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ANNEX

ANNEX

to the

**Proposal for a COUNCIL RECOMMENDATION
on the European Research Area Policy Agenda 2025-2027**

ANNEX

Detailed explanation of ERA structural policies and ERA actions

The proposals for ERA structural policies and ERA actions are outlined in more detail in the following order. They are based on a process of co-creation, carried out with Member States, Horizon Europe associated countries and stakeholders between March 2023 and November 2024:

ERA structural policies

- Enabling open science via sharing and re-use of data, including through the European Open Science Cloud (EOSC)
- Strengthening sustainability, accessibility and resilience of research infrastructures in the ERA
- Strengthening inclusive and intersectional gender equality in the ERA
- Making research careers more attractive and sustainable
- Reforming research assessment
- Upscaling knowledge valorisation capacities and activities
- Global Approach to R&I
- Making the strategic energy technology (SET) plan a key thematic component of the ERA
- Improving the articulation between R&I and higher education within the ERA and unleashing the full potential of European R&I ecosystems
- Enhancing trust in science through citizen participation, engagement and science communication
- Improve EU access to excellence

ERA actions

- Equity in open science
- Advancing the European Science for Policy (S4P) ecosystem
- Facilitating and accelerating the responsible use of AI in science in the EU
- Enhancing research security
- Accelerating R&I investments for Europe's industrial transformation and competitive sustainability

- Accelerating new approach methodologies (NAMs) to advance biomedical research and testing of medicinal products and medical devices
- A harmonised and coordinated framework for a European approach to integrity and ethics in R&I in the face of emerging challenges
- Empowering R&I: A new era in research management

ERA structural policies

1. ENABLING OPEN SCIENCE VIA SHARING AND RE-USE OF DATA, INCLUDING THROUGH THE EUROPEAN OPEN SCIENCE CLOUD (EOSC)

Objectives

- Open science practices and skills are rewarded and taught, becoming the ‘new normal’;
- standards, tools and services allow researchers to find, access, reuse and combine results;
- a federated community-driven infrastructure enabling open sharing of scientific results is deployed and maintained;
- Europe is in the driving seat towards a web of FAIR¹ research data with established links to other data spaces;
- researchers are provided with better legal conditions and resources to access and reuse publicly funded research results and use publications and data for scientific purposes.

Description

This structural policy aims to achieve a step change across research communities and research infrastructures in Europe. It will seek to create a better EU legal framework for open sharing, seamless access and reliable re-use of research data and other digital research objects used and produced along the research life cycle. Example activities are:

- Promoting the uptake of the EOSC EU Node by the European research community;
- Support the enlargement of the EOSC Federation with several nodes, and ensure its scalability through common EOSC Federation standards and use policies, as of 2025;
- conducting further stakeholder consultations and collecting more evidence on identified policy options to make the EU copyright and data legislative and regulatory framework fit for research;
- expanding the EOSC monitoring framework with state-of-the-art methodologies to assess the impact of related policies and practices.

Expected outcomes

- Develop a high-value EOSC federation and increase its uptake;
- increase the amount and productivity of FAIR research data in Europe;
- identify areas for legislative and non-legislative measures to ensure an EU copyright and data legislative and regulatory framework fit for research;
- assess the impact of open science policies and practices based on an open science policy intelligence platform.

¹ Findable, Accessible, Interoperable, and Reusable

2. STRENGTHENING SUSTAINABILITY, ACCESSIBILITY AND RESILIENCE OF RESEARCH INFRASTRUCTURES IN THE ERA

Objectives

- Strengthened research infrastructure (RI) services, better adapted to user needs, in the context of contemporary and emerging scientific, technological and innovation challenges and EU policy priorities;
- strengthened European RI ecosystem including through consolidation of existing RI and identification of new RI projects filling gaps;
- create more integrated and sustainable schemes for access to RI and their services;
- enhanced impact on research and society and strengthened engagement with industry;
- create better links between different kinds of infrastructures (RIs, technology infrastructures, e-infrastructures, data infrastructures);
- achieve a greater involvement of stakeholders in RI activities.

Description

This structural policy ensures the openness, accessibility and security of world-class sustainable RI for researchers and innovators in Europe, develops further and consolidate RI, their integrative function in the R&I ecosystem and their potential to tackle EU priorities. A long-term strategy will streamline the RI landscape and identify and prioritise the RI services and technologies needed to boost the EU's S&T competitiveness and strategic autonomy and its capacity to solve societal challenges.

- Developing of a long-term strategy on RIs;
- carrying out clear monitoring of the performance of the different RIs;
- conducting a clear analysis of the financial support to the RIs;
- carrying out a strategic landscape analysis for RIs in Europe.

Expected outcomes

- **From long-term and recurrent activities:** (1) A long-term EU strategy for research infrastructures including a new, strategic approach for EU support to research infrastructures; (2) an ESFRI roadmap 2026 and key elements for the 2028 landscape analysis, (3) monitoring of ESFRI landmarks; (4) stakeholder engagement (event/activity reports).
- **From short-term activities, reports with recommendations on:** (1) financing, including synergies with national and regional funding, EU and other sources, (2) international cooperation, taking research security considerations into account; (3) an impact assessment of ESFRI; (4) resilience and greening of European research infrastructures; (5) further strengthening of ERICs as part of the RI ecosystem.

3. STRENGTHENING INCLUSIVE AND INTERSECTIONAL GENDER EQUALITY IN THE ERA

Objectives

- Deepen policy dialogue and the coordination of policies and actions on inclusive and intersectional gender equality in R&I, including institutional/structural changes through inclusive gender equality plans (GEP), intersectionality, integrating the gender dimension in R&I content, ending gender-based violence, and developing gender budgeting;
- advance inclusive and intersectional gender equality in R&I through the uptake of existing recommendations and tools;
- improve data collection, monitoring and evaluation on inclusive and intersectional gender equality in R&I to identify successful practices and challenges and any gaps to be addressed by future policies and measures;
- reduce geographical differences in addressing inclusive and intersectional gender equality among Member States and associated countries.
- Achieve a higher rate of participation of women and under-represented researchers in all aspects of diversity, improve the quality of working (and studying) conditions including fairer recruitment, promotion and budget allocation, availability of work-life balance measures, safer gender-violence-free environments, better gender balance in decision-making positions, and unbiased and higher quality R&I outputs.

Description

This structural policy will improve the quality and societal relevance of R&I, help attracting and retaining more diverse talent into Europe's R&I system, and help to ensure that everyone can maximise their potential, demonstrating that the EU remains committed leading at international level in ensuring inclusive and intersectional gender equality in R&I.

Expected outcomes

- Devise a monitoring and evaluation approach for effective implementation of inclusive GEPs;
- develop guidelines for implementing intersectionality in R&I policy, including indicators;
- design a monitoring and evaluation approach increasing the uptake of the integration of the gender dimension in R&I content;
- enhanced gender mainstreaming mechanism for synergies with other ERA actions at the EU and national level;
- implement the Code of Conduct on gender-based violence in R&I developed by Action 5 of the ERA Policy Agenda 2022-2024;
- principles developed for gender budgeting and expenditures tracking in R&I.

4. MAKING RESEARCH CAREERS MORE ATTRACTIVE AND SUSTAINABLE

Objectives

- Foster recognition of the research professions, and the interoperability and comparability of research careers across sectors and Member States;
- improve recruitment and working conditions, including aspects related to open, transparent and merit-based recruitment (OTM-R);
- strengthen researchers' skills to foster inter-sectoral and inter-disciplinary careers;
- support better career development and progression and shape new investment pathways to reduce precarity and broaden the spectrum of career opportunities;
- work towards a more balanced circulation of talents, including intersectoral flows;
- ensure effective and reliable data from the R&I Careers Observatory;
- create synergies with other related ERA policy actions and related current and future EU initiatives such as the Commission's skills and talent mobility package.

Description

The structural policy aims to make research careers in Europe more attractive and sustainable, by supporting joint implementation by the EU, Member States, associated countries, and stakeholders of all actions stemming from action 4 of the ERA Policy Agenda 2022-2024, and by monitoring the outcomes of implementing these initiatives and reforms on the ground. The action will include exchanges of good practices, the development of guidelines and recommendations, and the contribution to the consolidation of the R&I careers observatory (ReICO).

Expected outcomes

- Co-created guidelines for the implementation of the Council Recommendation on research careers, for better quality jobs and a better functioning research labour market;
- a community of practice to share experiences and strengthen research careers at European, national, regional, and organizational level;
- a consolidated ReICO with the involvement of relevant actors outside the R&I community, and jointly eliminating gaps;
- recommendations for better career development and career progression, including European tenure-track like models and related assessment and funding mechanisms;
- co-created investment pathways, joining and coordinating forces and co-designing initiatives to reduce precarity and ease career paths to non-academic research careers.

5. REFORMING RESEARCH ASSESSMENT

Objectives

- Make institutional changes to improve research assessment;
- measure the level of progress made with reforms to research assessment;
- increase knowledge and raise awareness of reforms;
- identify gaps in reforms, any limiting or blocking factors, and further measures needed;
- Ultimately, help raise quality, performance and impact of research and therefore to make research careers more attractive.

Description

The way research projects, researchers, research units and research institutions are currently assessed is still very much based on a limited set of research outputs and activities, mainly publications, and dominated by some inappropriate uses of several indicators and methods gauging the quality, performance and impact of research.

- Identifying and widely-sharing good practices, toolboxes and recommendations, for research assessment;
- organising international dialogues, dissemination and mutual learning events by the Commission, Coalition for Advancing Research Assessment (CoARA) and Member States;
- implementing research assessment reforms in research institutions;
- carrying out a study to identify the changes made to national frameworks, changes implemented by research institutions, and changes expected from the action plans of the signatories of the Agreement on Reforming Research Assessment;
- continued national dialogues between national authorities and research organisations.

Expected outcomes

- Knowledge, awareness, and engagement to research assessment practices and reforms raised by CoARA, research organisations (including research performing, research funding and research assessment organisations), national authorities and EU institutions;
- support, mapping and an analysis of the changes made to in national frameworks and in individual research institutions;
- the identification of any remaining gaps in reforms and of any measures still needed at all levels (institutional, national, and European).

6. UPSCALING KNOWLEDGE VALORISATION CAPACITIES AND ACTIVITIES

Objectives

- Strengthen knowledge valorisation and deployment, skills and professional support;
- improve the access and use of intellectual assets and data derived from research and innovation;
- Consolidate the culture of knowledge valorisation.

Description

The EU faces challenges in translating research and innovation results into societal use and economic value and in retaining value within the EU, which is vital for the functioning of the internal market. This structural policy will seek to close in the European knowledge landscape by

- Building the capacity of intermediaries to strengthen links between academia, industry and public authorities;
- improving access to and safeguarding of intellectual assets notably through responsible licensing and shared data governance approach;
- strengthening the valorisation capacities and skills of R&I actors including research institutes and funding organisations;
- increasing the uptake of results from multidisciplinary research including social sciences, arts and humanities;
- improving the measurement framework for capturing wider societal value created.

Expected outcomes

- European scheme on responsible licensing principles and shared data-governance approach to facilitate greater cross-sectoral collaboration and benefit for both businesses and society, taking research security considerations into account;
- ‘learning labs for value creation’ to develop skills on knowledge valorisation and entrepreneurship through targeted trainings, peer-learning and contact with role models;
- policy guidance on increasing and accelerating the uptake of R&I results of a multidisciplinary nature in the European Research Area, based on a Commission background study and on work to create a dedicated community of practice;
- a comprehensive measurement framework capturing the broad spectrum of knowledge valorisation activities to monitor the performance of the ERA in this field.

7. GLOBAL APPROACH TO R&I

Objectives

- To guarantee that the ERA Policy Agenda 2025-2027 includes the international dimension, as a cross-cutting, long-term and fundamental characteristic of the R&I ecosystem.
- enhancing the science-policy-diplomacy interface;
- Tackling global challenges while protecting the strategic interests, values and principles of the Union, its Member States and associated countries;
- promoting a level-playing field at EU level in international cooperation in R&I;
- Deepen knowledge on bilateral cooperation led by MS and associated countries with non-EU countries.

Description

Against the background of fundamental changes to geopolitical, scientific and technological environment, the EU must become more strategic in using the power of international cooperation in research and innovation .

This structural policy will be pursued by running activities and discussions of the ERA Forum Standing Subgroup on the Global Approach to R&I:

- recurrent mapping of bi- and multilateral scientific cooperation of Member States, associated countries and stakeholders;
- fostering synergies with other EU programmes and initiatives such as Global Gateway;
- coordinating and aligning with the other ERA actions such as the proposed one on research security;
- providing input and guidance on how to strengthen the international dimension of the next framework programme.

Expected outcomes

- European framework for science diplomacy (2025);
- roadmap for multilateral dialogue on values and principles for international cooperation in research and innovation (2025);
- new pilot initiatives of the Team Europe approach, including Latin America and Caribbean in 2025 and India in 2026; and expanding current Team Europe approaches to Africa and China;
- an opinion on how to organise international R&I cooperation activities with third countries under the next framework programme.

8. MAKING THE STRATEGIC ENERGY TECHNOLOGY (SET) PLAN A KEY THEMATIC COMPONENT OF THE ERA

Objectives

- Deeper connections between the R&I community and industry to support to deployment of clean energy innovations, without adding administrative burden;
- Form joint approaches to cross-cutting issues, including sustainability by design, skills development, research and innovation tailored to societal needs, digitalisation, and market uptake and market accessibility;
- review the current technology scope to include new relevant clean energy technologies;
- new cooperation between the European Technology and Innovation Platforms and the European industrial alliances.

Description

This structural policy will contribute to overall ERA targets by deepening coordination between clean energy R&I programmes and initiatives at EU, national and institutional level and by increasing the cooperation between actors across Europe, in view of contributing to the overall climate and environment targets. Furthermore, making the revamped SET plan a structural policy of the new ERA Policy Agenda will be a driver for launching and unfolding new key initiatives and better connecting clean energy R&I goal to the broader R&I perspective. For instance, the EU Solar Energy Strategy set out among its actions the preparation of a joint strategic solar energy R&I agenda with the Member States. Additional foreseen activities include:

- setting up of five cross-cutting task forces to issue tools and drafting recommendations on cross cutting issues across the SET plan;
- creating a workstream on hydrogen to implement the ‘ERA pilot on Green Hydrogen’;
- alignment of R&I priorities between Member States and EU, while fostering cross-border European research centres, universities and industries joint actions.

Expected outcomes

- Alignment of all domain/technology-specific Strategic Research & Innovation Agendas and implementation plans to the new EU priorities and development of Common Implementation & Investment Plans”
- policy recommendations to better include the following areas in the energy R&I framework of SET plan: circularity and materials substitution; R&I for societal needs; digitalisation; skills; market uptake;
- Improved monitoring of progress, through the SET plan information system.

9. IMPROVING THE ARTICULATION BETWEEN R&I AND HIGHER EDUCATION WITHIN THE ERA AND UNLEASHING THE FULL POTENTIAL OF EUROPEAN R&I ECOSYSTEMS

Objective s

- Achieve better coherence between strategies, policies, programmes and funding for R&I and higher education. Closer cooperation and dialogue between those two areas at EU, national, regional and institutional levels;
- achieve stronger and more connected regional R&I systems and reduction of European innovation divide;
- improve knowledge, indicators and tools for implementing comprehensive cross-sectoral strategies, aligning innovation with broader societal goals;
- higher level of awareness on and improved complementarity between research and education;
- reduce fragmentation and regional divide within Europe's R&I landscape;
- strengthen cooperation between academic, public and private entities.

Description

This structural policy aims to create a structured and focused exchange platform to promote a more systematic approach, including in terms of governance and support, and involving both research and higher education representatives. For establishing robust partnerships between education and research & innovation actors, working together to set up new mechanisms and incentives to reduce fragmentation and bridge the regional divide.

Expected outcomes

- Development of recommendations drawn up to design and implement strategies at institutional, regional, national and European level;
- The identification of current legal obstacles at regional, national, and European levels; of principles and main components necessary for the development of the legal framework for establishing the fifth freedom; recommendations for consolidating European HEIs at the forefront of global R&I;
- The identification of policies, mechanisms and incentives to foster more robust partnerships between HEIs and the other R&I actors;
- Ambitions roadmap adopted for ERA/EEA (higher education-related) strategic alignment.

10. ENHANCING TRUST IN SCIENCE THROUGH CITIZEN PARTICIPATION, ENGAGEMENT AND SCIENCE COMMUNICATION

Objective

- Boost public engagement in R&I, citizen science and science communication through commonly developed guidelines;
- develop more effective mechanisms for substantial, inclusive public engagement in R&I;
- strengthen science-society links at national/ regional/ local level;
- increase scientific literacy and science capital through closer links between the scientific community and young people and with people not habitually involved in science.

Description

This structural policy presents a multifaceted approach with a view to enhancing trust in science and by extension democratic governance - building on the achievements of Action 14 'Bringing Science Closer to Citizens' of the ERA Policy Agenda 2022-2024.

Expected outcomes

- Inclusive engagement guiding principles: develop common approaches for public engagement in R&I and science communication;
- activities connecting researchers and young people: innovative ways of effectively and inclusively engaging and involving young people with science, by inviting practitioners to provide best national practices and build on the work to develop handbooks and guidelines under EU funded projects;
- connect science and citizens, organise activities connecting and strengthening local R&I communities with different stakeholders and citizens around the topic of science and its role in society;
- mutual learning exercise on trust in science, consolidating and sharing knowledge on how to build, measure and enhance trust through public engagement;
- a mechanism and funding scheme designed to scale up of best practices of national citizen participation and engagement initiatives to EU level.

11. IMPROVE EU ACCESS TO EXCELLENCE

Objectives

- Improve access to excellence throughout the EU;
- contribute to a coherent and synergetic design and implementation of EU investment in R&I from cohesion policy programmes and the 10th framework programme for R&I;
- forge closer links between regional authorities to initiatives under the R&I programmes, and to provide incentives to launch national initiatives that complement those at EU level.

Description

There are persistent bottlenecks to improving to excellence and to building stronger synergies between cohesion policy and Horizon Europe. The structural policy tackles these bottlenecks by strengthening cooperation between the bodies involved managing the European Regional Development Fund and Horizon Europe at national and EU-level.

- Continuing the work of ‘RIMA’ subgroup under the ERA Forum, to bring together national R&I authorities and managing authorities of cohesion policy programmes to facilitate the sharing of information on outcomes and practices from EU initiatives.

Expected outcomes

- Recommendations drafted on improving access to excellence and securing coherence and synergies between programmes;
- progress report on implementing of the recommendations from the RIMA phase 1 survey under the current legal framework (e.g., communication, capacity building, long-term planning, data accessibility and data-driven approach, implementation rules, and coordination models between the two communities);
- advice on building stronger synergies in the future between Cohesion Policy, in particular on smart specialisation while using synergies with actions funded under the ‘Widening’ part of the programme, and the framework programme;
- exchanges of best practices to improve access to excellence, in particular national policies, actions and instruments that facilitate access to scientific and innovation networks, and policy suggestions, especially for collaboration across Member States.

ERA actions

12. EQUITY IN OPEN SCIENCE

Objectives

- Identify barriers and challenges regarding equity in practicing open science and propose ways forward for policy responses;
- expansion of not-for-profit, open access scholarly publishing models with broad uptake and recognition across disciplines, including in research assessment;
- build capacities in terms of open science skills and equitable access to open science infrastructures for the ERA research community;
- develop EU policy approaches to identify pathways for greater equity in Open Science practices and infrastructures.

Description

Implementing open science requires strong policy support and a significant investment in resources, notably in infrastructures (and access to them), coordination, technological readiness, open science and digital skills, and creating effective incentives and recognition and award systems for researchers. These differ widely among European countries and organisations - but also globally - and create an overall need for more equitable approaches in the ERA.

- Examination of national experiences and policy frameworks in relation to access, coverage and design of infrastructures for open science, scholarly publishing policies and researchers' open science capacities;
- launching a mutual learning exercise on equity in open science in 2025/2026;
- Promote skills dissemination and training to tackle inequities in practicing open science;
- Running workshops for public authorities to identify recommendations for institutions and policy makers – and to issue a report in 2027.

Expected outcomes

- Stocktaking of equity challenges in open science across ERA countries (reflecting existing diversity in terms of frameworks, capacities, funding etc.);
- policy and funding support to operate high-quality not-for-profit open access scholarly publishing services across the ERA;
- development and dissemination of shared tools, training methods and services to boost capacity in terms of open science skills; in collaboration with stakeholders;
- recommendations for developing an EU policy approach to equity in open science in its different practices.

13. ADVANCING THE EUROPEAN SCIENCE FOR POLICY (S4P) ECOSYSTEM

Objectives

This action has three interlocking objectives:

- further developing ‘Science for Policy’ and improving the cross-cutting integration of knowledge in public policies;
- furthering and strengthening the European S4P ecosystem across all approaches, sectors, and levels of governance;
- promoting collaboration among networks of relevant actors and fostering the identification and exchange of best practices and mutual learning.

Description

In order to support science-policy interfaces across Europe and to tackle the fragmentation in S4P ecosystems, two main milestones will be achieved:

- a network of science for policy correspondents, bringing together officials working on S4P in national R&I policy institutions across Europe with the aim to coordinate efforts to mainstream S4P approaches in their administrations at all levels of governance and foster mutual learning across countries;
- A S4P community of practice with the objective to foster strong pan-European and international connections and greater interactions, mutual learning, and collaboration of S4P networks and actors.

Expected outcomes

- Regular dialogue between the network, the community of practice, and other interested stakeholders to explore how to create the necessary conditions to enable effective engagement between research and policy;
- peer learning is fostered, strengthening skills and competences and enabling collaboration on S4P across different sectors and levels of governance;
- an observatory of the European S4P landscape and its practices is created, compiling success factors and common challenges of operating at the science-policy interface.

14. FACILITATING AND ACCELERATING THE RESPONSIBLE USE OF AI IN SCIENCE IN THE EU

Objectives

To design, support, align and coordinate policy measures to accelerate and facilitate the responsible uptake of AI in European science and research, resulting in:

- aligned policies on AI in Science, including common identification of priority areas;
- greater expertise and resource sharing across countries;
- a foundation for collaboration and future involvement, for sharing best practices, and for attracting more like-minded partners;
- closer collaboration and engagement with stakeholders, setting up networks, and building a community.

Description

The action will focus on three key topics stemming from the political priorities of the new Commission:

- strategy for AI in science;
- The set up of a European AI Research Council;
- An agreement on a funding focus for AI in science.

These topics will be discussed and developed in the form of regular meetings, capacity building workshops presenting evidence and policy developments, as well as hands-on workshops to work together on policy alignment, guidelines, and funding agendas.

Expected outcomes

- Update, promote and disseminate the ERA living guidelines on the use of generative AI in research (at least yearly in 2025, 2026, 2027);
- a joint roadmap on AI in science (2025);
- an agreed strategic funding agenda with Member States and possibly also with European funders (2026);
- joint projects if considered feasible/useful by participants (2026-2027);
- an agreed plan for ongoing collaboration and policy development (2027).

15. ENHANCING RESEARCH SECURITY

Objective

- Improve research security in the EU to maintain a strong and open academic environment, taking the Council Recommendation on research security as a basis;
- provide a platform for policy makers to share experiences and implement and develop a national approach to mitigate risks, while respecting academic freedom and institutional autonomy;
- empower the European R&I sector to optimise the opportunities and mitigate the risks of international collaboration and to keep international cooperation open and safe.

Description

Given how knowledge flows across the ERA and the strong international connections in the R&I sector, it is not possible to tackle research security through national efforts alone. Coordinated national and EU-efforts will provide a framework to share best practices and ensuring consistency. In the first year, Member States will be able to assess their state of play and plan next steps to help each other achieve a base level of research security.

Expected outcomes

The action will implement the framework of the Council Recommendation on research security² in the following way:

- work towards a European cooperation space on research security by structural cooperation among Member State experts, research funders and EU-level research and innovation stakeholder organisations as well as through setting up a European Centre of Expertise on Research Security;
- convene policymakers, experts and practitioners around the theme of research security in a biennial European Flagship Conference on Research Security (2025, 2027);
- map, monitor and analyse national and EU level research security measures and initiatives, including through a biennial Research Security Monitor (2025, 2027);
- support information sharing, peer learning and capacity building, notably for the development of national approaches to research security.
- develop guidance and tools for safeguards in national and EU level research funding programmes as well as for risk management and due diligence processes in research performing organisations (i.e: One-stop-shop platform on tackling foreign interference in R&I)
- closer cooperation with international partners on research security approaches and measures

Given the sensitive nature of the topic, which often involves sensitive or classified information, participation in will generally be restricted to Member States experts.

² COUNCIL RECOMMENDATION (EU) 9097/1/24.

16. ACCELERATING R&I INVESTMENTS FOR EUROPE'S INDUSTRIAL TRANSFORMATION AND COMPETITIVE SUSTAINABILITY

Objective

- Achieve a greater understanding of industrial needs for R&I results and investments, enabling policy makers and funding agencies to design and implement targeted tools to mobilise R&I investments;
- increase synergies in funding of R&I, notably by industry, for technology transfer, demonstrators, scale-up, validation and technology infrastructures;
- facilitate the path to deployment and use of advanced technologies in industry with a focus on sustainability and societal benefit.

Description

Accelerating R&I investments requires a systematic approach to informing and shaping the R&I agenda by industrial needs and a comprehensive, operational framework for effective transfer of R&I results into industrial applications.

- Integrating current tools at European, national and regional levels, showcasing good practices in their application, facilitating exchange of experience and providing opportunities for Member States and regions to share good practices, and to bring new knowledge;
- Implement the envisaged European approach on technology infrastructures, including the selected pilot actions, governance framework and possible funding schemes;
- developing, testing and implementing the policy toolbox approach for accelerating decarbonisation of energy-intensive industries and advancing circular economy, ensuring the contribution from the SET plan community.

Expected outcomes

- Mapping of the policy tools supporting industrial R&I;
- European policy on Technology Infrastructures and implementation of its actions leading to increased availability and use of such infrastructures by industry, including SMEs, start-ups and scale-ups.
- building and exchanging knowledge and expertise in national industrial technology roadmapping to decarbonise energy-intensive industries;
- contributing to a European monitoring platform for technologies and industrial demonstrators (INCITE),

17. ACCELERATING NEW APPROACH METHODOLOGIES (NAMs) TO ADVANCE BIOMEDICAL RESEARCH AND TESTING OF MEDICINAL PRODUCTS AND MEDICAL DEVICES.

Objective

The action aims to accelerate, through an aligned and coordinated approach across Member States and associated countries, the development, validation/qualification, acceptance, and uptake of new approach methodologies (NAMs) in biomedical research and regulatory testing of medicinal products and medical devices.

Description

Although Member States are bound by Directive 2010/63/EU that calls for the replacement of animal procedures in research, education, and regulatory testing as soon as valid alternative approaches become available, there is no coordination mechanism to ensure the development and validation of NAMs. The ERA action will actively involve all actors by setting-up an EU-wide coordination, consisting of relevant ministries, regulatory agencies, research funding organisations, academia, pharmaceutical and medical technology industry, contract research organisations (CROs), small and medium-sized enterprises (SMEs), and startups, to align national and regional policies for speeding up the development, validation, acceptance, and uptake of NAMs.

This action will be supported by four working groups with the themes:(1) development of NAMs and common European infrastructures, (2) validation/qualification, acceptance, and uptake of NAMs, (3) education and training, (4) openness & awareness.

Expected outcomes

- NAM development and infrastructure agenda identifying where NAMs are most needed and expected to have the highest short- to medium-term impact (Q4 2027);
- Member States and stakeholders identify actions they could jointly support to develop new NAMs and related infrastructures (Q1 2028);
- NAM acceptance and uptake strategy which identifies criteria for using NAMs (Q3 2027);
- Member States and stakeholders jointly supporting the validation and qualification of a limited set of NAMs designed to be accepted and implemented in regulatory testing of medicinal products and medical devices (Q4 2027-Q3 2028);
- NAM education and training plan (Q1 2027) and joint education and training programmes (Q2 2027- Q2 2028);
- Harmonised NAM openness and awareness programme that improves open access to NAMs protocols and results of animal experiments. The programme will provides guidance for ethical committee members, reviewers, and regulators, based on best practices in participating Member States. It proposes concrete actions to increase the confidence of regulators in NAMs including a better understanding of the potential and limitations of NAMs (Q2 2028).
- At least one major conference to raise awareness of civil society and patients on biomedical research, drug discovery and development process (Q3 2028).

18. A HARMONISED AND COORDINATED FRAMEWORK FOR A EUROPEAN APPROACH TO INTEGRITY AND ETHICS IN R&I IN THE FACE OF EMERGING CHALLENGES

Objectives

- Creation of a platform to facilitate the discussions on a new approach to ethics and integrity in research that is technology-neutral and will facilitate innovation and support excellence, respecting simplification and the ethics by design approach;
- coordination of actions to enhance ethics and integrity, prevent breaches, and address barriers to implementing existing ethical guidelines;
- gradually develop a European network to establish a framework for research integrity and ethics, including a roadmap of actions and performance indicators;
- create a vision for an ecosystem of ethics advice and support based on trust, enabling science and research to drive responsible innovation aligned with societal interests.

Description

This action aims to anticipate, prevent, tackle, and mitigate emerging challenges and safeguard research integrity in critical technology areas in light of the recent update of the European Code of Conduct for Research Integrity and the Commission's Recommendation on critical technology areas for the EU's economic security.

- Taking a concerted approach to integrity and ethics to facilitate the sector's response to this and other emerging challenges;
- providing a wide range of tools to foresee, prevent, manage, and mitigate novel disruptive challenges to research integrity;
- develop a truly operational, coherent and sustainable European approach to support researchers to address ethical challenges.

Expected outcomes

- Development of a coordination structure (in the form of a European platform) that will bring together the existing European networks on research ethics and integrity;
- a detailed roadmap of actions and performance indicators;
- practical guidelines, operational toolboxes, and standard operating procedures;
- an approach to joint training actions approach on a pilot basis.

19. EMPOWERING R&I: A NEW ERA IN RESEARCH MANAGEMENT

Objective

- Achieve better recognition of the research manager profession as well as attractive and clearer career paths for research managers;
- ensure broad and easy access to educational material and upskilling activities/tools of research managers, including early careers research managers, including guidance on AI tools;
- create a recognised Europe-wide learning and skills development scheme for Research Managers with peer-to-peer learning and mobility components ensuring the integration of ERA priorities and values, e.g., ethics and research integrity, open science and inclusive gender equality;
- improve networking with research managers in the private sector for a triangle approach (public research performing organisations – research funding organisations and industry) resulting in better awareness of schemes for professional development, career path and available training opportunities.

Description

As research processes intensify and the expectations on generating a societal impact grow, specialized support from research managers becomes crucial. This initiative seeks to strengthen the research management profession, still undervalued in the ERA, and provides support for its strategic development. It emphasizes the need for coordinated EU and national policy support to create skilled professionals, better career prospects, improved working conditions, gender equality, training, and mobility.

Expected outcomes

- Launching in 2025 and implementing an overarching and flexible careers and competence framework for research managers; implementing an evidence-based awareness campaign in Member States, the results of which will be published in 2026;
- Co-creating in 2026 a European Charter for research managers, creating a triangle approach of research performing organisations, research funding organisations, and European industry, ensuring recognition across sectors; designing approaches for capacity building; and analysing the role of research management in selected actions funded under the widening part to the Horizon Europe to monitor the impact on the overall efficiency and effectiveness of the R&I system;
- Launching in 2027 a centralised online hub, preferably under the upcoming ERA Talent Platform, that collates current and new curricula, educational materials, alongside upskilling tools for research managers, and access to vital training and certification programmes for both current and aspiring professionals.