2:   Annual general meeting of the EOSC Support Office Austria/Austrian EOSC Mandated

Expected impact:

Contribution to a coordinated implementation of the goals of the Austrian Open Science Policy and the European Open Science Cloud.

Goals/indicators:

1. Establishment and maintenance of contacts with partners and other stakeholders,

2. Administrative support of working groups,

3. Documentation of activities (processes, discussions, results, etc.) in the joint EOSC Wiki,

4. Coordination of measures, methods and instruments to implement the initiative,

5. Definition and monitoring of specifications and processes of the initiative (including evaluation processes, general planning of the initiative, definition of development phases),

6. Reporting (results and other official documents),

7. Strengthening cooperation with initiatives, committees and working groups at national and international level in the research data management environment.

Indicator: Number of Austrian members in the EOSC Association.

➢ **Action 2.3:**

"Events and workshops on EOSC by the EOSC Support Office Austria"

Milestones:

Planned activities:

1. Continuation of the "Research Data Management in Austria" webinar series (up to 10 webinars per year)[10],

2. Workshops – technical development of RDM Tools & Services,

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[10] This platform can be used by all Austrian universities and research institutions, museums, libraries and funding agencies.

3. EOSC Support Office Austria quarterly meetings (progress report, invited guests/keynote speakers, strengthening of the community),

4. EOSC Support Office Austria onboarding/training of new members,

5. Reports/invited talks @UNIKO Forum Digitisation/Research,

6. Participation in EOSC and research infrastructure-related events/conferences at European level,

7. Participation in GO FAIR events,

8. Dissemination of the results at national and international level (GO FAIR Newsletter, EOSC Association Newsletter),

9. Exchange between universities and funding bodies (e.g. as already planned for December 2022),

10. Exchange of Data Management Curricula in Austria (e.g. University of Vienna with focus on: "Train-the-trainer" Vienna University of Technology with focus on: "Master students"),

11. FAIR workshop on ontologies.

Expected impact:

Contribution to all three levels of EOSC implementation: European, national and institutional. Definition of standards and the development of tools and services to enable researchers to find, retrieve, re-use and combine results.

Increasing efficiency of communication between the various EOSC participants, especially inter-institutionally and supra-regionally.

Goals/indicators:

Coordination of all measures necessary for establishing a national EOSC structure.

Indicators: Number of institutions, researchers and other stakeholders actively involved in establishing a national EOSC structure, number of participants at the events.

➢ **Action 2.4:**

"Active projects related to Open Science/Fair/EOSC, funded by the BMBWF"

Description:

In 2019, the BMBWF launched a national call for proposals entitled "Digital and Social Transformation" with selected digitisation projects at public higher education institutions for the period 2020 to 2024. Including activities related to FAIR and EOSC, a total of 34 Open Science and EOSC-relevant projects were funded.

Milestones:

Milestone 1:   Project implementation 2020 to 2024, see also: Austria Country Profile
Q3/2022 » EOSC Support Office Austria (eosc-austria.at)

Expected impact:
- Implementation of EOSC through national measures
- Stakeholder engagement.

Goals/indicators:

to implement EOSC:

1. Strengthening knowledge transfer between universities, business and society,

2. Implementing FAIR principles ("Findable", "Accessible", "Interoperable" and "Reusable"),

3. Collaboration/cooperation of existing research (data) infrastructures,

4. Development of a national infrastructure for Open Educational Resources (OER),

5. Integrated data management,

6. Transition to Open Access.

The active participation of Austrian researchers in the EOSC process has so far given rise to various networks to promote Open Science, Citizen Science, FAIR, EOSC and PSI activities, such as FAIR Office Austria, which networks interested individuals from research and service institutions to organise the Austrian community from the (research) data sector on the topic of FAIR.

Indicator: Number of Austrian actors and research infrastructures involved in the EOSC process

➢ **Action 2.5:**

"Expansion of the EOSC principles to applied/industrial research through data management plans and data service ecosystems"

Description:
Many changes are currently taking place in the area of data handling, at European and national level. In order to align these with each other, processes that have so far taken place in the context of EOSC academic research should also be established in other funded areas.

These include Horizon Europe's Data Management Plans (DMP) as well as dealing with cross-sectoral data platforms such as the DIO[11], the Green Data Hub 2022[12] and GAIA-X[13].

Milestones:

Milestone 1: Introducing the DMP 2023 with explicit reference to EOSC

Milestone 2: Building exemplary data service ecosystems

Expected impact:

- Consolidating different strands of national and European data management

- Wider knowledge/use of the EOSC and other data service ecosystems

Goals/indicators:

   to implement EOSC:

1. Relevant consideration of Data Management Plans 2023
2. Integrated data management through interfaces and cooperation between various data pools, as well as formulation of analyses and position papers

2.3 Strengthen human resources for science and research in Austria

➢ **Coordination:** **Anna Steiger**

   Chair of the Higher Education Conference Working Group on "Careers in research in the context of the European Research Area", Vice-Rector for Human Resources, TU Wien

➢ **ERA actions to be addressed by the initiative:**

03_ Advance towards the reform of the Assessment System for research, researchers and institutions to improve their quality, performance and impact

04_ Promote attractive and sustainable research careers, a balanced talent circulation and international, transdisciplinary and inter-sectoral mobility across the ERA

➢ **Description of the initiative:**

The initiative follows the development and implementation of measures to strengthen human resources for science and research in Austria. The focus is on attractive research careers including international and inter-sectoral mobility, the reform of the assessment

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[11] Data Intelligence Initiative: https://www.dataintelligence.at/about/leitbild/

[12] https://www.greendatahub.at/start/

[13] https://www.gaia-x.at

system for scientists and researchers, and the further development of research management.

- ➢ **Objectives:**

    1. Inventory of existing career models in all higher education sectors, at the ÖAW (Austrian Academy of Sciences) and IST Austria (Institute of Science and Technology Austria), as well as existing barriers to permeability

    2. Recommendation for concrete measures to

        a. increase permeability

        b. further develop existing career models

        c. implement European instruments/standards

    3. Inventory of existing practices on research assessment and evaluation of results

    4. Recommendations for concrete measures to reform the assessment system for scientists and researchers at Austrian higher education institutions.

- ➢ **Actors and Stakeholders:**

Actors:

The leading actor is the Higher Education Conference working group on "Careers in research in the context of the European Research Area", which is coordinating the initiative in collaboration with the BMBWF. Other actors: UNIKO, FWF, FFG, OeAD, ÖAW, ISTA, LBG

Stakeholders:

The Austrian universities and universities of applied sciences, non-university research institutions, interest groups.

- ➢ **Action 3.1:**

"Develop concrete measures for careers in research in Austria"

Description of this measure:

The Higher Education Conference working group on "Careers in research in the context of the European Research Area", which was constituted in May 2022, will develop recommendations and concrete measures on the topics of

- attractive and sustainable careers for researchers and

- reform of the assessment system for scientists and researchers.

With regard to the reform of the assessment system for scientists and researchers, recommendations and concrete measures must be agreed with OSA (Open Science

Austria), because Open Science is of central importance for the reform of the assessment system. In addition, active support should be given to the process of reforming the assessment system for scientists and researchers within the framework of the "Coalition on Advancing Research Assessment - CoARA", established at EU-level.

Milestones:

1. Creation of the Higher Education Conference working group on "Careers in research in the context of the European Research Area" in May 2022

2. Study on "Academic career paths in Austria"

3. Recommendation for concrete measures to
   a. increase permeability
   b. further develop existing career models
   c. implement European instruments/standards

4. Submission of concrete proposals for incentives and steering measures by April 2024

Expected impact

Concrete measures are aimed at improving the attractiveness and sustainability of careers in research as well as at reforming the assessment system for scientists and researchers.

Goals/indicators:

The aim of the Higher Education Conference Working Group (abb.: HSK AG) on "Careers in research in the context of the European Research Area" is to develop recommendations for permeable and sustainable career models in Austrian higher education and research, taking into account the development of the European Research Area, especially with regard to the further development of the European Charter & Code of Conduct for the Recruitment of Researchers, research assessment, and inter-sectoral, interdisciplinary and transnational mobility.

➢ **Action 3.2:**

"Development of concrete measures to reform the assessment and incentive system for researchers"

Description of this measure:

The OSA AG "Research Assessment" will create recommendations and concrete measures to reform the assessment system for scientists and researchers at Austrian universities and beyond. The starting point is the document "Agreement on Reforming Research Assessment", jointly prepared and published by experts from the European Commission, the EUA (European University Association) and Science Europe.

Milestones:

1. Establishing a specific OSA working group on research assessment in the 1st quarter of 2023

2. Study on dealing with research assessment in the various disciplines in the 1st quarter of 2023

3. Recommendations for concrete measures to reform the assessment system for scientists and researchers at Austrian higher education institutions in the 2nd quarter of 2024

Expected impact:

Research institutions and other stakeholders who assess the performance of scientists (for recruitment, tenuring, allocation of funds, evaluations) have a sharper awareness of the wide range of relevant performance, including from the field of Open Science. Institutions critically examine their assessment and reward systems and develop them further - each according to the university/college/establishment and the disciplines represented. The *Agreement on Reforming Research Assessment* and best practice examples from other institutions and/or countries provide the starting point for this.

Goals/indicators:

1. Inventory of existing practices on research assessment and evaluation of results

2. Raising awareness of assessment and incentive systems and their impact

3. Active support for the process of reforming the assessment system for scientists and researchers within the framework of the "Coalition for Advancing Research Assessment" (CoARA)

4. Recommendations for concrete measures to reform the assessment system for scientists and researchers at Austrian higher education institutions.

➢ **Action 3.3:**

"Further develop Euraxess (Austria) within the framework of the EU project "ERA Talent Platform"”

Description of this measure:

The pan-European initiative EURAXESS[14] is a globally-anchored platform initiated by the European Commission that offers researchers and research institutions a wide range of information and services as well as advice on practical day-to-day issues. It therefore makes a significant contribution to the career development and mobility of researchers in the European Research Area. There are currently more than 600 EURAXESS centres in 42

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[14] https://euraxess.ec.europa.eu

countries. In Austria, EURAXESS is supported jointly by BMBWF, OeAD, FFG and higher education and research institutions.

In the context of "New ERA", EURAXESS will be expanded in the next few years (until 2024) to become an ERA Talent Platform, optimising services, supporting researchers in the development of research careers in many ways - in the role of researchers in society and business (inter-sectoral mobility, entrepreneurship), skills acquisition and career development (training, mentoring, etc.), and international mobility.

Milestones:

1. creation of a national catalogue of measures for the further development of EURAXESS into an ERA Talent Platform; the measures are aimed at both researchers and institutions and include the adaptation and expansion of the national platform with country-specific information and services, active participation in the design of the five thematic, transnational EURAXESS hubs (EURAXESS Start-up, Researchers Careers beyond Academia, Researcher Careers in Academia, Supporting Talent Circulation, EURAXESS Science4Refugees) and supporting the Communities of Practice, to exchange experiences and information.

2. Implementation and evaluation of measures; focal points include support with career orientation and planning, inter-sectoral mobility, integration of international researchers in Austria, dual careers and work-life balance; particular attention is paid to the integration of refugee researchers and the consideration of gender equality in the activities implemented.

3. Sharing the experience gained with EURAXESS network partners through communities of practice and the ERA TALENT circulation platform in the form of webinars, study visits, etc. for higher education and research institutions, private sector companies/actors, policy-makers and other stakeholders, as well as in national EURAXESS networking activities.

Expected impact:

The ERA Talent Platform supports the objectives of the EC Communication 'A new ERA for Research and Innovation' (628 final/2020), in particular section 2.4 'Deepening the ERA for the career development conditions to attract and retain the best researchers in Europe necessary in the global race for talent'. The further development of the platform aims to make talented researchers more aware of Austria as a hub for science and research, to better integrate international researchers in Austria, and to point researchers towards new career opportunities, even in the business/private sector, through the acquisition of additional skills. Synergies should be exploited, through increased international exchange between EURAXESS centres via communities of practice, giving members of higher education institutions and research institutions the opportunity to develop and cultivate a global mindset.

Goals/indicators:

Goal 1: Increase visibility of the "ERA Talent Platform"

Goal 2: Further expansion of the Talent Management Service of EURAXESS Centres (higher education institutions and research institutions)

Goal 3: Increased integration of international researchers in Austria

Indicators:

- Number of hits on the www.euraxess.at website;
- Number of activities (events, articles in various media, etc.) with active promotion of the ERA Talent Platform;
- Number of individuals participating in networking activities;

2.4 Set of measures on "Gender equality and inclusiveness"

➢ **Coordination:** **Roberta Schaller-Steidl**
Federal Ministry of Education, Science and Research
General Directorate V Department for Equality and Diversity Management

Silvia Neumann
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology
General Directorate III Department 1 – Policy Matters

Sabine Pohoryles-Drexel
Federal Ministry of Labour and Economic Affairs
General Directorate IV Department A/1 Innovation Strategies and Cooperation

➢ **ERA actions to be addressed by the initiative:**

05_ Promote gender equality and foster inclusiveness, taking note of the Ljubljana Declaration

This is basically a cross-cutting issue that is also relevant in all other ERA actions. It is particularly relevant in Actions 3_Reform of Research Assessment and 4_Research Careers.

➢ **Description of the initiative:**

The initiative aims to contribute to a coherent, cross-sectoral equal opportunities policy for the Austrian higher education and research area, and to reflect and strengthen European developments and requirements at national level. The focus is on the development and expansion of gender-equitable structures and processes (fixing the

institution) and the integration of the gender dimension in research and innovation content as well as in research-led teaching (fixing the knowledge).

Building on the thematic priorities of Action 5 of the ERA Policy Agenda, and in consultation with relevant stakeholders, measures were identified as key levers if they

a) contribute to the development and implementation of process-oriented equality plans at universities and research (funding) institutions

b) ensure the integration of the gender dimension in research and innovation content as well as in research-led teaching in the long term

c) strengthen interventions against gender-based violence/sexual harassment and

d) promote exchange and cooperation on gender equality approaches between sectors and pool the existing expertise of actors and researchers.

➢ **Objectives:**

Meta goals: Within this initiative, there are four goals that build on the thematic priorities of Action 5 (ERA Policy Agenda) described above. Overall, it is important to strengthen the general commitment to gender equality, especially at management level, to ensure suitable framework conditions (e.g. resources in the institutions), to prioritise and optimise the impact of the measures, and to call on and support all relevant actors in science and research to actively take on society's gender equality mandate.

Goal:

1. Support for higher education and research (funding) institutions in the creation, further development and implementation of their equality plans

2. Development of guidelines regarding the integration of the gender dimension in research and innovation content as well as in research-led teaching, for application in the context of research funding, amongst others

3. Contributions to raising awareness and making gender-based violence and sexual harassment visible in higher education and research (funding) institutions, as well as developing measures to prevent or combat gender-based violence and sexual harrassment.

4. Initiation and promotion of a cross-sectoral gender equality dialogue, among other things, to further develop existing gender equality concepts and measures towards intersectionality and diversity

➢ **Actors and stakeholders:**

The key actors are the three ministries involved with research:

The Federal Ministry of Education, Science and Research, the Federal Ministry of Climate Protection, Environment, Energy, Mobility, Innovation and Technology, and the Federal

Ministry of Labour and Economic Affairs (the first two of which are in charge of implementation).

Representatives of the national higher education and research (funding) institutions are involved as stakeholders: Austrian Science Fund (FWF), Universities Austria (uniko), Austrian Association of Universities of Applied Sciences (FHK), Austrian Private Universities Conference (ÖPUK), Rectors' Conference of Austrian Universities of Teacher Education (RÖPH), Austrian Academy of Sciences (ÖAW), Institute of Science and Technology Austria (ISTA), Ludwig Boltzmann Gesellschaft (LBG), GeoSphere Austria, Agency for Education and Internationalisation (OeAD), Agency for Quality Assurance and Accreditation Austria (AQ Austria), Austrian Research Promotion Agency (FFG), Austria Wirtschaftsservice (AWS), the non-university research institutions (e.g. Salzburg Research, Institute for Advanced Studies (IHS)), as well as Austrian Cooperative Research (ARC) and the Christian Doppler Research Association (CDG).

➢ **Action 4.1:**

"Establish a coordination structure for the (further) development and implementation of equality plans at Austrian higher education and research (funding) institutions"

To achieve goal 1: Support higher education and research (funding) institutions in the preparation, further development and implementation of their gender equality plans by providing expertise and support geared to the respective needs of the institutions

Description:

Within the framework of this measure, a suitable coordination structure is to be designed and implemented to support the development, implementation and monitoring of gender equality plans in higher education and research (funding) institutions. Suitable existing structures must be identified and, if necessary, adapted, and the expertise available in Austria should be pooled.

Milestones:

1. Coordination between the three ministries responsible for research in the 1st quarter of 2023

2. Development of a concept for the implementation of appropriate coordination structures for the (further) development, implementation and monitoring of gender equality plans at national level: 2nd - 4th quarter of 2023

3. Implementation of the concept from 2024

4. Development and implementation of formats to support the (further) development of equality plans based on the process steps formulated in the "Guidelines for the development of equality plans", as well as quality standards for higher education and research (funding) institutions and communication of examples of good practice from 2023, ongoing

5. Development of an instrument/procedure (e.g. within the framework of quality assurance processes or quality seals) for higher education and research (funding) institutions to check whether their equality plans comply with European requirements: 2024-2025

Expected impact:

In accordance with European guidelines, high-quality, effective equality plans must be developed or existing equality plans must be further developed and implemented. In this way, the necessary cultural change can be promoted within the institutions and the topic of equality strengthened in the institutions in a sustainable and effective manner.

Goals/indicators:

1. A concept of a coordination structure with service and advice for the implementation and (further) development of equality plans has been agreed between the ministries and is being implemented

2. Application-oriented formats for target group-specific further training and for the exchange between relevant actors in higher education and research (funding) institutions, with regard to the process steps in the development of gender equality plans, have been developed and implemented.

3. An instrument/procedure for quality assurance (European requirements) of the equality plans has been developed and is in use.

➢ **Action 4.2:**

"Develop guidelines regarding the integration of the gender dimension in research and innovation content as well as in research-led teaching for application, amongst others in the context of research funding "

Description:

The integration of the gender dimension in research and innovation content or in research-led teaching, based on European requirements, and the specification of mandatory equality plans for the award of funding, are examined in cooperation with relevant stakeholders for their compatibility with national research funding, and coordinated implementation recommendations are formulated.

Milestones:

1. Implementation of awareness measures and cross-sector cooperation such as award ceremonies (Gabriele Possanner awards, Diversitas awards, Gender Research Day) to increase visibility and, if necessary, consideration of cross-sectoral further development, e.g. on Gender Research Day: ongoing from 2023

2. Expansion, reflection and further development of existing national guidelines (especially with regard to equality plans) for the award of research funding from 2023

3. Development of a concept for the integration of the gender dimension in research and innovation content as well as in research-led teaching - in cooperation with relevant stakeholders and on the basis of existing initiatives (e.g. research programmes, HSK recommendations for broadening gender competence in university processes): 2024

Expected impact:

The innovative and sustainable integration of the gender dimension in research and innovation content as well as in research-led teaching uses its social relevance for research and increases the overall scientific quality of research. Furthermore, attention to the social relevance of the gender dimension in research and innovation content should be increased.

Goals/indicators:

1. Organise and award the Gabriele Possanner Awards (2023/2025) and the Diversitas Awards (2024).

2. Recommendations agreed with relevant stakeholders on the integration of European requirements (e.g. equality plans) and the integration of the gender dimension in the requirements of national research funding or inclusion in specific research programmes, as well as support for non-university research institutions.

3. Derive recommendations for action (naming of gaps) for existing national award criteria at various research funding institutions.

4. Derive recommendations for action for anchoring the gender dimension in teaching and curricula.

➢ **Action 4.3:**

"Develop measures on gender-based violence and sexual harassment in higher education and research (funding) institutions, based on a status quo survey"
to achieve goal 3: Raising awareness, increasing visibility as well as preventing and combating gender-based violence and sexual harassment in higher education and research (funding) institutions

Description:

On the one hand, this action intends to make visible the extent to which gender-based violence/sexual harassment occurs in higher education and research (funding) institutions by surveying the status quo, but also to identify and name existing policies, measures and gaps.

Milestones:

1. Survey the status quo of existing legal provisions, contact points and information centres and measures, as well as visualising gaps: by 2nd half of 2024

2. Derive recommendations for measures and/or further need for action: end of 2024

3. Develop a national code of conduct for higher education, research and research funding institutions on dealing with gender-based violence/sexual harassment: end of 2024

4. Examine the need for (and existence of) a low-threshold, external contact point for victims of gender-based violence/sexual harassment, and, if necessary, establish such a contact point: end of 2024

5. Develop knowledge and skills on gender-based violence/sexual harassment through (mandatory) training for managers in higher education and research (funding) institutions, and integrate the content "Role and responsibility of leadership in gender-based violence" into all existing management programmes from 2nd half of 2024

6. Offer training formats for all, e.g. management academy from 2nd half of 2024

Expected impact:

Create a culture within institutions that is as safe, equal and non-discriminatory as possible. Explore new ways in which gender-based violence and sexual harassment are perceived as an issue in the various institutions, what measures are being taken to address this issue, and what action is needed.

Goals/indicators:

1. Report on the status quo

2. Develop recommendations for action

3. Develop and disseminate of a code of conduct

4. If necessary, establish an external centre for victims of gender-based violence/sexual harassment

5. Holding training sessions and participation of managers

6. Holding training formats and participation of employees from numerous higher education and research (funding) institutions

➢ **Action 4.4:**

"Initiate and promote a cross-sectoral equality dialogue"
To achieve goal 4: Initiation and promotion of a cross-sectoral gender equality dialogue, among other things, to further develop existing gender equality concepts and measures towards intersectionality and diversity

Description:

The equality dialogue should take place between higher education institutions, research institutions and research funding institutions as well as the three federal ministries responsible for research on the further development of equality concepts, taking into account the inter-sectional perspective.

Milestones:

1. Gender Research Day (2023, 2025) and its reflection (2024)

2. Publication "From gender politics to diversity-oriented equality politics in the Austrian higher education and research area - development from 2000 to 2022" – equality dialogue between scientists and practitioners as well as formulation of recommendations for action: 2023

3. Initiation of an equality dialogue with representatives of national higher education and research (funding) institutions on the recommendations for action in the publication from 2nd half of 2023

4. Monitoring of the 36 recommendations of the Higher Education Conference on the broadening of gender competence from 2023 ongoing

5. Annual networking forum on gender and diversity competence for higher education and research institutions of the BMBWF: Autumn 2023, 2024 and 2025

Expected impact:

Knowledge on the topic of gender equality is to be disseminated and discussed in the institutions. As a next step, the consideration of the inter-sectional perspective should be discussed and further developed across sectors. The transfer of know-how should form a community of practice and thus strengthen the cultural change in the institutions and professionalise equality work as a whole. Furthermore, a platform for exchange and mutual learning is to be set up, and the integration and further development of existing goals and measures, personal responsibility and awareness of the importance of the topic should be strengthened. The desired reflections and the monitoring of the project should in turn create opportunities to recognise changes and react to them.

Goals/indicators:

1. Holding a biennial event (2023, 2025) as well as creating a brochure reflecting on the respective past event (2022, 2024)

2. Release of the publication "From gender policy to diversity-oriented equality policy in the Austrian higher education and research area - development from 2000 to 2022", including future-oriented recommendations for action

3. Equality dialogue on the recommendations for action derived in the publication

4. Holding the networking forum on gender and diversity competence for higher education and research institutions

2.5 Strengthen trust in science through citizen science

➢ **Coordination:**   **Karin Müller-Magyar**

    Federal Ministry of Education, Science and Research General Directorate V

➢ **ERA actions to be addressed by the initiative:**

14_ Bring science closer to citizens

➢ **Description of the initiative:**

Austria is actively involved in the implementation of Action 14 of the ERA Policy Agenda 2022-2024 "Bring science closer to citizens". Various measures aim at increasing the involvement of citizens in science and research and thus strengthening public trust in science.

The following measures in particular aim to achieve this:

- Participation in the pilot project as part of Horizon Europe: "Plastic Pirates go Europe!",
- Participation in the "Mutual Learning Initiative" on Citizen Science as part of Horizon Europe's Policy Support Facility,
- Financing various Citizen Science projects and
- Co-financing the next European Citizen Science Association (ECSA) Conference 2024.

Austria is starting from a good position because existing structures and programmes are well established in the community and work well together.

➢ **Objectives:**

1. Better national networking of actors, building on existing networks (e.g. Citizen Science Network Austria, Science Center Network)

2. Learning from good practice examples at EU level with the aim of using international experience for Austrian policy

3. Increased problem awareness

4. Bringing science into society

➢ **Actors and Stakeholders:**

Actors: BMBWF, BMK, OeAD, FFG, FWF

Stakeholders: BOKU as coordinator of *"Österreich forscht"* (Austria does research), Citizen Science Network Austria, higher education and research institutions, Natural History Museum Vienna.

➢ **Action 5.1:**

"Participation in the pilot project as part of Horizon Europe: "Plastic Pirates go Europe!""

Description:

The Horizon Europe-funded project "Plastic Pirates go Europe!" has been identified as part of the ERA action "Bring science closer to citizens" for the period 2022-2024.

Plastic Pirates is a citizen science initiative to study plastic pollution in rivers. Using a large-scale citizen science approach, young people are collecting research data. The main goals of the initiative are to generate scientific knowledge about the origins and pathways of plastic pollution, to raise environmental awareness, to proactively engage and empower different stakeholders to act (pupils and students, teachers, communities, research centres, sports clubs, scout associations, fishing clubs, etc.) and improve the scientific and oceanic competence of the participants.

The initiative combines the topics of climate change, plastic pollution, water restoration and citizen science with cutting-edge research.

In 2021, the "Europeanisation of plastic pirates" project, part of the 2021 Horizon Europe Mission Work Programme "Restore our Ocean and Waters", was awarded to the German Aerospace Centre (DLR) as the Commission's primary contractor, with a budget of EUR 2 million.

Milestones:

1. The Institute for Waste Management at the University of Natural Resources and Life Sciences in Vienna is commissioned by DLR to implement Plastic Pirates in Austria. A letter of support by the BMBWF is sent to DLR: July 2022

2. EU-wide plastic sampling campaigns start from September 2022

Expected impact:

Contribution to the EU R&I mission "Restore our Ocean and Waters by 2030" and support of the implementation and monitoring of related EU policy objectives. Raised awareness among citizens of the impacts and benefits of R&I in their daily lives, promotion of marine literacy and active engagement through formal education, combining citizen science, citizen engagement and cutting-edge research.

Goals/indicators:

1. Development and testing of best practices for the implementation of pan-European citizen science campaigns linking both marine and freshwater, which will prepare the ground for future EU-wide Citizen Science campaigns in support of the European mission "Restore our Ocean and Waters by 2030".

2. Strengthening of transnational cooperation in citizen science, especially at European level, to empower citizens to take action to clean up pollution and restore our oceans and waters.

Indicators:

- Data sets collected and uploaded onto a common portal
- Number of students and young people involved in the initiative

➢ **Action 5.2:**

"Participation in the "Mutual Learning Exercise" on Citizen Science (as part of EC Policy Support Facility, funded by Horizon Europe)"

Description:

The "Mutual Learning Exercise" on "Citizen Science Initiatives – Policy and Practice" aims to enable the participating countries or their representatives to exchange experiences, lessons learned and best practices, to learn from other countries and to promote citizen science in Europe. The aim, therefore, is mutual learning and the development of common policy recommendations at European level.

Milestones:

1. regular meetings in 2022

2. final meeting on 13th January 2023,

3. dissemination campaign in spring 2023.

Expected impact

The aim, therefore, is mutual learning and the development of common policy recommendations at European level.

Goals/indicators:

The MLE aims to facilitate the exchange of information, experiences and lessons learned, as well as to identify best practices, strategies and programmes related to the different approaches at local, regional and national level, to support and scale up citizen science.

Furthermore, the goal is to identify citizen science campaigns that have a high potential for collaborative implementation across the European Research Area.

➢ **Action 5.3:**

"National Citizen Science projects as part of Sparkling Science 2.0"

Description:

"Sparkling Science 2.0" supports high-quality citizen science research projects in which scientific institutions work together with educational institutions and, if possible, partners from business and society.

Milestones:

1. Implementation of the projects from the first call (34 funded projects, EUR 11.5 million budget) from 2022
2. 2nd Call for proposals scheduled for 2023
3. 3rd Call for proposals scheduled for 2025

Expected impact:

The aim is to:

- Reduce scepticism about science
- Break down access barriers to science
- Intensify cooperation between research and education institutions

Goals/indicators:

1. Promote innovative citizen science research projects to generate new scientific knowledge
2. Build citizen science know-how through international networking
3. Promote young scientists
4. Develop school focal points in the field of science within the framework of school autonomy
5. Inclusion of schools from peripheral regions or schools in Austria that have not yet been reached or have hardly been reached with citizen science activities

Each year, the OeAD, on behalf of the BMBWF, invites interested pupils and also adults to participate in selected research projects, from April until the end of the school year (2023 until the end of July). The most committed Citizen Scientists are awarded the Citizen Science Awards at a festive ceremony each autumn.

➢ **Action 5.4:**

"European Citizen Science Association Conference 2024 in Austria"

Description:

The biennial conference of the European Citizen Association (ECSA) is the largest international conference on Citizen Science in Europe.

The aim of the joint initiative of the Natural History Museum Vienna and the University of Natural Resources and Life Sciences Vienna is to organise this conference in Vienna in 2024, in order to strengthen and further expand the strong role that Austria already plays in the national Citizen Science community. On the one hand, this should provide Austrian projects and initiatives with additional points of contact at international, especially European, level, and on the other hand, it should position Austria as a hub for Citizen Science in Europe.

Milestones:

1. Conference from 3rd to 6th April 2024

Expected impact:

- Networking and exchange between all relevant stakeholders
- Promotion of international research cooperation
- Strengthening of Citizen Science in Austria and in Europe
- Increased involvement of citizens

Goals/indicators:

The goal is to strengthen and further expand the strong role Austria already plays in the national Citizen Science community. On the one hand, this should provide Austrian projects and initiatives with additional points of contact at international, especially European, level, and on the other hand, it should position Austria as a hub for Citizen Science in Europe.

2.6 EU Partnerships in Austria

➢ **Coordination:** **Inge SCHACHNER-NEDHERER**

Federal Ministry of Education, Science and Research, General Directorate V, Department for EU and OECD Research Policy

Brigitte WEISS
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Office for "EU Innovation and Technology"

➢ **ERA actions to be addressed by the initiative:**

10_ Make EU R&I missions and partnerships key contributors to the ERA

➢ **Description of the initiative:**

European R&I partnerships are a strategic instrument for EU research funding at the interface between national and European level. They support the long-term networking of R&I actors around important scientific and/or technological topics, such as climate neutrality or digital transformation. Their importance and their share in the total budget of the respective Framework Programme has increased continuously since the 6th Framework Programme (2002-2006). In Horizon Europe (2021-2027), up to 50% of Pillar 2 funds will go to European Partnerships, which amounts to approximately EUR 24 billion.

For Horizon Europe, a new governance framework for EU partnerships, the "Strategic Coordinating Process", has been introduced, which includes a rationalisation of the partnership landscape and a coherent, strategic and impact-oriented implementation of partnerships. In this context, the "Partnership Knowledge Hub", a coordination body of the European Commission and the Member States, was established. As a result, the Member States are now more closely involved in steering processes and are given a more active role, e.g. in the preparation and selection of new partnerships or in the monitoring of partnerships.

As part of the RTI Strategy 2030 of the Austrian federal government, increased participation in European Partnerships is being sought. Austria will participate in 21 out of 22 European Partnerships of the first and second wave, with a budget of approx. EUR 300 million. This participation is specified in the RTI Pact 2021–2023. In total, the Member States will participate in the partnerships with approx. EUR 10 billion. The EC will invest approx. EUR 24 billion in partnerships from Horizon Europe.

Through the present initiative, Austria's participation in partnerships should be more strategically oriented and better coordinated, with broad stakeholder involvement. The "Austrian Partnerships Forum", which already includes the relevant actors, is used as a coordination body for partnerships at national level. The measures of the initiative support the responsible ministries in steering and implementing Austrian participation in the partnerships.

➢ **Objectives:**

This initiative has the following general objectives:

1. To make the best possible use of the European RTI partnerships for Austria and to create the best possible framework conditions for the national actors.

2. To tap the potential of the EU partnerships for solving societal challenges and strengthening the competitiveness of the economy in the best possible way. Many partnerships are active in subject areas that are also relevant to the missions. They should therefore also contribute to the implementation of the missions, among other things.

3. Provision of evidence about Austrian participation as a basis for strategic management at national level and as a contribution to European monitoring.

➢ **Actors and Stakeholders:**

Actors:

BMBWF, BMK, BMAW; sectoral ministries (BML, BMGSPK), agencies (FWF, FFG)

Stakeholders:

universities and higher education institutions; non-university research; research-based enterprises;

sectoral actors (e.g. UBA, AGES, Gesundheit Österreich);

business organisations (IV, WKÖ).

➢ **Action 6.1:**

"Involvement in European processes and national coordination"

Description of this measure:

Through their involvement in the Strategic Coordinating Process, the Member States are key actors in the management of the partnerships. Austria's active participation in the relevant body at European level, the Partnership Knowledge Hub (PKH), is essential. The coordination of national and European levels and the inclusion of Austrian interests in European processes are also important activities in this context. A key element of the Strategic Coordinating Process is the monitoring of the partnerships through the Biennial Monitoring Report, which is intended to document the progress of the partnerships in achieving their goals.

Milestones:

1. Regularly: Participation in plenary sessions and active involvement in PKH activities

2. At least twice per year: Organisation of the "Forum Partnerships Austria" and thus involvement of stakeholders affected by the partnerships

3. Active participation in the preparation and implementation of the monitoring framework for partnerships at EU level (Biennial Monitoring Reports)

Expected impact:

In the area of societal challenges, strategic participation in the partnerships increases scientific excellence and the competitiveness of the economy in Austria. The exchange of experience and information between the actors improves the implementation of the EU partnerships in Austria.

Goals/indicators:

The aim of this measure is to ensure that Austrian participation in EU partnerships takes place within a coordinated and informed process. Austria is involved in all relevant partnerships.

> **Action 6.2:**

"Establishment and operation of ongoing monitoring of Austrian participation in European R&I partnerships"

Description of this measure:

To date, Austria has registered approx. EUR 300 million of indicative commitments for the partnerships. In order to support strategic decisions in the area of partnerships, monitoring of Austria's participation in partnerships will be established, making the best possible use of the European monitoring process to avoid duplication, e.g. in data collection. Additional, specific national requirements for monitoring are to be defined in the course of preparations.

Milestones:

1. Establishment of a monitoring working group within the framework of the Austrian Partnerships Forum - Q4/2022

2. Use of existing resources within the framework of the "EU Performance Monitoring" commission to the FFG for data processing and analysis, and, if necessary, establishment of new structures - by Q4/2023

Expected impact:

A monitoring framework for Austria's participation in the partnerships has been set up and forms the basis for evidence-based decisions.

Goals/indicators:

An initial monitoring report is scheduled for 2024. For the duration of Horizon Europe, updates of the monitoring report are to take place every two years - in line with the European level.

2.7 Green hydrogen for Europe

> **Coordination:**   **Andreas DORDA**
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Department III/4 – Mobility and Transport Technologies

Dr. Peter RAIMANN
Austrian Energy Agency

➢ **ERA actions to be addressed by the initiative:**

11_ An ERA for green transformation

➢ **Description of the initiative:**

In line with the conclusions of the EU Competitiveness Council in December 2020, the "green" and "digital" transformation have been identified as the main directions for ERA implementation. Within this framework, the Council called on the Commission and interested Member States to implement an agenda process on "Green Hydrogen" as an ERA pilot. 25 interested Member States, including Austria, and five third countries under the auspices of the German Federal Ministry of Education and Research (BMBF) had come together to form a task force to respond to this call.

This Green Hydrogen Pilot is one of the first Member State-driven processes in the ERA. Through intensive exchange and a high degree of transparency, a "Strategic Research and Innovation Agenda" (SRIA) was jointly developed, presented and discussed in March and May 2022. The jointly developed 5 action points of the SRIA are to be implemented by the participating countries or in changing bilateral or multilateral partnerships.

➢ **Objectives:**

1. **Innovation ecosystem for green hydrogen**
   Further develop the innovation ecosystem for green hydrogen (e.g. research funding)

2. **European digital platform**
   Develop a European digital platform for hydrogen to provide an overview of all relevant information (projects, actors, trends, benchmarking, legislation...). This activity could be linked to the TRUST database of the Clean Hydrogen Joint Undertaking.

3. **European and international partnerships**
   Strong European and international partnerships are necessary to establish a green hydrogen economy

4. **Involvement of Member States and national authorities**
   To ensure the continued success of the SRIA process, the Member State holding the Presidency should be responsible for the implementation of the Agenda in cooperation with the Commission

5. **Develop R&I and infrastructure in parallel**
   The timeline is of utmost importance in the transition to green hydrogen across Europe. The timeline for measures taken should be synchronised to allow parallel, complementary activities to be carried out.

   The action points can be found in the "Strategic Research and Innovation Agenda", Agenda Process for the European Research and Innovation Initiative on Green Hydrogen, Final version, 18th March 2022, page 21 - 23.

Actors and Stakeholders:

Actors:

BMK, BMAW, AEA (Austrian Energy Agency), national industry, FFG

Stakeholders:

EU Member States, European industry, Clean Hydrogen Joint Undertaking, EC DG RTD, Eureka network, Clean Energy Transition Partnership (CETP)

➢ **Action 7.1:**

"Supporting a European innovation ecosystem on green hydrogen"

Description of this measure:

Transnational calls for proposals to fund cooperative RTI projects for the development of hydrogen and fuel cell technologies: Austria is participating in the CETP TRI 3 call for proposals on sustainable hydrogen-based fuels with EUR 2 million in 2022, based on the Green Hydrogen Action (GHA) process. A further EUR 1.5 are available for 2023.

Supporting Austrian hydrogen activities and supporting participating stakeholders, especially in international projects.

Milestones:

1. End of 2022: Call for proposals of the Clean Energy Transition Partnership in Module 3b "Enabling Climate Neutrality with Renewable Fuels and Hydrogen"

2. End of 2025: Completion of CETP projects

3. Autumn 2023: Further call for proposals to support international R&D projects in the context of the Green Hydrogen Pilot (platform still open)

Expected impact:

Strengthening Austria and Europe as a location for green hydrogen

Goal:

1. Further develop relevant technologies

2. Strengthen the networking of Austrian actors in Europe

3. Active and extensive participation of Austrian stakeholders in the international calls for proposals

- ➢ **Action 7.2:**

"European and international partnerships"

Description of this measure:

Participation in European processes on hydrogen, in particular follow-up activities of the GHA group (task force meetings, stakeholder consultations, meetings of expert groups)

Coordination and participation in transnational committees (e.g. IPHE, IEA-TCP Hydrogen as well as Fuel Cells, SRG of Horizon Europe Partnerships [Clean Hydrogen as well as 2Zero], Pentalateral Energy Forum, Clean Energy Transition Partnership IEA CEM H2I Initiative, UNIDO Global Partnership for Hydrogen in Industry, etc.)

Expected impact:

Deeper and more relevant networking of Austrian stakeholders in European and international hydrogen activities, as well as increasing the visibility and attractiveness of the portfolio of national stakeholders in the European and international market.

Goal:

1. Planning and agreement of concrete multilateral SRIA implementation activities

2. Exchange of information on activities (e.g. IPHE and IEA country reports)

3. Joint processing of identified challenges (e.g. IEA-TCP)

- ➢ **Action 7.3:**

Stimulation of the national market through position papers, strategies and platforms (Platform for Hydrogen in Austria "H2Austria") or industry initiatives (Hydrogen Cluster "Hydrogen Austria") and funding (e.g. RTI Mobility Agenda 2026 and KLIEN)"

Description of this measure:

The creation of position papers, strategies, and platforms is intended to motivate national stakeholders such as companies or research institutions to carry out research and technology development in the field of green hydrogen. This should, among other things, cover the national and European funding landscape, as well as the positioning of various national stakeholders and potential European partners.

Expected impact:

Strengthening the positioning of Austria and the Austrian stakeholders through supportive coordination and knowledge exchange

Goal:

1. Promotion of hydrogen technologies in mobility

2. Strengthening stakeholder involvement through workshops (e.g. as part of the implementation support for the hydrogen strategy via the H2Austria platform)

2.8 Revise the Strategic Energy Technology Plan (SET Plan)

➢ **Coordination:**   **Hans-Günther SCHWARZ**
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Department III/3 – Energy and Environmental Technologies

Patricia SCHEDIFKA
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate VI, Department VI/7 – Funding Instruments for Innovative Climate and Energy Technologies

➢ **ERA actions to be addressed by the initiative:**

11_ An ERA for green transformation

➢ **Description of the initiative:**

The Strategic Energy Technology Plan (SET Plan) was launched in 2007 in response to the second Ukrainian gas crisis[15][16]. It was intended to serve as a central mechanism for the cooperation between the European Commission and the Member States as well as stakeholders from industry and RTI on energy policy on the one hand and energy-related RTI policies and programmes on the other, and to drive the transition to a CO2 and climate-neutral energy system.

In its activity logic, the SET Plan followed the model of high-level advisory groups in the EU. The European Commission acts as chair, represented by the Directorate-General for Research and Innovation (RTD), Directorate General for Energy (ENER) and the Joint Research Centre (JRC), while decisions are taken in a Steering Group composed of delegates from the EU Member States and the countries associated to the Research Framework Programme. In this Steering Group, the ministries responsible for energy policy and/or

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[15] Commission Communication with proposal for the preparation of the SET-Plan: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1411399585976&uri=CELEX:52006DC0847

[16] Commission Communication on establishing the SET Plan: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1411399552757&uri=CELEX:52007DC0723

energy-related RTI policy or their delegated institutions are represented, depending on national priorities.

As a source of expertise and to support implementation, the European Commission supports sector-specific technology platforms (ETIPs - European Technology and Innovation Platforms) and an energy-related RTI alliance (EERA - European Energy Research Alliance). In addition, the SETIS (SET Plan Information System) documentation platform was set up at the Joint Research Centre (JRC).

In 2015, a first revision[17] of the SET Plan activities was carried out, which resulted in the establishment of originally 13 and now 14 RTI Implementation Working Groups (IWGs), driven primarily by the Member States. Austria has taken the lead in the areas of energy systems (IWG 4) and plus-energy neighbourhoods (IWG 3.2). Austria is represented in the SET-Plan Steering Group by two delegates from Departments III/3 and VI/7.

➢ **Objectives:**

Further development of the SET Plan, which is the central strategic body for cooperation in climate and energy-related RTI & policy at European level.

In the past, the original idea of uniting energy policy and energy-related RTI in the SET Plan has proved to be a major stumbling block to the SET Plan in the areas of energy policy and energy-related RTI. This is mainly due to the fact that the energy markets are subject to strict regulation, and any discussion of changes seems possible at the level of the EU Council of Ministers at best, but not at the level of a mere advisory body. This means that initiatives will always be taken in the field of energy-related RTI policy, but they will have no impact on energy policy.

Another major reason to revise the SET Plan are the new framework conditions for green energy technologies through the European Green Deal. In order to advance the ambitions of the Green Deal, and if possible to improve access to possible funding instruments and technologies, the goals and targets of the SET Plan need to be updated. In addition, this update should underline the synergies of existing (research) programmes (Horizon Europe Partnerships) and take into account existing resources before creating new ones.

The European Commission has therefore conducted a survey among all participating countries and stakeholder groups, the results of which will form the basis for the new SET Plan. A frequently made demand is the greater involvement of the National Energy and Climate Plans, as these already presuppose a certain degree of cooperation between the areas of energy and RTI policy at national level, also with regard to the creation of "regulatory sandboxes", which can enable the testing of innovative ideas in practical application (of the energy system).

At Austrian level, the revision of the SET Plan can have great influence on national strategies and projects, as well as on the accessibility to European funding.

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[17] Commission Communication 2015 on the first revision of the SET Plan:

https://energy.ec.europa.eu/document/download/757ba42b-e37d-446b-aacc-ba370f8ae81e_en?filename=1_EN_ACT_part1_v8.pdf

➢ **Actors and Stakeholders:**

Actors:

BMK, BMAW, AEA (Austrian Energy Agency)

Stakeholders:

National research institutions, national industry, enterprises, cities and municipalities and their utilities, IV (Federation of Austrian Industry), WKO (Austrian Federal Economic Chamber), civil society

➢ **Action 8.1:**

"Participation in European processes to revise the SET Plan"

Description of this measure:

Providing national representation in European processes in the revision of the SET Plan in order to represent Austrian interests, and furthermore to achieve an effective revision of the SET Plan with technical statements from energy policy experts. Inclusion of Austrian positions in the revised SET Plan.

Milestones:

1. Presentation of the feedback on the "Call for Evidence" by the European Commission at the SET Plan conference on 09-10/11/2022

2. Mid 2023: Development of a timely Austrian position on the European Commission's final proposal for a new structure

3. End of 2023: Adoption of the SET Plan

Expected impact:

Creation of a relevant positioning of Austria in European processes, as well as renewal of the SET Plan in line with national interests

Goals/indicators:

The general objective of this measure is to update this key RTI and energy policy strategy at European level and in consideration of Austrian interests. The indicators for the respective priorities will be discussed in the course of the European process.

➢ **Action 8.2:**

"Provision of experts and stakeholders at selected consultations, as well as national position papers."

Description of this measure:

Participation of national experts in relevant events, as well as in work on national strategies and position papers, in order to include European interests in the national discourse - and vice versa.

Expected impact:

Contribution to the implementation of the SET Plan at national level; use of the SET Plan for a clearer national orientation towards energy transition and climate neutrality.

Goals/indicators:

The indicators for the respective priorities will be discussed in the course of the European process.

➢ **Action 8.3:**

"Using a revised SET Plan to increase national energy-related innovation"

Description of this measure:

Inform national decision-makers, agencies, companies, infrastructure operators and stakeholders on SET Plan projects, and incorporate these elements into strategies and funding for national research and technology development, amongst other things. Furthermore, there should be cross-departmental coordination between technology and policy experts in order to strengthen innovation in the energy sector.

Expected impact:

Strengthening national and European policies in the field of energy technologies and improving their implementation through setting a clear national thematic focus; improving tendering procedures; identifying and pursuing solutions for social challenges; generating attention for energy policies

Goals/indicators:

The indicators for the respective priorities will be discussed in the course of the European process.

2.9 Green and digital transition in industry

➢ **Coordination:** **Daniel J. VOIGT**
Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Unit for EU Technology and Innovation

➢ **ERA actions to be addressed by the initiative:**

12_ Accelerate the green/digital transition of Europe's key industrial ecosystems

➢ **Description of the initiative:**

The implementation of the "Green and Digital Transition" in industry is a new, highly-relevant aspect in ERA, mainly related to applied research under ERA Action 12. This initiative consist of three pillars:

- Creation of ERA Industrial Technology Roadmaps

- Policy Framework for improving the transfer of fundamental/low TRL technologies into industrial R&I

- Addressing and supporting social change towards the Green & Digital Transition

There are currently two Industrial Technology Roadmaps, on the topics of "Low-Carbon Technologies for Energy-intensive Industries" and "Circular Industrial Technologies". These roadmaps should subsequently be expanded or finalised with Austrian input and implemented at national level (in RTI and in application).

To achieve this, national actors must be increasingly involved in the processes of consulting on roadmaps, but also in their implementation. Existing bodies as well as the Climate and Energy Fund can be important partners in this regard.

An important Austrian initiative in this context that is currently being implemented are the mission-oriented, transformative focal points of the Ministry for Climate Action BMK (energy transition, mobility transition, circular economy, climate-neutral city). In the context of this initiative, RTI should be bundled with implementation, and all relevant groups of actors should be involved, with a focus on citizen engagement.

Objectives:

This initiative has the following general objective: To support and implement the Green/Digital Transition in applied research and civil society, as well as bringing national interests into European processes

Specifically, this means:

1. Compiling an overview of relevant national and European information and expertise in the thematic fields of industrial technology roadmaps, and thus creating innovative solutions

2. Incorporating Austrian interests in European coordination processes, potentially also in the development of further roadmaps, and anchoring Austrian initiatives at European level

3. In relevant cases, incorporating strategic recommendations of the roadmap into national strategies and European agendas

4. Increasing visibility of roadmap topics among national decision-makers (ministries, industry)

5. Strengthening national and European exchange with civil society.

➢ **Actors and Stakeholders:**

Actors:

BMK, BMAW, national industry, national research institutions

Stakeholders

National research institutions, national industry, enterprises, IV, WKO, civil society,

➢ **Action 9.1:**

"Co-design the Industrial Technology Roadmap for Low Carbon Technologies in Key Industrial Ecosystems and the Industrial Technology Roadmap for Circular Industries."

Description of this measure:

Share national information on strategies, funding, industry, infrastructure, stakeholders, etc. with the European Commission, and incorporate Austrian interest in the processing steps of the roadmaps.

Milestones:

1. Finalisation of the roadmap for low-carbon technologies in energy-intensive industries
   Q1 2022

2. Finalisation of the Roadmap for Circular Industries
   Q1 2023

Expected impact:

Comprehensive overview of the available technology portfolio and possibility of linking with implementation. Austria improves the relative level of information of the European Member States, as well as its own visibility in the selected subject areas. Starting point for further implementation in jointly defined key areas.

Goal:

A key goal is the creation of holistic roadmaps that identify elements such as strengths and weaknesses of the two topics in Europe and individual Member States. In addition, funding opportunities and national strategies will be presented and compared. On this basis, new measures will be proposed for the EU, EU Member States and Associated Countries. The representation of Austrian interests and proposals will be taken into account here.

➢ **Action 9.2:**

"Support in the national implementation of the two roadmaps, including in the context of European processes"

Description of this measure:

The proposed potential for improvement at national and European level, identified by the two Industrial Technology Roadmaps, should be incorporated into ongoing and existing research and technology development processes and used by the actors in the economy/enterprises. Areas addressed include topics such as mobility, energy, use of raw materials and material sciences, data management and relevant space-based technologies. To ensure that the objectives of the roadmaps are pursued, there should be close coordination with the fields of activity listed below, and topics and focal points of the Industrial Technology Roadmaps should be taken into account in relevant Austrian RTI programmes. These are:

- EU R&I missions
- EU Partnerships
- Important Projects of Common European Interest (IPCEI) in the areas of microelectronics, batteries and hydrogen
- RTI priorities of the BMK in the areas of energy transition, mobility transition, circular economy and climate neutral-cities
- European Chips Act
- Thematically relevant national strategies

Milestones:

1. Relevant Austrian participation in EU missions and partnerships of Cluster 4 "Digital, Industry and Space" and Cluster 5 "Climate, Energy and Mobility", as well as other relevant Horizon Europe projects

2. Austrian coordination of at least two EU partnerships related to circular economy or low-carbon technologies

3. Austrian participation in IPCEIs in the areas of microelectronics, batteries and hydrogen with at least 14 projects

4. Austrian participation in aspects of the European Chips Act

5. Development and adoption of national strategies with a focus on the circular economy and the promotion of low-carbon technologies

6. Implementation of or participation in media-relevant events and conferences such as the Austrian Circular Economy Summit

Expected impact:

Intensification of Austrian activities in highly innovative technologies to contribute to the Green and Digital Transition with strong reference to the thematic areas of the Technology Roadmaps identified by the Commission. This also aims to support, or potentially create, directional impact-oriented funding at European and Austrian level.

Goal:

1. Development of innovative technologies to reduce greenhouse gas emissions in industrial processes

2. Development of innovative technologies for the recycling of raw materials in industrial processes

3. Creating visibility and relevance for the topics of circular economy and low-carbon technologies

4. Bringing Austrian interests into European processes and vice versa

5. Supporting overarching Austrian strategies and programmes in the field of green and digital transition

6. Strengthening Austrian companies in the target areas mentioned

Indicators can largely be used by the respective projects contributing to implementation; IPCEI aims specifically at innovation in the field of Green/Digital Transition, and measures relative improvements in the economic, but also societal sense.

➢ **Action 9.3:**

"Establishment of or more in-depth networking with national expert groups"

Description of this measure:

This measure aims to establish a national expert group to support the implementation of the Industrial Technology Roadmaps. At national level, existing competences and committees can be used to further strengthen work in the areas of *low-carbon technologies* and *circular economy*. To this end, there is first of all a need to analyse which bodies exist at national level, and whether these bodies are suitable to implement these roadmaps, or whether an additional working group could be convened. Elements of the Climate and Energy Fund, the national coordination offices of EU missions, EU partnerships and IPCEI, as well as the BMK RTI priorities should be taken into account. In addition, interest groups and industrial associations as well as experts from national research institutions, such as the COMET centres or Silicon Austria Labs, can also provide important input.

Milestones:

1. Creation of a mapping of the national group of experts and their activities

2. Holding an event on the circular economy with relevant stakeholders

3. Holding an event on low-carbon industries with relevant stakeholders

Expected impact:

Intensified national networking should strengthen the exchange on the two topics and provide information on national goals, activities and priorities. In addition, the Austrian position on these two topics should be seen as coherent by its international partners , and Austrian stakeholders should be more aware of the goals and activities mentioned. Such an exchange also has the potential to influence the national political-economic discourse, and to increase relevance or even funding in the areas of the Roadmap.

Goals/indicators:

1. Create visibility and relevance among stakeholders for the topics of circular economy and low-carbon technologies

2. Create an exchange on current calls for proposals and funding mechanisms

3. Provide holistic insights into national activities from ministries, enterprises, research institutions and civil society

4. Better capture and bundle national interests and needs

➢ **Action 9.4:**

"Participation in Mutual Learning Exercises, conferences, workshops, and expert panels"

Description of this measure:

Austrian participation in MLEs and other relevant events with national representation from the ministries concerned, as well as participation of national stakeholders such as funding agencies and companies. This measure should be closely related to action 9.3, but should be more concerned with participation in European processes rather than coordinating national processes.

Milestones:

1. Produce a report on ecosystem strategy and internationalisation

Expected impact:

Optimisation of the flow of information on, among other things: current measures at European level, best practice examples, insights into policies of other Member States, potential funding or funding mechanisms, and legal framework conditions.

Goals/indicators:

1. Create visibility and relevance among stakeholders for the topics of circular economy and low-carbon technologies

2. Introduction of Austrian positions to European collaborations, processes and activities

3. Gathering information on best practice examples of other European actors

4. Involving national stakeholders in collaboration and exchange

➢ **Action 9.5:**

Involve civil society in regional and national processes to stimulate social change

Description of this measure:

This measure aims to deepen processes already underway to increase the involvement of civil actors in shaping the Green/Digital Transition. In this context, it is primarily concerned with joint political bodies (e.g. citizens' Climate Council), as well as potential information events and civil consultations.

Milestones:

1. Implementation of, or participation, in media-relevant events and conferences such as the Austrian Circular Economy Summit

2. Publication of information on government and corporate projects in the areas of circular economy and low-carbon technologies

Expected impact:

One expected impact of this measure is the increased visibility and relevance of the circular economy and low-carbon technologies in Austrian RTI policy. In the medium to long term, this should also help civil society to develop certain changes in consumption on the one hand, and to have a say in national processes on the other.

Goals/indicators:

1. Creating visibility and relevance for the topics of circular economy and low-carbon technologies among the population

2. Linking this action to ERA NAP Action 3: Strengthen trust in science

3. Disseminating information on the current status of technologies and policies on the circular economy and low-carbon technologies to civil society

➢ **Action 9.6:**

Co-design transition pathways for the 14 key ecosystems

Description of this measure:

In May 2021, the updated EU Industrial Strategy proposed to develop *transition pathways* for the green and digital transition for 14 of the most important European ecosystems defined in the strategy. Austria has supported the process from the outset and is seeking to involve a wide range of interest groups in the process of developing *transition pathways*.

Milestones:

1. Milestone 1: Finalisation of the transition pathway for tourism; based on this, stakeholders are now regularly invited to participate in the implementation at different levels. However, there are currently no mandatory actions.

2. Work is also underway on a transition pathway for mobility, textiles, social economy and chemicals. Work on the transition pathway for energy-intensive industry has been paused due to the current crisis.

Expected impact:

In cooperation with industry, authorities, social partners and other stakeholders, transition pathways must be developed for these important ecosystems. The plan is to initiate a *"bottom-up"* process and work out an understanding of the scope of the costs and the long-term benefits of the transition, as well as to lead the necessary actions to a feasible plan (if inputs from industrial technology roadmaps are available in the respective concrete topic area/ecosystem, these should also be taken into account)

Goals/indicators:

1. Creating visibility and relevance for the topics of circular economy and low-carbon technologies

2. Bringing Austrian interests into European processes and vice versa

3. Supporting the Innovation Agenda through national actions

4. Strengthening Austrian enterprises in the target areas mentioned

2.10 Austrian Research Infrastructure Action Plan

- **Coordination:**   **Thorsten D. BARTH**
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  Margit HARJUNG
  Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Department III/2 – Advancement of Research and Technology

- **ERA actions to be addressed by the initiative:**

08_ Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA

The research infrastructure is a significant determining factor for the R&I system, and is therefore an important and relevant pre-requisite for this and other initiatives.

- **Description of the initiative:**

Research infrastructures form a significant proportion of the factors that determine any R&I system. The continued development of research infrastructures (including e-infrastructures) is therefore an important and ongoing task in both national and European research policy. Within the framework of wider EU research policy, Austria will therefore continue to participate in the important processes and projects in the field of research infrastructures, also setting new priorities on the national stage. The Austrian Research Infrastructure Action Plan 2030, developed as part of the R&I Strategy 2030, is the key instrument here when it comes to shaping how the research infrastructure will be expanded, and the way in which we will take part in European and international (large-scale) research infrastructure, with an eye on development up to 2030.

- **Objectives:**

The Austrian Research Infrastructure Action Plan 2030 will be used to pursue the following research infrastructure development objectives:

1. creation of flexible access points to science and economics research infrastructures,
2. inclusion of national infrastructures in large-scale European and international research infrastructure projects,
3. evidence-based planning and long-term (competitive) funding models, in particular for participation in European and international research infrastructures and
4. digitalisation and expansion of (research) data infrastructures and (research) data management.

At the centre of the Action Plan is the guideline for coordinated sourcing and cooperative utilisation of research infrastructures.

➢ **Actors and Stakeholders:**

The central stakeholders are members of the RTI Working Group for Research Infrastructure that accompanies the RTI Strategy 2030:

- BMBWF - Federal Ministry for Education, Science and Research (Chair)
- BMK - Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (Chair)
- BKA - Federal Chancellery
- BMF – Ministry of Finance
- BMAW - Federal Ministry for Labour and Economy
- Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft (BML) - Federal Ministry for Agriculture, Forestry, Regions and Water Management
- Rat für Forschung und Technologieentwicklung (RFTE) - Council for Research and Technology Development

Stakeholders to be included in research infrastructure development:

- Central, non-academic research and research funding institutions in accordance with the Austrian Research Funding Act (FoFinaG) (AIT, ISTA, ÖAW, SAL, LBG and GSA, as well as aws, CDG, FWF, OeAD and FFG);
- Universities and universities of applied sciences;
- Non-academic research institutions and enterprises;
- Federal states.

➢ **Measure 10.1:**

"Preparation and implementation of the Austrian Research Infrastructure Action Plan 2030"

Description of this measure:

As part of the R&I Strategy 2030, the Austrian Research Infrastructure Action Plan 2030 is created, which provides for (1) the expansion of research infrastructure and (2) participation in (large-scale) European and international research infrastructure.

Milestones:

1. Creation of the Research Infrastructure Action Plan (01/2022 - 12/2022)

2. Implementation of the Research Infrastructure Action Plan (from Q1/2023)

   a. Interdepartmental definition and determination of agreed indicators for measuring the Action Plan within the RTI WG Research Infrastructure (Q1/2023-Q1/2024)

   b. Monitoring the current status of the Research Infrastructure Action Plan (2026)

> c. Monitoring the stage of development of the Research Infrastructure Action Plan (2029)

Expected impact:

Coordinated sourcing and cooperative utilisation of research infrastructures at national, European and international level.

Goals/indicators:

1. Publication/release of the Research Infrastructure Action Plan (Q1/2023)

2. Monitoring the current status of the Research Infrastructure Action Plan: (2026): Due to the Action Plan's long timeframe, its progress will be evaluated halfway through the timeframe using the agreed interdepartmental indicators, in order to measure the extent of expansion of the research infrastructure and the level of participation in large-scale European and international research infrastructure.

3. Monitoring the stage of development of the Research Infrastructure Action Plan: Before the expiry of the term of the Action Plan, an evaluation will be carried out in its final year (2029) regarding the stage of development of the research infrastructure and the targets met by the measures implemented. The form that the Action Plan will take from 2030 onwards will be based on the results of this evaluation.

2.11 Measures for knowledge valorisation

> **Coordination:**   **Thomas LICHTENWÖHRER**
> Federal Ministry of Education, Science and Research, Department V/1 - Research, Technology, Innovation: Strategy, Reporting, Knowledge Transfer from Universities and Public Research Institutes
>
> **Ramona AUER**
> Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, General Directorate III, Department III/2 – Advancement of Research and Technology

> **ERA actions to be addressed by the initiative:**

07 Upgrade EU guidance for a better knowledge valorisation

> **Description of the initiative:**

The value of knowledge is maintained through various channels, bringing in all stakeholders in the R&I ecosystem and their bodies of knowledge. Accordingly, efforts

should be made to ensure that data, research findings and innovation are converted efficiently into sustainable products, processes, services and political measures which are of socio-economic value and benefit to society. To this end, the Council is planning to adopt a Recommendation at the end of 2022 on guiding principles for maintaining the value of knowledge. An efficient transfer of knowledge and technology helps make good and rapid use of new knowledge and technologies to the greatest scope possible, and ensure well-functioning value-added chains. Based on the government programme, the RTI Strategy 2030 and the RTI Pact 2021-2023, the focus is on knowledge and technology transfer, including the expansion at universities, universities of applied sciences and research institutes of entrepreneurship and a start-up culture, and increasing the number of spin-offs.

Increased use should be made of existing structures, processes and instruments for optimising knowledge and technology transfer, in order also and in particular to best translate the research findings of EU missions into innovations. See the three measures listed below.

➢ **Objectives:**

This initiative pursues the following objectives:

1. Making best use of research findings in order to translate them into innovations, in particular by further developing the exploitation strategies at higher education institutions and research institutes

2. Strengthening entrepreneurship and a start-up culture at higher education institutions and research institutes

3. Increasing the number of spin-offs: As per the RTI Strategy of the Austrian Federal Government, 100% more commercially successful academic spin-offs should be founded by 2030.

➢ **Actors and Stakeholders:**

Key actors: BMBWF, BMAW, BMK, funding agencies (aws, FFG)

Stakeholders: Higher education institutions, research institutes, industry, SMEs, spin-offs, start-ups.

➢ **Measure 11.1:**

"Agreeing effective strategies for the continued development and strengthening of knowledge transfer to the economy and entrepreneurship in performance agreements with universities and research institutions and in finance agreements with research funding institutions"

Description of this measure:

Knowledge and technology transfer is an important focus in the performance agreements and isfirmly anchored in the strategic continued development of universities and research institutions. The performance agreements call for exploitation strategies to be continually

developed. These contain areas of action and parameters, making use of pre-existing processes and also expected developments:

- Expansion of resources at technology transfer points, based on an annual performance evaluation, making use of suitable indicators/parameters

- Optimising cooperation with the economy through transparent framework conditions, and clear basic principles

- Strengthening of networks (e.g. community building through knowledge transfer centres, venture capitalists, etc.)

- Increasing the level of participation in European and also national funding initiatives (in particular: Horizon Europe, EIC (Pathfinder) and ERC (prototypes), Spin-off Fellowships)

- Spin-offs/entrepreneurship: Expansion of innovation platforms and spaces

- Accelerating entrepreneurship by means of training and further education measures

- Increasing the number of spin-offs from universities by roughly one third

- Open Innovation.

Milestones:

1. Implementing the ÖAW and IST-A performance agreements (2021-2023)

2. Implementing the performance agreements with universities (2022-2024)

3. Renegotiation of ÖAW and IST-A performance agreements (2024-2026)

4. Renegotiation of performance agreements with universities (2025-2027)

Expected impact:

By targeted maximum exploitation of academic knowledge in innovation and ensuring well-functioning value-added chains, Austria is making its contribution towards developing adequate solutions in order to quickly and effectively confront and overcome the great challenges facing humanity, e.g. digital transformation and pandemics.

Goals/indicators:

Anchoring target indicators in the performance agreements:

Number of patents applied for and issued, licence agreements, exploitation spin-off disclosures, invention disclosures

➢ **Measure 11.2:**

"Continued successful operation of the "National Contact Point for Knowledge Transfer and Intellectual Property" as an inter-ministerial platform"

Description of this measure:

The NCP.IP is an inter-ministerial platform set up at BMBWF on the basis of a 2008 Recommendation by the European Commission on funding knowledge transfer between science and industry. The operations of the NCP.IP include the provision (free of charge) of online sample agreements (Intellectual Property Agreement Guide, IPAG), the purpose of which is to significantly ease and speed up cooperation between higher education institutions, research institutions and enterprises, running relevant workshops/webinars, preparing publications on knowledge transfer, and an "Open Innovation Toolkit" webtool which provides information on fair remuneration regulations for selected OI cooperation processes. The NCP.IP was set up as an institution by the three ministries responsible, namely BMBWF, BMAW and BMK. Since 2010, the "Austria Wirtschaftsservice Gmbh" (aws), and since 2016 the Austrian Research Promotion Agency (FFG) have been commissioned with its operational implementation[18].

Milestones:

Ongoing implementation of work programme 2020-2023 (planned to be continued in 2024-2026)

Expected impact:

For all those involved in the innovation process, information symmetries are ensured, and stakeholders are supported in the application of fair and transparent rules regarding knowledge and technology transfer.

Goals/indicators:

Goal: Professionalisation of knowledge transfer through the targeted sharing of current, relevant (legal) knowledge regarding intellectual property and issues relevant to transfer

Indicators: Number of times the IPAG sample agreement homepage is accessed (up to 2021: around 42,000 times)

➢ **Measure 11.3:**

"Measures for funding academic spin-offs and start-ups."

Description of this measure:

The aim of the Austrian RTI Strategy is to found 100 % more financially successful academic spin-offs by 2030, and continue to promote a culture of entrepreneurship at universities and research institutions. This is because spin-offs in particular generate

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[18] Further information: https://www.ncp-ip.at/

"knowledge spillovers" by commercialising knowledge generated at universities and research institutions and feeding it into the economic production process.

In the performance agreements with the universities, it has been agreed to increase the number of spin-offs by a third, i.e. the plan is to create approximately 70 more spin-offs from universities by 2024.

The "Spin-off Fellowships" funding programme (2017-2021) has been extended until 2026. This programme supports researchers and students with innovative ideas and an entrepreneurial spirit in further developing their ideas, so that they can transform them into enterprises (https://www.ffg.at/spin-off-fellowships).

The early stage investment fund "IST Cube" of the Institute for Science and Technology Austria (IST-A) invests in the start-up phase and offers founders of enterprises in academia not just venture capital, but also practical support (https://ist-cube.com/)

Austrian PHOENIX Founders Award: An annual award for excellent achievements by Austrian start-ups and spin-offs (jointly with BMAW), https://www.aws.at/en/austrian-phoenix-founders-award/.

Milestones:

1. Implementation of ÖAW and IST-A performance agreements: 2021-2023

2. Implementation of performance agreements with universities: 2022-2024

3. Spin-off Fellowships funding programme: ongoing, until 2026

4. IST Cube: ongoing

5. Phoenix Award: ongoing until 2023, planned extension until 2025

6. Renegotiation of ÖAW and IST-A performance agreements (2024-2026)

7. Renegotiation of performance agreements with universities (2025-2027)

Expected impact:

With the acceleration of research-intensive academic spin-offs, the transfer of knowledge generated at higher education Institutions and research institutions into the market / into society is increased, and with it the usefulness of such knowledge.

Goals/indicators:

One hundred per cent increase in the number of financially successful spin-offs by 2030, as per the RTI Strategy of the federal government; "exploitation spin-offs" target indicator in the performance agreements.

2.12 Measures in the context of international cooperation in research

➢ **Coordination:**   **Martina HARTL**
Federal Ministry of Education, Science and Research, General Directorate V, Department for International Research Cooperation and Science Diplomacy

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➢ **ERA actions to be addressed by the initiative:**

06_ Deepen the ERA by protecting academic freedom in Europe

09_ Promote a positive environment and level playing field for international cooperation based on reciprocity.

The initiative can be divided into two sub-initiatives, which are presented separately below:

2.12.1 Foreign Interference

➢ **Description of sub-initiative:**

- Potential unwanted foreign influence on national RTI organisations - universities in particular - ("foreign interference") is increasingly becoming a hot topic also in Austria, also because of discussions at EU-level and ever more frequently occurring problems.

- With the exchange between EU Member States / EC and China within the framework of the EU-KNOC project in mind, the focus is on increased vigilance with regard to security issues and appropriate risk management relating to international cooperation in general.

- In Austria, there are several dedicated services and departments within the various ministries (e.g. in relation to export control, international law, military equipment, counter-terrorism, etc.), which already partly cover these topics.

- The current geopolitical situation (with regard to Russia in particular) combined with international cooperation at EU-level which is more heavily focused on values, principles and strategic autonomy, has further highlighted the need for action in this direction.

➢ **Objectives:**

1. Exchange with EU partners regarding Good Practice

2. Better networking of stakeholders at national level

3. Increased problem awareness

4. Development/application of tools for risk evaluation & management

5. Assessment of the need for continuous monitoring.

➢ Actors and Stakeholders:

Actors:

Research-related general-directorates/departments at BMBWF and other ministries, particularly BMK and BMAW, and relevant services (e.g. Export Control)

Stakeholders:

UNIKO, FHK, ÖPUK, individual universities as required
Relevant agencies, particularly OeAD, FWF, FFG
Central research institutions, particularly ÖAW, IST Austria.

➢ Measure 12.1.1:

"Participation in experience exchange with other EU countries within the framework of a *Mutual Learning Exercise on Foreign Interference*"

Description of this measure:

Joint activities at EU-level might be of most benefit to smaller countries, helping them to expand their capacities and keep abreast of global developments. The planned Mutual Learning Exercise on Foreign Interference is a targeted activity in this context and will focus on 3 areas.

Milestones:

1. Scoping Workshop on 26.09.2022;

2. November 2022 kick-off meeting;

3. Nov. 2022 – Dec. 2023 further workshops, visits to various countries and information dissemination events

Expected impact

Using discussion of national practices, this MLE will facilitate the exchange of best practice and information between participating countries in relation to identifying threats and weaknesses and the implementation of preventive measures.

By calling in external experts, the MLE will reflect the pros and cons of the various practices and possible conflicts of objectives. Using experiences gained at national level as a starting point, the aim is to identify best practice, findings and success factors.

The aim of the MLE process is to identify effective ways to create and implement initiatives that promote preventive measures at national level in order to benefit the research system, the economy, and society as a whole, without restricting international cooperation if possible.

Goals/indicators:

<u>Goal:</u> Exchange with EU partners regarding Good Practice

<u>to be evaluated by:</u>

- participation in workshops, visits to various countries within the framework of the MLE

- Input into EU discussions from a national perspective

- Participation in relevant national events

> **Measure 12.1.2:**

"Information and dialogue with national stakeholders, in order to raise the necessary awareness of the problem and where necessary develop solutions for the institutions affected."

Description of this measure:

When compared with the situation in other, more exposed countries, research and higher education institutions in Austria have only limited strategic approaches to security in science, research and education. When in dialogue with stakeholders, it is therefore necessary to improve awareness of this issue, to get to grips with national problems and approaches and compare them with those in other countries, so that additional measures may be developed and implemented, while respecting the autonomy of the institutions.

Milestones:

1. Setting up a national "stakeholder group" in parallel with the MLE in autumn/winter 2022;

2. Ongoing dialogue in 2022 and 2023;

3. Development and implementation of national measures 2023-2025.

Expected impact:

Raising awareness among stakeholders, preventing outside influence on the national RTI system, strengthening security at Austrian RTI institutions, focusing on universities and universities of applied sciences.

Goals/indicators:

<u>Goal</u>: Better national networking of stakeholders and raised awareness of the problem, to be evaluated by:

- setting up a national stakeholder group with relevant stakeholders, in order to facilitate ongoing exchange

- organising, and participating in, relevant events

<u>Goal</u>: evaluate development/application of suitable tools for risk evaluation & management, using:

- the documents created for / distributed to the RTI community

- the tools implemented in the organisations

<u>Goal</u>: evaluate the need for continuous monitoring

The findings from the MLE and dialogue with stakeholders should provide a basis for deciding whether Austria should introduce continuous monitoring of possible incidences of influence, and what form such monitoring could take, including in the context of activities planned at EU-level.

2.12.2 Science Diplomacy in the national and EU context

➢ **Description of sub-initiative:**

- The EC Communication on a "Global approach to research and innovation" stresses that a heavier focus on science and technology in the EU's foreign and security policy (in the sense of "Science Diplomacy") would help the EU to project its soft power and enable it to pursue its economic interests and values more effectively.

- In addition, the Council adopted Recommendations in September 2021 on the "Global approach to research and innovation", in which the EC, in cooperation with the EEAS, is requested to submit to the Council in 2023 a European Science Diplomacy Agenda.

- In parallel, the BMBWF sent out a survey nationally on the central national stakeholders, networks and activities associated with the field of Science Diplomacy. This was completed in September 2021 and contains options for deepening cooperation.

- Finally, the current geopolitical situation (and Russia in particular) presents new and complex challenges for Science Diplomacy.

➢ **Objectives:**

1. Agreement between EC, EEAS and member states in the area of Science Diplomacy

2. Introduction of national interests and positions into the European discussion

3. Sensitisation regarding the role and limits of Science Diplomacy

4. Enabling dialogue between science and diplomacy

5. Building up a Science Diplomacy community in Austria

➢ **Actors and Stakeholders:**

Actors:

BMBWF, BMEIA

Stakeholders:

Other ministries with research-related responsibilities, Diplomatic Academy of Vienna, higher education institutions, universities of applied sciences, research institutions, NGOs.

➢ **Measure 12.2.1:**

"Participation in activities at EU-level in the context of preparing an EU Science Diplomacy Agenda (ERA Forum Sub-Group "Global approach to research and innovation")"

Description of this measure:

Subsequent to the above-mentioned request by the Council to the EC and EEAS to submit a European Science Diplomacy Agenda, this topic is now being dealt with in the ERA Forum Subgroup on Global Approach, and an initial concept note on the subject has been submitted.

Milestones:

1. Work in an editorial group, in which Austria (Martina Hartl) will actively participate, from end of Sept. 2022

2. Presentation and discussion of a first draft of the document in the ERA Subgroup in Nov. 2022

3. Discussion with national stakeholders and interest groups, late 2022 and early 2023

4. Final draft of the document, end of first quarter of 2023

5. Next steps depend on the targeted legal status of the document

Expected impact:

Strategic use of Science Diplomacy in the international cooperation context.

Goals/indicators:

1. Clarification of common objectives in the area of Science Diplomacy

2. better coordinated course of action between the EU and its Member States in the area of Science Diplomacy;

3. Intensifying dialogue between science and diplomacy

> **Measure 12.2.2:**

"Setting up a national Science Diplomacy Round-table"

Description of this measure:

Based on the 2021 study on Science Diplomacy stakeholders in Austria, a regular Science Diplomacy Round-table should be set up to strengthen dialogue and cooperation between national stakeholders and get to grips with current issues at national and EU-level.

Milestones:

First round-table: towards the end of 2022 / beginning of 2023

then ongoing after that

Expected impact

Building up a Science Diplomacy community in Austria.

Goals/indicators:

1. Clarification of common interests of stakeholders
2. Joint work on areas of focus
3. Intensifying dialogue between science and diplomacy
4. Connecting with European and international panels, and working with them on relevant activities (e.g. INGSA via the BMEIA; EU Science Diplomacy Alliance)

3 National ERA Governance

A national ERA governance structure is being set up to implement the Pact for Research and Innovation in Europe, the ERA Policy Agenda, and in particular the national ERA Action Plan 2022-2025. The tasks of this governance structure is to ensure implementation of each ERA-NAP initiative, provide for contacts and exchange at EU-level, organise national networking of the various stakeholders, and monitor implementation. Finally, ERA governance includes providing a regular update on the current ERA Action Plan in line with the developing general conditions and the preparation of the subsequent political cycle.

Details of the individual elements of the ERA governance are given below. It is essential in this context that the structures do not involve excessive bureaucracy or administrative burdens for the stakeholders involved, but that they offer a flexible set of instruments for the required measures, coordination and cooperation.

3.1 ERA Governance Bodies

➢ **The National ERA Stakeholder Forum**

The National ERA Stakeholder Forum should enable a broad exchange between all stakeholders affected by ERA-related topics. The Forum should ensure information exchange on the implementation of ERA initiatives in Austria and developments at EU level. It should involve all stakeholders in the discussion of current activities and also the development of new measures and initiatives. Exchange in the Forum is not limited to the initiatives of ERA-NAP, but should encompass all topics relevant to ERA.

The ERA Stakeholder Forum will be <u>chaired by</u> the two Directors-General of General Directorate V in BMBWF and General Directorate III in BMK.

<u>Members</u> of the forum will be all relevant stakeholders in the Austrian RTI system (federal ministries, agencies, universities and universities of applied sciences, non-university research institutions, social partners, special interest groups) and members of the ERA-NAP Executive Board.

The Forum will meet as required, but at least twice a year. The meetings will take place either virtually or face-to-face.

- **The ERA-NAP Executive Board**

  The ERA-NAP Executive Board consists of two ERA-NAP Coordinators nominated by BMBWF and BMK (currently Martin Schmid and Daniel Voigt[19]), those responsible for leading the 12 ERA-NAP initiatives, the Coordinator nominated by BMBWF for ERA-NAP Monitoring (currently Bernhard Koch), and a representative of the EIP department at FFG.

  The role of the ERA-NAP Executive Board is to work as a collective and independently within the individual ministries to carry out and coordinate implementation and monitoring of ERA-NAP 2022-2025 and make preparations for the subsequent political cycle. This includes effective implementation of individual measures in ERA-NAP initiatives, the preparation of the annual progress report, involvement in the annual ERA Symposium, in the external evaluation, and in the preparation for the next ERA-NAP.

  The members of the ERA NAP Excecturive board are responsible individually for coordinating the ERA-NAP initiatives. It works as a network, organised by the ERA-NAP Coordinators, and holds meetings as required, convened by the ERA-NAP Coordinators.

3.2 The ERA Political Cycle

- **Adoption of the ERA-NAP**

The ERA-NAP is developed jointly by BMBWF and BMK, in close cooperation with all relevant stakeholders, with General Directorate V of BMBWF in the lead. It is brought to the Austrian Council of Ministers for adoption.

- **Ongoing implementation**

With adoption by the Council of Ministers, the ongoing implementation of ERA-NAP and the individual initiatives begins. Implementation is coordinated by those individuals responsible for the individual initiatives or by the ERA-NAP Executive Board.

- **Ongoing inclusion of stakeholders**

In addition to direct, active involvement by a great variety of stakeholders of the Austrian RTI system in the concrete implementation of ERA-NAP, inclusion of the stakeholders is ensured by means of the national ERA Stakeholder Forum.

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➢ **The annual progress report**

Every October, a progress report is produced on the status of implementation of ERA-NAP. The purpose of this implementation report is to qualitatively show the progress made with each initiative, but also quantitatively in cases where quantitative measurement is possible using defined indicators. In addition, the progress report should show any changes to the measures presented in ERA-NAP which appear to be necessary as part of developments at European and/or national level.

➢ **ERA Symposium**

Each November, an ERA Symposium involving all actors and stakeholders should take place. The annual progress report should be presented at the ERA Symposium. Targeted discussions should be held on certain selected topics relating to the implementation / ongoing development of the initiatives.

➢ **External evaluation**

In 2024, an external evaluation of ERA-NAP, its implementation and ERA Governance in Austria should be commissioned, so that the findings are available during the first quarter of 2025.

➢ **Preparations for the next ERA-NAP**

Based on the new ERA Policy Agenda 2025-2027 and the findings of the external evaluation, the new ERA-NAP (2026-2028) will have to be produced in 2025.

3.3 Monitoring

At European level, an ERA monitoring system is being set up, and should be in place by the end of 2023. It is planned that this monitoring system consist of the following four elements:

ERA Scoreboard: To measure progress at European level with regard to the ERA targets, using a limited number of quantitative indicators.

ERA Dashboard: To present progress at national level with regard to input, findings and effect, using a combination of different quantitative indicators and qualitative assessments.

ERA Country Report: The Commission produces annual reports on the progress of implementing the ERA Policy Agenda for each Member State.

Online ERA Policy Platform: The intention is that this should be a user-friendly platform for exchanging information on the implementation of the ERA Policy Agenda at EU and

national level, and other relevant initiatives, reforms and activities with regard to the principles and priorities in the R&I Pact for Europe.

The inclusion of national data and information is also explicitly foreseenfor the European ERA monitoring system. For Scoreboard and Dashboard, pre-existing data systems should be accessed where possible; with regard to information affecting Austria, the Policy Platform will in any case be provided with information within the context of national ERA governance.

In parallel with and closely linked to monitoring at EU-level, monitoring of ERA implementation will also be developed in Austria. For each ERA initiative in Austria, the progress of its implementation will be qualitatively evaluated as required and, wherever quantitative measurement is an option and makes sense, and is not already covered by the EU Monitoring System, quantitative indicators are to be developed and the resulting data collected.

List of abbreviations

ACOnet	Austrian Academic Computer Network
AEA	Austrian Energy Agency
AGES	German: *Agentur für Gesundheit und Ernährungssicherheit* (English: Austrian Agency for Health and Food Safety)
AIT	Austrian Institute of Technology
AQ Austria	Agency for Quality Assurance and Accreditation Austria
ARC	Austrian Cooperative Research
aws	German: *Austria Wirtschafts-Service GmbH* (the promotional bank of the Austrian federal government)
BBMRI	Biobanking and Biomolecular Resources Research Infrastructure
Bundeskanzleramt (BKA) - Federal Chancellery	Federal Chancellery
Bundesministerium für Arbeit und Wirtschaft (BMAW) - Federal Ministry of Labour and Economy	Federal Ministry of Labour and Economy
BMBWF	Federal Ministry of Education, Science and Research
BMEIA	Federal Ministry for European and International Affairs
BMF	Austrian Federal Ministry of Finance
BMGSPK	Federal Ministry for Social Affairs, Health, Care and Consumer Protection
BMK	Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology
Bundesministerium für Land- und Forstwirtschaft, Regionen und Wasserwirtschaft (BML) - Federal Ministry for Agriculture, Forestry,	Federal Ministry for Agriculture, Forestry, Regions and Water Management

Regions and Water Management	
BOKU	German: *Universität für Bodenkultur* (English: University of Natural Resources and Life Sciences)
CETP	Clean Energy Transition Partnership
CoARA	Coalition on Advancing Research Assessment
COMET Centers	Competence Centres for Excellent Technologies
CDG	German: *Christian Doppler (Forschungs-)Gesellschaft* (English: Christian Doppler Research Association)
DIO	Data Intelligence Offensive
DLR	German: *Deutsches Zentrum für Luft- und Raumfahrt* (English: German Aerospace Center)
DMP	Data Management Plans
EC	European Commission
ECSA	European Citizen Science Association
EEAS	European External Action Service
EERA	European Energy Research Alliance
EIC	European Innovation Council
EIP	European and International Programmes (Dept. 4 of FFG)
ENER	Directorate General for Energy
EOSC	European Open Science Cloud
ERA	European Research Area
ERC	European Research Council
ETIP	European Technology and Innovation Platforms
FAIR	Findable, Accessible, Interoperable and Reusable
FFG	German: *Forschungs-Förderungs-Gesellschaft* (English: Austrian Research Promotion Agency)
FHK	German: *Fachhochschulkonferenz* (English: Association of Universities of Applied Sciences)
FoFinaG	German: *Forschungsfinanzierungsgesetz* (English: Research Financing Law)

FWF	German: *Fonds zur Förderung der wissenschaftlichen Forschung* (English: Austrian Science Fund)
GSA	GeoSphere Austria
IEA	International Energy Agency
IHS	German: *Institut für Höhere Studien* (English: Institute for Advanced Studies)
INGSA	International Network for Government Science Advice
IPAG	Intellectual Property Agreement Guide
IPCEI	Important Projects of Common European Interest
IPHE	International Partnership for Hydrogen and Fuel Cells in the Economy
ISTA	<u>Institute of Science and Technology Austria</u>
IV	German: *Industriellenvereinigung* (English: Federation of Austrian Industries)
IWG	Implementation Working Groups
JRC	Joint Research Centre
LBG	German: *Ludwig Boltzmann Gesellschaft* (English: Ludwig Boltzmann Association)
NHM	Natural History Museum, Vienna
NREN	National Research and Education Network
ÖAW	Austrian Academy of Science
OeAD GmbH	Former name in German: Oesterreichischer Austausch-Dienst, now: Agentur für Bildung und Internationalisierung (English: Agency for Education and Internationalisation)
OECD	Organisation for Economic Cooperation and Development
OER	Open Educational Resources
ÖPUK	German: Österreichische Privat-Universitäten-Konferenz (English: Austrian Private Universities Conference)
OSA	Open Science Austria
PKH	Partnership Knowledge Hub
Rat für Forschung und Technologieentwicklung	German: Rat für Forschung und Technologie-Entwicklung (English: Council for Research and Technology Development)

(RFTE) - Council for Research and Technology Development	
RÖPH	German: Rektorinnen- und Rektorenkonferenz der österreichischen Pädagogischen Hochschulen (English: Rectors' Conference of Austrian University Colleges of Teacher Education)
RTD	Directorate-General for Research and Innovation (RTD = Research and Technological Development)
RTI	Research, technology and innovation
SAL	Silicon Austria Labs
SET Plan	Strategic Energy Technologies Plan
STEM	Science, Technology, Engineering and Mathematics
SRIA	Strategic Research and Innovation Agenda
TFEU	Treaty on the Functioning of the European Union
TRAMI Project	TRAnsnational Cooperation on the MIssions approach
UBA	German: *Umweltbundesamt GmbH* (English: Environment Agency Austria)
ubifo	German: *Universitätsbibliotheken-Forum Österreichs* (English: Forum of Austrian University Libraries)
UNIDO	United Nations Industrial Development Organisation
UNIKO	German: *Österreichische Universitäten-Konferenz* (English: Universities Austria)
WKÖ	German: *Wirtschaftskammer Österreich* (English: Austrian Federal Economic Chamber)