

# Enabling open science via sharing and re-use of data, including through the European Open Science Cloud (EOSC)

What is the action about?	<p>The action aims to achieve a step change across research communities and research infrastructures in Europe towards open sharing, seamless access and reliable re-use of data used and produced along the research life cycle. The European Open Science Cloud as a federation of infrastructures serving researchers aims to be a key enabler of this transition.</p>
What are the main outcomes?	<ul style="list-style-type: none"><li>• Develop a high-value federation of EOSC nodes and increase its uptake by research communities</li><li>• Increase the amount and productivity of FAIR research data in Europe</li><li>• Propose legislative and non-legislative measures to improve access and re-use of scientific publications and data</li><li>• Assess the impact of open science policies and practices based on an open science policy intelligence platform</li></ul>
Why do we need the action? (Added value as an ERA action)	<p>A significant part of data generated or used in research are not shared openly, are poorly annotated and are not machine-readable. The cost of non-FAIR data is estimated to be more than EUR 10 billion per year in Europe. It is only through coordination at European level and the strong involvement by the Member States and Associated Countries to engage scientific communities and research infrastructures in Europe that we can tackle these challenges effectively.</p>

# Open Science

## “Equity in Open and Responsible Research and Innovation”

What is the action about?	Federation of activities promoting equity, strengthening openness and social responsibility of research and innovation
What are the main outcomes?	<ul style="list-style-type: none"><li>• Identify OS equity barriers and challenges in ERA countries (attention also to divergence in capacities among countries).</li><li>• Expansion of not-for-profit OA scholarly publishing platforms and models in Europe</li><li>• Capacity building for equitable access to OS infrastructures, skills for researchers to apply OS practices. Training on open and responsible publishing practices for researchers at all career stages (avoiding predatory publishing).</li><li>• Establish mechanisms for more equitable public engagement in R&amp;I set up.</li><li>• Recommendations and support for HEIs, RPOs, and RFOs to identify concrete pathways for greater equity in OS practices and infrastructures.</li></ul>
Why do we need the action? (Added value as an ERA action)	<ul style="list-style-type: none"><li>• Imbalances in equity undermine the potential of OS to deliver on research quality, impact, accessibility, reproducibility, public engagement and the democratization of knowledge.</li><li>• Pact stresses need to promote more socially responsible R&amp;I and policy adaptability</li><li>• ERA Action will develop capacities of institutions and researchers for OS, promote more equitable academic publishing practices, support more equitable public engagement in R&amp;I.</li><li>• Engaging closely with MS/AC. Main actors also include stakeholders (RPOs and RFO</li></ul>

What is the action about?	Ensuring the openness and accessibility of world-class sustainable research infrastructures for researchers in Europe, and further developing and consolidating research infrastructures, their integrative function in the R&I ecosystem and their potential in providing solutions to societal challenges.
What are the main outcomes?	<ul style="list-style-type: none"><li>• <b>Strategic approach for EU support</b> to research infrastructures</li><li>• Next ESFRI <b>Roadmap</b> and elements for next <b>Landscape Analysis</b></li><li>• Results of <b>monitoring</b> ESFRI Landmarks</li><li>• Reports on <b>resilience</b> and <b>greening</b> of European research infrastructures</li><li>• <b>Stakeholder</b> engagement (with EOSC, industry, technology infrastructures etc.) events</li><li>• Report on <b>financing</b>, incl. synergies with national &amp; regional funding, EU and others</li><li>• Report on <b>international</b> cooperation</li><li>• Impact assessment of <b>ESFRI</b></li><li>• Report on further strengthening of <b>ERICs</b> and other excellent European RIs</li></ul>
Why do we need the action? (Added value as an ERA action)	RI policy development and implementation requires close cooperation among MS and with the EC. New challenges call for further collaborative efforts and reinforced synergies with other ERA actions e.g. on open science, research careers, and

**Strengthening inclusive and intersectional gender equality in the European Research Area**

What is the action about?	Strengthening inclusive and intersectional gender equality in the ERA, building on the outcomes of Action 5 of the ERA Policy Agenda 2022-2024 and its dedicated subgroup, with renewed objectives addressing key priorities identified by MS, AC, Stakeholders and the European Commission.
What are the main outcomes?	<ul style="list-style-type: none"><li>• Monitoring and evaluation approach for effective (inclusive) GEPs</li><li>• Guidelines for implementing intersectionality in R&amp;I policy, including recommended indicators</li><li>• Monitoring and evaluation approach for an increased uptake of the integration of the gender dimension in R&amp;I content</li><li>• Enhanced gender mainstreaming mechanism for synergies with other ERA Actions at EU and national levels</li><li>• Implementation of the code of conduct on gender-based violence in R&amp;I developed by Action 5 of the ERA Policy Agenda 2022-2024</li><li>• Principles for gender budgeting in R&amp;I</li></ul>
Why do we need the action?	Gender and intersecting inequalities in the EU R&I system, and at national levels, remain pervasive and require continued policy coordination at the ERA level in order to fulfill the Post's related priority

# Pact Priority Area: Deepening a truly functioning internal market for knowledge

## Action Title: Attractive and sustainable research careers

What is the action about?	Support the joint implementation and the monitoring of initiatives and reforms to make research careers in Europe more attractive and sustainable
What are the main outcomes?	<ol style="list-style-type: none"><li>1. <b>Co-created guidelines for the implementation of the Council Recommendation on research careers</b> based on the exchange of good practices and lessons learnt, for better quality jobs and a better functioning research labour market</li><li>2. <b>Community of Practices</b> to share experiences in order to advance implementation at European, national, regional, organisational levels on strengthening research careers and improving mobility</li><li>3. <b>Consolidated Research and Innovation Careers Observatory</b> fulfilling the needs of policy makers and stakeholders with the involvement of relevant actors beyond the R&amp;I community, and jointly eliminating gaps</li><li>4. <b>Recommendations for better career development and European tenure-track like models</b>, and related funding mechanisms</li><li>5. <b>Co-created investment pathways</b>, joining and coordinating forces to reduce precarity and to facilitate paths for non-academic research careers</li></ol>
Why do we need the action? (Added value as an ERA action)	Following the adoption of the Council Recommendation establishing a European framework for research careers, there is a need for a structured approach to ensure its effective and coordinated implementation. There is a need to support initiatives and reforms for more attractive and sustainable research careers and more balanced talent circulation, including across sectors. This should encompass a policy dialogue and contribution involving all levels (European, national, regional, organisational).

# *Researchers' careers and mobility and research assessment and reward systems* Reform of Research Assessment

What is the action about?	<b>Reforming the Assessment Systems</b> for research, researchers and institutions to improve their quality, performance and impact
What are the main outcomes?	<ul style="list-style-type: none"> <li>• <b>Awareness on reforms of research assessment raised</b> by CoARA, research organisations and national authorities;</li> <li>• <b>Mapping and analysis of the changes</b> introduced in national frameworks and in individual research institutions;</li> <li>• <b>Identification of remaining gaps in reforms and of measures still needed</b> at all levels (institutional, national, European).</li> </ul>
Why do we need the action? (Added value as an ERA action)	<p>All three <b>expected outcomes for ERA Action 3</b> have already been delivered or are well under way:</p> <ul style="list-style-type: none"> <li>✓ CoARA established;</li> <li>✓ Implementation plan progressed with the selection of CoARA Working Groups;</li> <li>✓ National dialogues initiated to identify potential legal and administrative barriers and solutions.</li> </ul> <p>CoARA and stakeholder organisations are now expected to work on reforms during the coming years, in accordance with the Agreement.</p> <p><b>Remaining gaps:</b> Awareness on reforms will need to be raised; Progress made will need to be measured; Gaps in reforms will need to be identified; Policy dialogue at national level and work will need to continue to address remaining obstacle and improve enabling frameworks.</p>

# Strengthening knowledge valorisation in R&I

What is the action about?	To strengthen the R&I performance in Europe by reinforcing the links between the R&I actors and making sure that research results bring value to the society.
What are the main outcomes?	<ul style="list-style-type: none"><li>• Better recognition of the role of intermediaries and capacity building of knowledge valorisation services including internal KTO/TTOs.</li><li>• Novel tools and approaches for intellectual assets management for improved access and use including by industry in the international and geopolitical context.</li><li>• Improved skills and technologies, including AI, for fostering knowledge valorisation.</li><li>• Increased uptake of non-technological research results from social sciences and humanities for addressing complex societal challenges.</li><li>• Metrics, indicators and new approaches for better capturing the value created.</li></ul>
Why do we need the action? (Added value as an ERA action)	<ul style="list-style-type: none"><li>• To improve the value creation of R&amp;I Europe needs to upscale its capacity to bring research results to the market, policy makers and society.</li><li>• To efficiently address emerging key policy priorities including green and digital transitions and ensuring EU competitiveness and its technological base, it is crucial to strengthen the link between R&amp;I actors and society.</li><li>• To use knowledge valorisation as a tool for economic and industrial recovery and resilience (COMPET Council debate Q4/2023 and Council Conclusions Q2/2024).</li><li>• To address the new challenges, such as research security and fast evolving geopolitical environment and emerging technologies such as AI which have significant impact on Europe's R&amp;I performance.</li><li>• Strengthening the linkages of KV with industrial strategy and higher education</li></ul>



# Strengthening Freedom of Scientific Research in the EU

What is the action about?	Strengthening and developing a cohesive EU policy to protect the freedom of scientific research while reducing barriers in research collaboration.
What are the main outcomes?	<ul style="list-style-type: none"><li>• Clear policy guidelines on how to strengthen freedom of Scientific Research and enhanced international cooperation.</li><li>• Raise awareness and create a Europe-wide culture of protecting this freedom</li><li>• Protection of scientists from threats.</li><li>• Monitoring the state of freedom for scientific research in the EU.</li><li>• A coordinated EU approach in line with knowledge security developments.</li></ul>
Why do we need the action? (Added value as an ERA action)	Safeguarding freedom of scientific research in the EU fosters innovation, upholds democratic values and EU's reputation as a stronghold for this freedom, fosters trust in science throughout society and attracts global academic talent.



# Pact Priority Area: Scientific leadership

## Fundamental research and the scientific leadership of Europe

### What is the action about?

- Strengthening fundamental research to achieve scientific leadership, in line with the commitment of the Pact for R&I
- Analysing the current funding landscape in Europe and identifying actions to boost and further optimise the funding streams that nurture fundamental research
- Providing evidence to support informed policy-making and the preparation of the next FP

### What are the main outcomes?

- A strengthened framework for supporting fundamental research at national and European levels, contributing to a better coordinated and ambitious approaches to boost the scientific leadership of Europe
- Mutual learning on the balance between 1) core funding of RPOs and competitive research funding 2) bottom-up and challenge-driven research;
- Improved understanding of the role of fundamental research in contributing to innovation and societal challenges, training skilled graduates and researchers as well as creating international networks for transmitting the latest knowledge on complex challenges

### Why do we need the action? (Added value as an ERA action)

- To improve Europe's capacity to provide the resources and conditions required to become a leading scientific powerhouse;
- To contribute to the optimising of future investments
- To bring together MSs, EC and stakeholders to identify objectives, priorities priorities and a way forward for achieving this goal

# Societal Impact of Research: Social Sciences and the Humanities

What are the main outcomes?	<p>Shared understanding and knowledge about different cultures, peoples and their history and culture to deepen the understanding of why we, as a society, need to <b>face the challenges (including war conflicts, migrant crisis, climate change)</b>.</p> <p>Encourage <b>results related to actions on inclusiveness</b> and societal responsibility.</p> <p>Knowledge of and results relating to the modes in which scholars <b>communicate</b> the developments in the social sciences and the humanities and their impact to achieve:</p> <ul style="list-style-type: none"><li>• More accessible knowledge about the way society functions, what social issues we deal with (conflicts incl. ), social factors and their impact (languages, history, (cultural) artifacts...)</li><li>• Easier access to scholarly information through new venues and content</li></ul>
Why do we need the action? (Added value as an ERA action)	<p>To understand how to clearly <b>communicate</b> the problems of and results of social sciences (why we may not be able to answer specific questions, and what we need to be able to offer answers) and how they may both predetermine and impact our life (everyday life).</p> <p>To shed light – for <b>the (general) public</b> – on underlying causes of conflicts such as nationalisms, striving for dominance.</p> <p>To overcome the <b>lack of knowledge (or fake expertise)</b> about the cultural values of "the others, the foreigners" leading to lack of tolerance towards "the others, the foreigners" and to foster solidarity with "the others, the foreigners".</p> <p>To <b>explore other approaches</b>/methods/venues, including popular venues/media with targeted content (interesting facts, quirky hypotheses, etc.; educational materials...) aimed at specific demographics, relevant topics and problems.</p> <p>To support the <b>values we take for granted</b> such as ethics and integrity, freedom, inclusiveness</p>

# Scientific Leadership

Supporting the uptake of science into policymaking through the establishment of a European Science for Policy (S4P) ecosystem

What is the action about?

Supporting the uptake of science into policymaking through the establishment of a European Science for Policy (S4P) ecosystem

What are the main outcomes?

- Setup a network of S4P coordinators across Europe to steer the co-creation of the European S4P ecosystem
- Exchange and promote best practices through an MLE
- Develop a S4P Code of Practice and operational Guidelines for the S4P actors
- Establish synergies with ERA Actions 3, 4 and 7

Why do we need the action?  
(Added value as an ERA action)

- Bridge the gap between science and policy
- Support the design of better-quality policies that benefit the society
- Support further development and better connection of the national S4P ecosystems across Europe
- Promote coherent S4P approaches to achieve common long term policy objectives and better respond in emergencies
- Reinforce trust among the S4P actors and public trust in governance

# Scientific leadership AI in Science

What is the action about?	Support, align and coordinate the policy measures to accelerate and facilitate the uptake of AI in European science
What are the main outcomes?	<p><b>Policy gains:</b></p> <ul style="list-style-type: none"><li>• Improved understanding of the impact of artificial intelligence on research practice in different MS</li><li>• Identification and improved understanding of good practices and further needs for policy actions at EU and MS level to improve the ecosystem for AI in Science.</li><li>• Stronger collaboration and engagement with relevant stakeholders, setting up networks, building a community</li></ul> <p><b>Final outcome:</b> a Coordinated plan for AI in Science, comprising additional concrete deliverables like:</p> <ul style="list-style-type: none"><li>• Updates of the guidelines on the use of generative AI in research</li><li>• recommendations on specific issues identified by the MS</li></ul>
Why do we need the action? (Added value as an ERA action)	<ul style="list-style-type: none"><li>• align Commission and Member states' approach towards the responsible integration of AI in science for the benefit of society and for European scientific leadership</li><li>• enhance combined coordination on challenge-based actions such as digital transformation with impact on society.</li><li>• contribute to an EU policy on AI in Science which eventually can lead to national recommendations or new policies for the use of AI in science</li></ul>

# The contribution of the Subgroup on the Global Approach to the next ERA policy agenda

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*text*





# Global Approach in the next ERA policy agenda

- In the next ERA policy agenda, a dedicated ERA action on international R&I cooperation is more than ever needed
- **Unfinished business:** current priorities that should continue in 2025-27:
  - Science diplomacy
  - Multilateral Dialogue
  - Team Europe Africa and China
- **New priorities** to be added:
  - Research security
  - Other regions



# Global Approach in the next ERA policy agenda

- **Governance issues:**

- Improving the **visibility** of Subgroup's work, e.g. by providing (written) input
- Improve **uptake** of Subgroup deliverables
- **Clarification** of interlinkages between ERA actions and of working relations with ERA Forum and ERAC

- **Roles of the Subgroup:**

- **Owner** of an ERA action on the Global Approach
- **Horizontal role** monitoring and steering the international dimension of the ERA policy agenda





## Challenge-based ERA action

# Revamping the SET plan

What is the action about?	The SET Plan has been revised with a Communication (20 October 2023). The implementation of the SET Plan will continue in the new ERA Policy Agenda.
What are the main outcomes?	The measures included in the Communication on the revision of the SET Plan.
Why do we need the action? (Added value as an ERA action)	With the revision of the SET Plan, we are now moving to a new implementation phase. It is very important that the SET Plan continues to be strongly integrated in the ERA Policy Agenda. In the Communication, it was proposed, and the ERA Forum agreed, to set-up an ERA Forum sub-group to formalize the SET Plan Steering Group.

## Pact Priority Area - Challenge-based ERA action

### Action title - Promoting Sustainable Lifestyles in an Inclusive Manner (ERA-SLIM)

What is the action about?	Fostering energy demand reduction, behaviour change, and the adoption of more sustainable lifestyles is an important lever to support climate objectives. This action aims to respond to R&I needs by identifying the current state of research in the field to establish a common measurable understanding of sustainable lifestyles. This would allow for monitoring and benchmarking progress on achieving more sustainability and fairness goals.
What are the main outcomes?	<ul style="list-style-type: none"><li>• Strategic gap analysis of the European/Member State R&amp;I landscape(s) on sustainable lifestyles to shape a common understanding and conceptual framework.</li><li>• Fostering energy demand reduction, behaviour change, and the adoption of more sustainable lifestyles is an important lever to support climate objectives.</li><li>• Establish a monitoring mechanism to collect data, identify best practices and benchmark progress towards more sustainable lifestyles.</li><li>• Disseminate and discuss the results at relevant fora as appropriate, including at COP conferences and CEM summits.</li></ul>
Why do we need the action? (Added value as an ERA action)	Such an action would be rightly suited under the priorities of the European Research Area given that the normative nature of fairness questions in the green transition such as defining sustainable lifestyles and fair consumption spaces as well as policy measures enabling and constraining sustainable behavioural changes. Therefore, this requires a participatory approach and co-creation to include a diverse range of perspectives. The role of R&I actors in such a novel policy field is crucial.

# GREENING RESEARCH: TOWARDS CLIMATE-SUSTAINABLE RESEARCH PRACTICES



What is the action about?	The research community, encompassing research institutions, funders, and policymakers, bears the duty of reducing research activities' ecological impact without compromising scientific quality. This new ERA Action has two core objectives: 1) establishing a ERA-wide standard for evaluating research's ecological footprint, and 2) creating an ERA platform for sustainable research practices, focusing on sustainability pathways, mutual learning, and future planning.
What are the main outcomes?	The action's primary outcomes include common guidelines for assessing the ecological impact of research, promoting comparison and discussion within the ERA. This process will lead to identify best practices and create a cross-border network of research institutes, fostering knowledge sharing on sustainable research activities.
Why do we need the action? (Added value as an ERA action)	Climate action stands as a top priority, and research activities should lead the way. This action seeks to raise awareness, define standards, and generate evidence for reducing research's ecological footprint. Its implementation will expedite the adoption of greener approaches throughout the ERA. Co-creation is ensured by launching this ERA action while initiating similar national-level efforts and involving stakeholders.

# Revival of indigenous plant knowledge

## ction Title

What is the action about?	Collaborate with native communities to document and preserve their traditional plant knowledge, utilising this knowledge to promote environmental management and sustainable land use.
What are the main outcomes?	<ul style="list-style-type: none"><li>• <b>Climate resilience:</b> this action would aid in identifying resilient plant species for adaptation to climate change;</li><li>• <b>Biodiversity protection:</b> it can enhance understanding of local ecosystems, supporting more effective biodiversity conservation;</li><li>• <b>Sustainable land care:</b> traditional practices can improve land health and create resilient ecosystems;</li><li>• <b>Economic and health benefits:</b> indigenous plants can offer economic and medicinal advantages for communities and society;</li><li>• <b>Education and heritage:</b> documenting plant knowledge can foster intergenerational learning and cultural connections;</li><li>• <b>Community engagement:</b> involving indigenous communities can promote cooperation and mutual respect for sustainable outcomes;</li><li>• <b>Global knowledge sharing:</b> sharing plant knowledge can inspire similar initiatives worldwide, encouraging cross-cultural collaboration.</li></ul>
Why do we need the action? (Added value as an ERA action)	<b>Added value at national and European levels</b> <ul style="list-style-type: none"><li>• <b>Knowledge enrichment:</b> enriching collective knowledge, enhancing research and policy discussions;</li><li>• <b>Innovation and adaptation:</b> inspiring innovative solutions for sustainability, conservation and climate change;</li></ul>



# New proposed ERA policy action (revised\*)

Non-animal approaches (NAMs) in  
biomedical research  
and testing of pharmaceuticals

\* with NL, SE, DE, BE and EU-LIFE

**ERA forum** – 14 December 2023

# Major changes in revised ERA action

- ❑ **Title:**

- ❑ “Non-animal approaches (NAMs) in **biomedical research** and testing of **pharmaceuticals**”

instead of

- ❑ “Reducing the number of animals used in regulatory testing and research”

- ❑ More **detailed** structure around 4 Working Groups

- ❑ More focused and restricted in its regulatory aspects to **pharmaceuticals** (excluding all chemicals regulated by ECHA and EFSA)

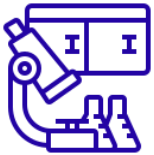
- ❑ Additional proposed concrete joint actions from the **MS**



# Why is uptake of **NAMs** relatively slow?



**insufficient availability of NAMs** to cover all aspects of biomedical sciences or complex regulatory endpoints



**lack of coordinated investment in MS** to fund and prioritize further **development** of NAMs and dedicated **infrastructures**



**Insufficient resources in most MS** to **qualify, standardize and validate** NAMs



disparities between **MS** in **education and training** programmes on the use of NAMs



**varying awareness of, and confidence in NAMs** from regulators



**The Commission invested**  
**> €1 billion** into  
**> 300 projects**  
over 20 years to develop NAMs

**Not enough!**  
**It cannot do it alone**

**coordination between MS is needed**

**ERA action addresses all these factors**



European  
Commission

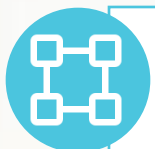
# ERA Objectives



**Create a forum with relevant ministries, regulatory agencies, research funders, academia, pharma and MedTech industry, CROs, to align national and regional policies for speeding up the development, validation, acceptance, and implementation of NAMs**



**WG1: Development of NAMs and common EU infrastructures**



**WG2: Validation, acceptance and implementation of NAMs**



**WG3: Education and training**



**WG4: Openness & awareness**

# WG1: Development of NAMs and common EU infrastructures

## ❑ Actions:

Identification of key areas where new NAMs are most needed and expected to have the highest impact, for instance in certain disease or biological areas, or specific safety and efficacy assessment endpoints for pharmaceuticals.

Priorities established for governments and industry to further coordinate development of NAMs and related infrastructures (also sustainability and access), taking into consideration the complementarity of scientific strengths and available expertise in the different MS and regions.

## ❑ Deliverables:

NAM development and infrastructure **agenda** identifying the areas where NAMs are most needed and expected to have the highest impact.

MS identify actions for possible joint support.

# WG2: Validation, acceptance and implementation of NAMs

## ❑ Actions:

Identification of the minimum criteria that NAMs need to meet to enable their acceptance and implementation in the contexts of basic and applied biomedical research, and for the regulatory assessment of pharmaceuticals.

Priorities for the qualification and validation of NAMs in the two different contexts of use.

## ❑ Deliverables:

NAM **implementation strategy**, which identifies criteria for the validation, qualification and acceptance of NAMs.

MS decide to jointly support the validation of a certain number of NAMs earmarked for acceptance and implementation in regulatory testing of pharmaceuticals.

# WG3: Education and training

## ☐ Actions:

Relevant **education and training programmes** on NAMs in EU and beyond for students, researchers, and regulators are mapped, and their quality and outreach assessed.

Suggestions to MS for jointly developing, in close collaboration with education directors at knowledge institutes, NAMs education and training modules.

## ☐ Deliverables:

NAM **education and training plan**, identifying the various opportunities to better inform researchers and regulators on NAMs.

MS engage to develop **common programmes** based on best practices identified in the most advanced EU or non-EU countries.

# WG4: Openness & awareness

## ☐ Actions:

Develop **common policies** to improve openness of research, publishing available NAM protocols and (positive as well as negative) results from animal experiments.

Recommendations on how to share best practices to make sure **ethical and funding committees, reviewers, and regulators** have a similar level of awareness of NAMs.

Improve the confidence of regulators in NAMs.

Identification of opportunities to raise awareness of NAMs in **civil society** and **patients**.

## ☐ Deliverables:

**NAM openness and awareness programme**

Guidance to **raise** awareness of NAMs based on **best practices in the MS**.

Plan to increase **confidence** of regulators in NAMs and involve civil society and patients.

# Longer-term expected Impact



**Availability of  
NAMs that would  
drive progress in  
biomedical  
research and  
innovation**



**Novel and  
harmonised  
animal-free  
strategies for  
regulators to  
ensure the highest  
level of protection  
of human and  
animal health**



**Sustained  
decrease of animal  
use in biomedical  
research and  
regulatory testing**



**Strengthened  
international  
leadership of the  
EU in biomedical  
research and  
regulatory testing  
of pharmaceuticals  
without animal  
testing**



**Increased public  
trust in, and  
societal  
acceptance of  
scientific  
innovation**



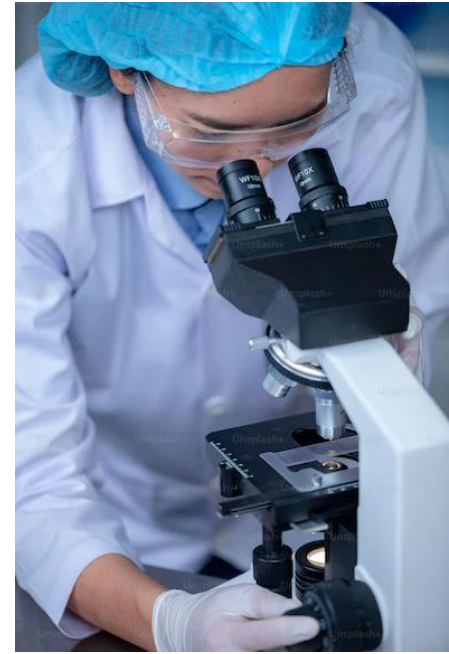
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# Contribution to ERA objectives

- ❑ Fosters **collaboration** among MS in an area where **coordination is missing**
- ❑ Promotes **sharing** of knowledge, data, resources, and best practices, contributing to **open science and cooperation**
- ❑ Promotes **responsible research and innovation** by encouraging the development and adoption of innovative, verifiable and reproducible methods that **reduce** the **use of animals**
- ❑ Seeks to ensure **policy coherence and alignment across MS**, by working towards **standardized and validated** NAMs that would comply with evolving regulations
- ❑ Active involvement of **citizens and patients** promotes **transparency** in the research and regulatory processes, and increases **societal trust** in science and innovation
- ❑ Positions EU as a **leader** of NAMs development and implementation, which could **attract talents** in EU and **boost research capabilities within MS**



# Thank you



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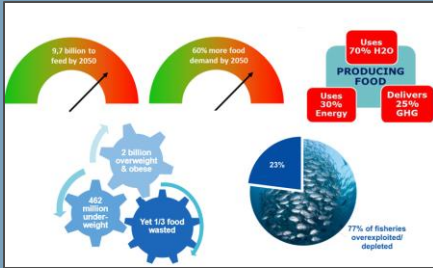
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# Strengthening science-policy interfaces for sustainable food systems

What is the action about?



The action “**Strengthening science-policy interfaces for sustainable food systems**” will help Member States build capacity to convene and engage decision-makers in support of the Green Deal, Farm to Fork Strategy and Food 2030 ambitions that calls for a systems approach to R&I policy capable of delivering co-benefits to nutrition, climate, circularity and communities, by support of Policy Support Facilities (PSF).

What are the main outcomes?  
Examples

- regional/national co-creation platforms** and new ways of working
- the co-design and implementation of **joint visions, strategies and action plans** that are science-backed/evidence-based and inclusive
- a more **well-structured, legitimated and well-financed science-policy interface** in support of overall food systems governance

Why do we need the action?  
(Added value as an ERA action)

- Our **predominantly sectoral R&I** is not delivering the systemic solutions needed to address multiple and urgent challenges
- Food system transformation must be better supported through **more ambitious interlinked science-policy interfaces** (HLEG)
- This thematic action will support the **Pact for R&I and the ERA objectives** by creating a **societal impact** and the action will increase **coordination, coherence and commitment**

# Pact Priority Area – Challenge-based ERA action

## Promoting renewable energy valleys (REV)

What is the action about?	The action is concerned with support to and exchange of best practices about the implementation of the REV approach. This can also focus on remote territories and on the regions most affected by the transition to climate-neutrality.
What are the main outcomes?	<ul style="list-style-type: none"><li>• Enhance the security and autonomy of energy supply in Europe.</li><li>• Increase the reliability, performance, and affordability of local and regional energy systems, including acceptance of innovative energy solutions.</li><li>• Help territories expected to be the most negatively impacted by the transition towards climate-neutrality.</li><li>• Accelerate the dissemination of knowledge about renewable energy</li><li>• Widen the participation of SSH researchers.</li></ul>
Why do we need the action? (Added value as an ERA action)	<ul style="list-style-type: none"><li>• Provide a favourable framework for the REV approach to be discussed with national, regional, and local authorities.</li><li>• Offer an efficient forum to connect to other relevant ERA actions, on clean energy (SET Plan, Action 11.2), as well as on education (Action 13), citizen engagement (Action 14) and support to research (Action 15).</li></ul>

# A harmonised framework to support integrity and ethics in R&I in the face of emerging challenges

What is the action about?	<p>This action aims to tackle emerging challenges and support opportunities in light of the recent update of the European Code of Conduct for Research Integrity ('the Code'). It seeks to provide ex-ante facilitation and guidance to foresee and prevent unethical behaviour and tackle new disruptive challenges to research integrity.</p>
What are the main outcomes?	<p>This Action will focus on the two following outcomes:</p> <ul style="list-style-type: none"><li>• Setting up a network of national integrity and ethics coordinators.</li><li>• Develop and publish the guidelines, which will take the form of a communication from the European Commission.</li></ul> <p><i>These outcomes will be supported or coordinated by the Ethics and Integrity Sector of the Commission</i></p>
Why do we need the action? (Added value as an ERA action)	<p>Integrity and ethics are listed in the 'Pact for Research and Innovation in Europe'. However, no existing structure or comprehensive policy framework could tackle emerging challenges and propose a European approach. The action will be a first step towards establishing such a framework that could continue after the end of the action.</p>





## Pact Priority Area

### 14.1 Scale-up of the Plastics Pirates

What is the action about?	The <b>Plastic Pirates citizen science initiative</b> engages and empowers young people across Europe to monitor and tackle plastic pollution in rivers, coasts and sea. It directly contributes to the <b>EU Mission Restore our Ocean and Waters</b> .
What are the main outcomes?	<ul style="list-style-type: none"><li>✓ Enlarging the partners from currently 13 MS/AC to <b>all MS/AC</b>.</li><li>✓ Expanding the broad partnership of <b>over 30 local and scientific partners</b></li><li>✓ Bringing science closer to citizens: Bringing the total amount of engaged students to more than <b>10,000 students and 750 schools</b>, empowering young people to take action for the green transition</li><li>✓ <b>Supporting MS/AC in achieving their zero pollution targets</b>, leading to a cleaner and healthier environment</li><li>✓ Excellent science and improved monitoring of EU policies through data gathering of <b>more than 600 samplings</b> in the field on EU rivers, waterways and beaches</li><li>✓ <b>Providing best practices for pan-European citizen science</b>, building on the MLE on “Citizen Science initiatives – Policy and Practice”</li><li>✓ Further strengthening <b>links with EU programmes</b> (Horizon Europe, MSCA, European Solidarity Corps) and <b>national programmes</b>, leveraging further funding in addition to the <b>EUR 2.94 m</b> + in-kind contributions already mobilised</li></ul>
Why do we need the action? (Added value as an ERA action)	<p>In a next stage, the will <b>support the 2030 Mission Ocean and Waters targets</b>, by:</p> <ul style="list-style-type: none"><li>• Helping to <b>reduce by 50% marine litter by 2030 in MS/AC and EU</b>, through improved monitoring and understanding of pollution sources, pathways and hotspots.</li><li>• <b>Expanding the Plastic Pirates protocol</b> from freshwater to marine water data samplings and to cover other forms of pollution (e.g. nutrients, chemical)</li><li>• Further <b>embedding Plastic Pirates data into monitoring of EU Policy objectives</b> (e.g. ZPAP, MSFD, WFD, Mission Ocean and Waters).</li></ul>



Pact Priority Area: Strengthening synergies between R&I policy and sectoral and industrial policies

## Accelerating industrial transformation for Europe's competitive sustainability and strategic autonomy

What is the action about?	<p>Developing a systematic approach for bringing R&amp;I results to uptake and deployment for industrial transformation, including the green transition, supporting EU's long-term competitiveness.</p> <p>⇒ <a href="#">Fostering the industrial transition towards the Green Deal 2030 and 2050</a></p>
What are the main outcomes?	<ul style="list-style-type: none"><li>✓ Accelerating decarbonisation of energy-intensive industries: facilitating design and implementation of national industrial technology roadmaps, bringing industrial demonstrators to the market, facilitating the transfer of decarbonisation technologies</li><li>✓ Advancing circular economy: MLE on circular technologies, pilots supporting circular economy, strengthening Hubs4Circularity</li><li>✓ Implementation of a European approach to Technology Infrastructures: setting up an EU coordination mechanism, implementation of strategic pilots</li><li>✓ Scaling up of Industry 5.0: follow-up of the ERA Technology Roadmap, Community of Practice, Industry 5.0 Assessment Tool</li><li>✓ Clarity on the European and national policy toolboxes and synergies for common priorities</li></ul>
Why do we need the action? (Added value as an ERA action)	<p>To achieve the green and digital transitions and to bring their contribution to Europe's strategic autonomy, it is essential to accelerate industrial R&amp;I, its scale-up and deployment. This action will promote a systemic toolbox for assessing R&amp;I results and state of play in relevant technologies, bringing these to industry, developing investment agendas, supporting technology maturity and facilitating the way towards deployment. Reaching these objectives goes far beyond a funding challenge. It requires a close collaboration of all relevant actors at</p>

# Pact Priority Area

## Borrow a researcher

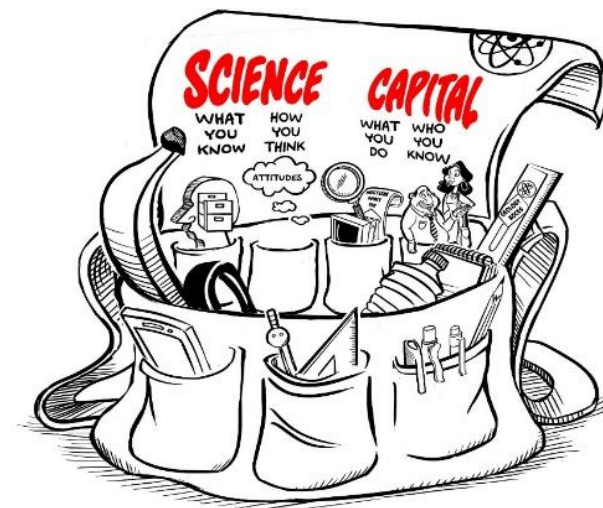


What is the action about?	A concept through which schools are visited by a researcher either face-to-face or online. The initiative enables schools, organisations and researchers across a country (or countries) to participate and interact regardless of where they are located. By showing the range of researchers with different backgrounds and research areas, the young generation learns that everyone can become a researcher.
What are the main outcomes?	Increased knowledge for pupils about what research is and how it is done. A cost-effective way to reach out to school pupils, especially those who don't have access to science and research in their daily lives and/or for those who live in remote areas where visits to a science centre, science museum or university is too costly or too far away. The action inspires the next generation of researchers and innovators. It also provides researchers with new insights and valuable experience of science engagement and the experience of meeting new target groups. The initiative gives valuable insights on societal concerns and issues to the participating researchers. Furthermore, it provides researchers with experience in how to engage with schools and young people.
Why do we need the action? (Added value as an ERA action)	The initiative brings science closer to society. With a specific focus on the young generation and schools situated in low income, poor socio-economic and/or isolated areas. It also facilitates European exchanges of researchers, expertise, cutting-edge research and innovation between schools and universities across and between member states. Thus, exploring new collaborations and building new networks and communities across Europe. It also spurs talent attraction and supply of future work skills in the EU.

## Pact Priority Area

# Mutual Learning Exercise on Science Capital

- Combined factors steer how people feel about and engage with science ----->
- Science Capital is a concept developed by Prof Louise Archer, UCL, to assess and improve people's attitudes and actions connected to science
- Science related knowledge + attitudes + experiences + resources = Science Capital



What is the action about?	An MLE to gather European experts and key actors in Member States to map, learn about, analyse, sort, describe and disseminate good practices.
What are the main outcomes?	Increased knowledge, more expertise and inspirational best practices on how best to foster Science Capital among citizens, especially young people.
Why do we need the action? (Added value as an ERA action)	For the EU be competitive and able to solve societal challenges, a solid Science Capital among citizens is key. Those with Science Capital are more inclined to pursue higher education, and are better prepared to engage with research, detect misinformation and make science informed decisions.

**Pact Priority Area:** Taking up together the challenges posed by the twin green and digital transition, and increasing society's participation in the ERA

**Action Title:** ***Building trust in science for a stronger and more democratic European society***

What is the action about?	Strengthening trust in science through the engagement of citizens in research and innovation processes, improving science journalism and science communication and sharing best practices and lessons learned on how to support scientists against attacks
What are the main outcomes?	<ul style="list-style-type: none"><li>• Evidence-based prevention and mitigation of science denial (based on study results)</li><li>• Effective protection of scholars and researchers against attacks (publication of guidelines and the results of an MLE)</li><li>• European scale-up of one or more citizen science initiatives with special attention to a representative participation that includes both urban and countryside areas as well as social minority groups (based on selection process)</li><li>• Improved collaboration on European level on science journalism (based on results of feasibility analysis)</li></ul>
Why do we need the action? (Added value as an ERA action)	<ul style="list-style-type: none"><li>• Policies based on scientific evidence and therefore trust in science are the bases of modern democracies</li><li>• Scientists are increasingly called to engage in communicating scientific evidence, countering disinformation and science denial</li><li>• Science communication, fact-based journalism and science literacy of citizens need to be improved</li><li>• Political action to foster the protection and defence of scholars under attack is needed</li></ul>

# Synergies between Union, national and regional funding programmes

## Improve EU-wide access to excellence

### What is the action about?

- RIMA expert group was set up in 2022 with the objective of identifying persisting challenges hindering access to excellence and providing recommendations on the support needed to address them at regional, national and EU level. As this is a long-term endeavour, this action is needed to continue delivering on the RIMA objectives.
- As a continued action, the work of the RIMA EG will build on the outputs of the first phase (barriers and solutions for synergies in the current MFF) and will engage in new activities to facilitate synergies between both programmes in the **next MFF**.

### What are the main outcomes?

- Strengthened cooperation between bodies involved in the management of ERDF and HE at national level and with the EU level, as recommended by the ECA.
- Facilitated exchange of practices on actions improving access to excellence across the EU, notably the implementation of ERDF-HE synergies, governance models of collaboration and shared outcomes and practices from WIDERA projects
- Suggestions for enhanced facilitation of synergies in the next MFF

### Why do we need the

Improving access to excellence and facilitating synergies is a long term objective requiring a long term plan of actions that build on each other. The continuation

NB: The continuation of the Expert Group and the focus of the activities will be consulted in the next meeting of the group that will confirm, or not, the need for the continuation of the group and the proposed focus of activities



# Pact Priority Area: coordination of R&I investments

## Action Title : An R&I foresight community of practice for the ERA

### Initial problem

- R&I foresight is not yet broadly considered as an institutionalised part of evidence-informed policy making or the need for it is not yet pressing enough in certain MS/ACs (with various levels of “maturity”).
- Not every MS/AC participates in the **HORIZON-WIDERA-2023-ERA-01-02 CSA**, nor with civil servants who are active in R&I
- MS/Acs show different levels of “(R&I) foresight maturity”.
- The past MLE is not appropriate to create a longer lasting community

### What is the action about?

- **Promote** the importance of R&I foresight for reinforcing EU resilience and open strategic autonomy (and aligning activities on a European level) within national/regional administrations, and **share practical experiences** of bringing foresight into R&I policy development.
- Complement the **CSA** on R&I foresight by **giving** it a **high visibility** in the national/regional administrations and liaising with experts from research performing and civil society organisations.
- **Convey CSA research results** and other progress (or messages) to potentially interested colleagues in the national and regional administrations, in particular concerning the creation of a multi-stakeholder network of R&I foresight practitioners.
- **Invite your colleagues** to **join** the **network** during and after the CSA.



# Pact Priority Area: coordination of R&I investments

## Action Title : An R&I foresight community of practice for the ERA

What are the main outcomes?

### Output:

- Representatives (or all members) of the national/regional network **join** the **network/community of practice** set up by the **CSA**.
- Each participating MS/AC creates a **national/regional network** of civil servants and experts from research performing and civil society organisations active and/or interested in R&I foresight activities.

### Impact:

- R&I foresight, with long-term horizon scanning and reflections on megatrends and future challenges, is an **institutionalised part** of evidence-informed and future oriented policy making.
- **Preparedness** of institutions and policies for **alternative future scenarios** is strengthened, e.g., for the development of mission oriented R&I policy, research/technology infrastructures and international cooperation.
- National/regional **resources** are (re-)invested/recombined in R&I foresight activities.
- **European network** remains **active** after end of CSA and ERA action.



# Pact Priority Area: coordination of R&I investments

## Action Title : An R&I foresight community of practice for the ERA

Why do we need the action?  
(Added value as an ERA action)

### Need for:

- **visions** and R&I agendas with a long-term perspective based on (R&I) foresight exercises.
- **interfaces** between governmental units that perform comprehensive societal foresight exercises and those in charge of R&I, in collaboration with of experts from research performing and civil society organisations.

### Added value as ERA action:

R&I foresight is brought in the “**political spotlight**” for a longer period, which would create **more momentum** (more “push”) for commitments by MS/ACs than the CSA would be able generate on its own (as partners of CSAs are not necessarily the most appropriate ones to have the “coordinated activity” included in the R&I policy preparation cycle).

### Alternative:

This could also become a part of the regular ERA Forum workstream.