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DG RESEARCH AND INNOVATION

Directorate A ERA & Innovation

European Research Area Act

Analysis of Responses to the Call for Evidence

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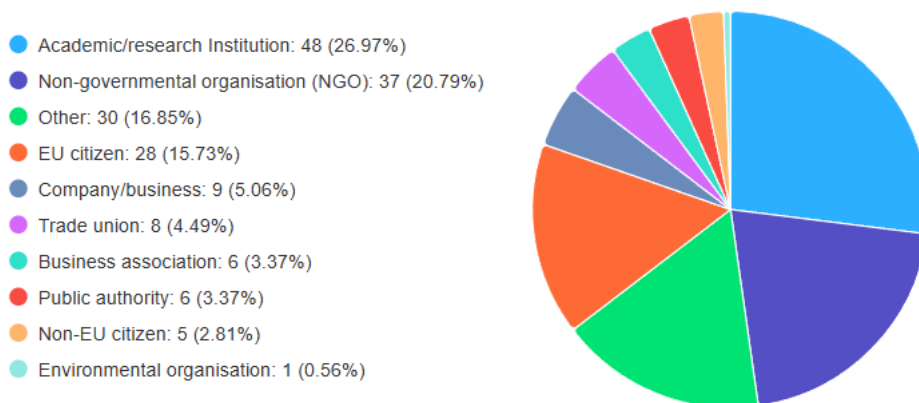
Feedback from all Stakeholders

1. Introduction

Between 6 August and 10 September 2025, the European Commission opened a call for evidence in the context of the preparation of the European Research Area (ERA) Act proposal, to be tabled in the third quarter of 2026, as outlined in Commissioner Zaharieva's for Startups, Research and Innovation mission letter.

The aim of the call for evidence, as a first step in the public stakeholder consultation process, was to collect general evidence on the problems facing the development and full achievement of the ERA, along with stakeholders' views on feasible solutions that could be supported by legislation at EU level. The call for evidence targeted all stakeholders from national and regional administrations and research and innovation communities.

Overall, 178 contributions from 29 countries were received, most of them showing strong general support for the ERA Act initiative. The figure below represents the distribution of contributions by category of respondent, showing the considerable weight of academic and research institutions, NGOs, EU citizens and other organisations (mostly professional associations and project consortia), adding up to almost 80% of respondents.



The report is structured according to the main areas of intervention that are foreseen for the ERA Act, each section making the distinction between the main problems identified by stakeholders and their proposals of actions to tackle them. The analysis is based on an artificial intelligence based analytical model developed by Directorate T Digital Transformation and Data at the Joint Research Centre, fully revised and complemented by the ERA Governance Team at Directorate A ERA and Innovation, DG Research and Innovation, including a careful assessment of 84 position papers received.

2. Research & Development Investment

2.1 Overview

The consultation on Research & Development (R&D) investment within the European Research Area (ERA) Act reveals a complex landscape of problems and proposed actions to solve them, reflecting diverse stakeholder perspectives. Academic and research institutions, NGOs, companies, and trade unions across various EU member states and beyond have contributed their insights, highlighting both the challenges and potential

solutions to enhance R&D investment in the EU. The overarching goal of achieving a 3% GDP investment in R&D is a recurring theme, with stakeholders advocating for binding commitments and structural reforms to ensure this target is met. The hurdles identified include disparities in investment levels, underfunding, and bureaucratic obstacles, while proposed actions focus on creating sustainable funding mechanisms and incentivizing private investment. The analysis reveals a strong consensus on the need for increased and sustained investment, yet divergent views on the methods to achieve this, particularly regarding the balance between public and private funding and the role of legal frameworks.

2.2 Problems

The hurdles associated with R&D investment are multifaceted, with stakeholders consistently highlighting disparities in investment levels across EU member states as a significant barrier. Academic institutions from Austria and Italy emphasize the uneven distribution of R&D funding, which undermines the EU's scientific competitiveness and creates vulnerabilities in research infrastructure (F3718684_002, F3697336_005). This sentiment is echoed by NGOs in Belgium and the Netherlands, who point out that Europe continues to lag behind in public R&D investment, failing to meet the 3% GDP target (F3714891_001, F3694982_010). The chronic underfunding of research initiatives leads to temporary contracts and job insecurity, as noted by stakeholders from Germany and the Netherlands (F3695992_005, F3696259_001). The lack of long-term commitment to support research infrastructure further compounds these challenges, with stakeholders highlighting the need for specific national plans for investment in research infrastructures (F3678259). Stakeholders from the United Kingdom and France highlight the absence of follow-up national and regional funding after project completion, making it difficult to translate research results into innovations (F3678259_004, F3709766_009). This issue is particularly acute in sectors like paediatric oncology, where research remains marginal within the health R&I landscape (F3714336_003). In addition to these structural hurdles, stakeholders from the United States and Germany point to the innovation gap between the EU and global leaders like the US and China, underscoring the need for the EU strategic investment to bridge this divide (F3590180_002, F3703315_005). The risk-averse nature of many European investors is identified as a critical bottleneck, limiting the flow of capital into innovative research projects (F3714082_004). Overall, the analysis reveals a consensus on the need for increased investment and streamlined processes, and highlights significant disparities in funding levels and administrative challenges that must be addressed to achieve the ERA's objectives.

2.3 Proposed actions

The proposed actions to enhance R&D investment within the ERA are diverse, reflecting the varied priorities and strategies of different stakeholder groups. A central theme is the call for binding commitments to achieve the 3% GDP investment target, with stakeholders from Belgium, Germany, and Portugal advocating for legally enforceable measures to ensure national trajectories align with this goal (F3717190_001, F3714470_001, F3717630_011). NGOs in Belgium emphasize the need for a public scoreboard to track progress and promote transparency in R&D investments (F3717190_006). Academic institutions from France and Germany propose substantial, sustained funding through permanent structural frameworks like the European Research Council (ERC) and Marie Skłodowska-Curie Actions, which are seen as keystones of innovation (F3718504_003, F3714513_002). The expansion of successful national models, such as France's 'Labex', to the European level is suggested as a means to consolidate research infrastructures and foster excellence (F3716325_001, F3714562_003). Incentivizing private investment is

another key focus, with stakeholders from the United States and Belgium recommending co-funding and risk-sharing models to attract private capital into innovative clinical trial approaches (F3714654_010, F3696795_005). The creation of dedicated instruments for funding, as proposed by business associations in Belgium, aims to support industry-driven R&D initiatives and measure their economic impact (F3714449_006, F3714449_002). To address the bureaucratic hurdles identified, stakeholders from Germany and the United Kingdom advocate for simplified grant application processes and generalizing grant portability across the EU (F3714470_008, F3678259_008). NGOs in Germany suggest creating smaller, flexible grants and fellowships for early-career researchers to encourage participation in diverse research fields (F3711511_007, F3711511_023). Overall, the actions analysis reveals broad support for binding investment targets and structural reforms yet underscores the need for innovative funding mechanisms and streamlined processes to foster a dynamic and competitive R&D environment in the EU.

3. Alignment of Research & Innovation Investments, Policies, and Programmes between the EU and Member States and Across Member States

3.1 Overview

The alignment of Research & Innovation (R&I) investments, policies, and programmes between the EU and its Member States is a critical area of focus in the European Research Area (ERA) Act consultation. Stakeholders from various sectors, including academic institutions, NGOs, business associations, and public authorities, have provided insights into the problems and potential necessary actions to achieve better alignment. The feedback reveals a complex landscape where fragmentation, disparities in investment levels, and bureaucratic challenges are prevalent. Stakeholders advocate for a range of actions, from enhanced coordination mechanisms to the harmonization of standards and procedures, to address these issues. Many proposed solutions directly target the identified barriers, aiming to streamline governance, reduce fragmentation, and foster collaboration across borders and sectors.

3.2 Problems

The persistent fragmentation of R&I systems across the EU is a recurring theme in stakeholder feedback. Academic institutions, NGOs, and business associations alike highlight the challenges posed by fragmented funding landscapes and governance frameworks. For instance, an academic institution from Austria notes the "persistent fragmentation of the R&I systems" (F3718684_001), while a business association from Belgium describes fragmentation as a "scourge" that hampers the simplification and harmonization of standards and procedures (F3678334_001). This fragmentation is further exacerbated by differences in national laws and regulations, which create barriers to effective cross-border collaboration. An NGO from the Netherlands points out that "differences in national laws prevent clarity" (F3719029_003), underscoring the need for harmonized legal frameworks to facilitate cooperation.

Disparities in research capacity and funding across Member States are another significant hurdle. Stakeholders from Belgium and Germany emphasize the unequal access to funding and opportunities, with an NGO from Germany stating that "unequal access to funding, infrastructures, and opportunities across EU regions" is a major concern (F3711511_014).

These disparities not only hinder the overall performance of the ERA but also contribute to geographic imbalances in research efforts. An academic institution from Italy highlights the "research effort imbalance" (F3696488_012), suggesting that targeted interventions are needed to address these inequities.

Bureaucratic overhead and administrative barriers are frequently cited as obstacles to effective R&I alignment. A company from Sweden describes the "bureaucratic overhead of EU-funded research projects" (F3714745_001), while an NGO from Belgium points to "complex bureaucracy, fragmented administration, and divergent national R&I funding and audit rules" as limiting factors (F3716241_021). These administrative burdens not only slow down investment flows but also limit the optimal sharing and use of research infrastructures, as noted by a stakeholder from Germany (F3695603_008).

The lack of strategic alignment between EU and national funding programs is another problem identified by stakeholders. A business association from Austria mentions "insufficient strategic alignment between EU and national funding programs" (F3673898_001), indicating that better coordination is needed to ensure that national R&D investments are strategically aligned with EU priorities and goals. This sentiment is echoed by a public authority from Sweden, which calls for "better coordination and alignment of R&I strategies" (F3712113_002).

3.3 Proposed actions

Enhanced coordination mechanisms and simplified decision-making rules are among the most frequently suggested solutions. An academic institution from Portugal advocates for "stronger and more streamlined coordination of research and technology infrastructures" (F3717630_003), while a business association from Belgium calls for "enhanced coordination mechanisms and simplified decision-making rules" (F3714564_006). These actions aim to reduce fragmentation and improve the efficiency of R&I systems across the EU.

The harmonization of standards and procedures is another key area of focus. Stakeholders from various sectors emphasize the need for uniform rules and guidelines to facilitate cross-border collaboration. An academic institution from Finland suggests promoting "harmonised rules so that national or regional funding used as co-funding of a EU RDI project can adopt EU Framework Programme rules" (F3713431_004). Similarly, a company from Czechia calls for "standardized implementation protocols" to ensure consistent application of EU-approved technologies (F3590589_004).

Incentivizing coordinated investments and roadmaps across Member States is a widely supported action. An academic institution from Belgium proposes to "incentivise coordinated investments and roadmaps across Member States" (F3716831_006), while a public authority from Sweden emphasizes the importance of "developing joint research strategies in critical technologies" (F3692544_012). These actions aim to align national research strategies with EU goals, fostering a more cohesive and integrated R&I landscape.

Stakeholders also advocate for fostering collaboration across disciplines and sectors. An NGO from the Netherlands highlights the need to "foster inclusive and interdisciplinary networks" (F3714975_008), while an academic institution from Italy calls for "improved cooperation between higher education institutions, research organizations, and businesses" (F3713688_001). These actions are designed to break down silos and promote fluid integration, enhancing the overall impact of R&I efforts across the EU.

In addition, some stakeholders call for targeted measures within the ERA governance framework for smaller or less-developed regions, including dedicated capacity-building tools for lower-performing regions and mechanisms aimed at strengthening infrastructures, avoiding brain drain, and developing competitive proposals (F3714470).

Stakeholders also highlight the pivotal role of research and technology infrastructures in strengthening alignment between European and national R&I policies. Several contributions emphasise that research and technology infrastructures should be explicitly recognised and embedded in the ERA Act as instruments for coordination, strategic planning, and long-term sustainability. Respondents call for the integration and reinforcement of existing infrastructures rather than creating overlapping structures, including suggestions to amend the ERIC Regulation to remove operational barriers (F3709287). Additional proposals include establishing an EU-level funding mechanism for research infrastructures, supported by strategic mapping, sustainability measures such as green upgrades, and streamlined procedures for setting up ERICs (F3697095). Others stress the importance of sustainable maintenance, equal access for researchers across Member States, and the explicit inclusion of infrastructure-related provisions within the ERA Act (F3715151).

Finally, the establishment of binding legislative measures is proposed as a means to ensure sustained alignment. An academic institution from Austria suggests "developing binding legislative measures" (F3718684_004), while another from France calls for "establish mechanisms for better alignment between EU and Member States on R&I priorities" (F3718504_004). These measures aim to create a structured framework for collaboration, ensuring that alignment efforts are maintained over the long term.

4. Freedom of Scientific Research

4.1 Overview

Stakeholders from various sectors, including academic institutions, NGOs, trade unions, and individual citizens, have expressed concerns about the current state of scientific freedom within the EU. The feedback highlights a range of issues, from political and economic pressures to systemic barriers such as stigma and overregulation. Proposed actions aim to establish robust legal protections, promote open science, and ensure academic freedom is safeguarded against undue interference. The interplay between these hurdles and actions underscores the need for a comprehensive legislative framework that balances ambitious legal provisions with practical implementation mechanisms.

4.2 Problems

The hurdles identified in the consultation responses can be grouped into several thematic clusters, each representing significant challenges to the freedom of scientific research. One prominent cluster involves political and economic pressures, which stakeholders argue compromise the independence of scientific inquiry. Academic institutions in Germany and Italy have reported that researchers are under extreme pressure to align their work with certain political interests, which conflicts with the aim of strengthening research integrity and independence (F3591912_004, F3714416_005). This sentiment is echoed by NGOs in Germany, who note declining public trust in science and increasing threats to academic freedom in some regions (F3711511_005, F3711511_016).

Another significant hurdle is the overreliance on top-down definitions of research priorities, which stifles bottom-up, curiosity-driven research. Academic institutions in Hungary and Sweden have criticized prescriptive regulations that crowd out innovative research approaches (F3719425_003, F3718093_002). This issue is compounded by administrative demands that undermine scientific creativity, as reported by German academic institutions (F3589999_016).

The role of stigma as a systemic barrier is also highlighted, particularly by NGOs in the Netherlands. Stigma discourages researchers from pursuing emerging or unconventional fields, thereby limiting the scope of scientific inquiry and researcher mobility (F3714975_001, F3714975_002). This barrier is seen as a structural obstacle to freedom of inquiry and knowledge valorisation (F3714975_010).

Additionally, stakeholders have pointed out the lack of clear guidance and legal frameworks that protect academic freedom. Companies in the UK have noted the absence of clear guidance on navigating sensitive issues, while NGOs in Belgium have criticized national guidelines that compromise academic freedom (F3642643_012, F3713426_020). The need for improved legal frameworks that do not add to regulatory complexity is emphasized by stakeholders in Belgium (F3714463_012).

Overall, the hurdles identified reflect a broad consensus among stakeholders on the need for stronger protections and clearer guidelines to ensure the freedom of scientific research is upheld across the EU. The data includes responses from a broad range of stakeholders, with significant input from academic institutions, NGOs, and trade unions, highlighting the widespread concern over these issues.

4.3 Proposed actions

Stakeholders have proposed a range of actions aimed at safeguarding the freedom of scientific research. These actions can be categorized into several coherent policy approaches. A key approach involves establishing robust legal protections for academic freedom. Academic institutions in Germany and NGOs in Belgium advocate for legally anchoring the freedom of scientific research to protect researchers and institutions from political or ideological interference (F3714470_025, F3713007_001). This includes introducing EU-level academic freedom checks and embedding a justiciable ERA clause (F3709903_006, F3593283_024).

Another approach focuses on promoting open science and enhancing the professional protection of researchers. NGOs in Belgium and academic institutions in France emphasize the need for open science frameworks and the establishment of an ombudsperson for academic freedom at the European level (F3717607_004, F3698118_006). This would provide researchers with a representative in cases where their academic freedom may be threatened (F3698118_001).

Stakeholders also propose strengthening research integrity and ethics as a means to ensure a fair and responsible research environment. Academic institutions in Germany and NGOs in Belgium call for the promotion of research integrity and ethics, alongside the development of anti-stigma guidelines for funding bodies (F3714470_010, F3714975_006). This includes addressing recent integrity issues, such as papermills and image manipulation, as highlighted by companies in the Netherlands (F3710241_004).

Academic institutions, NGOs, and trade unions are particularly vocal in advocating for these measures, reflecting a strong consensus on the need for comprehensive legislative

safeguards. The integration of these actions into the ERA Act would represent a substantial step forward in protecting the freedom of scientific research within the EU.

5. Gender Equality and Equal Opportunities

5.1 Overview

Stakeholders from various sectors, including NGOs, academic institutions, trade unions, and public authorities, have provided insights regarding persistent challenges and potential solutions to achieve improved gender equality and inclusion in the ERA. The feedback highlights a strong consensus on the need for mandatory Gender Equality Plans (GEPs) and targeted support for underrepresented groups, particularly early-career and female researchers. The contributions received reflect the diversity of priorities and experiences across different stakeholder groups. The interconnections between hurdles and actions are evident, as the proposed solutions directly address the identified barriers, such as gender-based violence, systemic exclusion, and insufficient support for female researchers at reproductive age.

5.2 Problems

A recurring problem identified by stakeholders when it comes to gender equality and equal opportunities in the ERA is the systemic exclusion and gender imbalance within R&I systems, particularly affecting female researchers. NGOs from Germany and Belgium emphasize the "insufficient support for female researchers, particularly at reproductive age" (F3711511_003, F3711511_015), highlighting the need for concerted action to address these disparities. This sentiment is echoed by public authorities in Ireland, who note the "underrepresentation of women in senior leadership" (F3714758_003), suggesting that structural barriers persist at higher levels of academia and research institutions.

Another significant hurdle is the prevalence of gender-based violence and the backlash against feminist research, which are seen as threats to academic freedom. Stakeholders from Czechia stress that "gender-based violence remains prevalent and under-addressed" (F3617532_005), while also recognizing the "backlash against feminist research" (F3617532_002) as a critical issue. These challenges are compounded by institutional resistance, as noted by stakeholders from Spain (F3714781_002, F3714781_005).

Data gaps further exacerbate these issues, limiting the ability to track progress and implement effective solutions. An EU citizen from Sweden points out that "data gaps limit progress" (F3593663_003), underscoring the need for comprehensive data collection and analysis to inform policy decisions. This is particularly relevant in the context of excellence funding, where academic institutions in Sweden report a "disproportionate allocation of excellence funding to men" (F3593569_001) and the "systematic exclusion despite equal merit" (F3593569_002). The concentration of resources in a small male elite is seen as a significant barrier to achieving gender equality in R&I systems (F3593569_003).

Overall, the problems identified by stakeholders reflect deep-rooted structural issues that require targeted interventions and systemic change. The feedback highlights the need for a comprehensive approach that addresses both the immediate challenges and the underlying causes of gender inequality in the ERA.

5.3 Proposed actions

In response to the identified problems, stakeholders have proposed a range of actions aimed at promoting gender equality and equal opportunities within the ERA. A key recommendation is the implementation of mandatory Gender Equality Plans (GEPs) for all research actors, including higher education institutions, research organizations, and private companies. This proposal is widely supported across stakeholder groups, with NGOs from Belgium and academic institutions from Ireland advocating for GEPs as a condition for funding (F3713007_017, F3593667_001). The requirement for GEPs is seen as a crucial step in ensuring consistent standards and accountability across the ERA.

Stakeholders also emphasize the importance of targeted support for early-career and female researchers, particularly in terms of leadership opportunities and career advancement. Trade unions from France, Slovakia, and Belgium highlight the need for "targeted support and leadership opportunities" (F3710047_005, F3644456_009, F3605823_007), suggesting that such measures are essential for addressing the gender imbalance in senior positions. This is complemented by calls for dedicated funding to support feminist and gender research, as noted by stakeholders from Czechia (F3617532_008).

The promotion of inclusivity and intersectionality is another critical area of focus, with stakeholders advocating for policies that explicitly tackle intersecting inequalities. Academic institutions from Ireland and Czechia propose "inclusive, intersectional GEPs" (F3593667_009, F3617532_014), while NGOs from Belgium stress the need to "expand this vision to encompass equality for all forms of diversity" (F3592366_004). These actions are seen as vital for creating a more equitable and inclusive research environment that welcomes diverse talents and perspectives.

To address gender-based violence, stakeholders recommend a zero-tolerance approach and the implementation of robust policies to foster safe working environments. An EU citizen from Sweden calls for "a zero-tolerance approach to gender-based violence" (F3593663_005), while stakeholders from Czechia emphasize the need for effective policies to counteract gender-based violence as a condition for funding (F3617532_018). These measures are crucial for ensuring the safety and well-being of researchers and promoting a culture of respect and equality within R&I systems.

Finally, stakeholders highlight the importance of monitoring and evaluation to track progress and ensure accountability. Academic institutions from Ireland propose an "EU-wide monitoring framework with common indicators" (F3593667_007), while NGOs from Belgium stress the need to "monitor Gender Equality Plans" (F3711503_014). These actions are considered essential for assessing the impact of gender equality initiatives and identifying areas for improvement.

6. Researchers' Careers and Mobility

6.1 Overview

The feedback received regarding the challenges and potential solutions to enhance mobility and career development for researchers across the EU highlights a strong desire for harmonization of employment standards, simplification of visa procedures, and improved recognition of qualifications to facilitate seamless mobility. Additionally, there is a call for better career security and attractive working conditions to retain and attract top talent

within the EU. The interconnections between problems and proposed actions suggest a need for comprehensive policy frameworks that address both structural and procedural barriers to mobility and career advancement.

6.2 Problems

The hurdles identified in the consultation responses can be grouped into several key clusters: administrative and bureaucratic barriers to mobility, inconsistent recognition of qualifications, precarious employment conditions, and limited career predictability. These issues are experienced differently across stakeholder groups, with academic institutions and NGOs frequently highlighting the impact of complex visa procedures and fragmented employment frameworks. For instance, stakeholders from Germany and Belgium emphasize the "bureaucratic burdens on researchers" (F3709903_008) and "fragmented career frameworks across the EU" (F3716241_025), which hinder mobility and career progression.

Administrative hurdles, such as lengthy visa processes and inconsistent recognition of qualifications, are a significant concern. Stakeholders from Germany and the United States note that "complex visa procedures hinder mobility" (F3714513_008) and "inconsistent recognition of qualifications" (F3714654_005) slow the deployment of research staff. These barriers not only impede the free movement of researchers but also discourage cross-border collaboration and integration into the EU research landscape.

Precarious employment conditions are another critical issue, with many researchers facing short-term contracts and uncertain career prospects. Trade unions from Belgium and Malta highlight the "precarity faced by many researchers" (F3605823_014) and "short-term, precarious contracts" (F3605969_015) as threats to sustainability and career development. This precariousness is particularly pronounced for early-career researchers, who often struggle to secure stable positions and competitive salaries.

The lack of harmonization in the recognition of qualifications across Member States further exacerbates mobility challenges. Stakeholders from Italy and Belgium point out the "heterogeneous procedures for the recognition of qualifications" (F3697336_002) and "unequal recognition of qualifications" (F3713426_004), which create barriers to career advancement and mobility. These inconsistencies undermine the EU's goal of creating a single market for researchers and scientific knowledge.

Overall, the hurdles identified in the consultation responses reflect a need for coordinated efforts to address both structural and procedural barriers to researchers' careers and mobility. The feedback underscores the importance of creating a supportive environment that facilitates seamless mobility and career development across the EU.

6.3 Proposed actions

The proposed actions to address the hurdles in researchers' careers and mobility are diverse and reflect a range of approaches, including policy harmonization, administrative simplification, and career development initiatives. Stakeholders from academic institutions, NGOs, and trade unions have put forward solutions that aim to create a more cohesive and supportive environment for researchers across the EU.

One of the most widely supported actions is the harmonization of employment standards and recognition of qualifications. Stakeholders from Germany and Belgium advocate for "common standards for employment and working conditions" (F3709903_002) and

"harmonised and streamlined procedures for researcher mobility" (F3715151_011). These measures are seen as essential for reducing fragmentation and facilitating seamless mobility across Member States.

Simplification of visa procedures is another key area of focus, with stakeholders from Germany and the United States calling for a "uniform visa regime for researchers" (F3709903_001) and "fast-track scientific visa system" (F3590180_009). These actions aim to remove the bureaucratic barriers that researchers from outside the EU face to obtain visas, and to make it easier for them to move between countries within the EU.

Improving career security and attractiveness is also a priority, with trade unions from Belgium and France emphasizing the need for "attractive and secure research careers" (F3605823_007) and "civil servant positions as the norm for scientific research" (F3710047_020). These actions are intended to provide researchers with stable employment conditions and competitive salaries, thereby enhancing the EU's ability to retain and attract top talent.

Stakeholders also propose initiatives to support career development and mobility, such as "intersectoral PhD and Postdoc programs" (F3714513_010) and "mentoring and entrepreneurship training" (F3711511_018). These programs should be designed to equip researchers with the skills and experience needed to succeed in diverse career paths and facilitate mobility between academia and industry.

Several stakeholders also underline that the ERA Act should explicitly support the independence and long-term stability of major European talent programmes, particularly the ERC and MSCA. Contributors highlight the need to safeguard their governance continuity and protect them from external interference, stressing that their effectiveness relies on sufficient autonomy, predictable and sustained funding, and a stable institutional framework (F3714470). Other responses emphasise the importance of ensuring long-term programme stability through dedicated resources, adequate infrastructure, and mechanisms that uphold academic freedom and shield these programmes from political or administrative pressures (F3698118).

A large number of position papers emphasise that the ERA Act should reflect the ongoing reform of research assessment and incorporate principles aligned with CoARA or equivalent initiatives. Several contributions call for establishing a legal reference to these frameworks and for anchoring responsible research assessment practices within ERA governance, including the recognition of diverse research outputs and alignment of institutional evaluation systems with modernised criteria (F3679204, F3716241, F3713426, F3714891). Other respondents propose the development of anti-stigma guidelines and best practices for evaluators and funding agencies to support fairer assessment cultures across Member States (F3714975). At the same time, some contributions caution that research assessment and integrity should remain under academic self-governance and warn against political overreach or excessive regulatory intervention within the ERA Act (F3709903).

Several contributions emphasise that the ERA Act should ensure stronger synergies between the ERA and the European Higher Education Area (EHEA). Respondents highlight the need for more systemic links between research and higher education, including improved mutual recognition of degrees, microcredentials, and pathways enabling mobility between academic, educational, and research management careers (F3679204). Additional feedback stresses the importance of integrating ERA and EHEA frameworks in areas such as recognition procedures, training, and career progression

(F3696456), while others propose reinforcing coherence between research and education systems through better diploma recognition, lifelong learning structures, and closer alignment of institutional practices across both domains (F3696259).

Overall, the proposed actions reflect a comprehensive approach to addressing the hurdles in researchers' careers and mobility. The feedback highlights the importance of creating a supportive environment that facilitates seamless mobility and career development across the EU.

7. Free Circulation of Scientific Knowledge

7.1. Overview

The free circulation of scientific knowledge is a cornerstone of the European Research Area (ERA) Act, aiming to dismantle barriers that hinder the seamless exchange of research outputs across borders. Stakeholders from various sectors, including NGOs, academic institutions, businesses, and public authorities, have provided insights into the hurdles and actions necessary to achieve this goal. The feedback reveals a complex landscape where legal, technical, and cultural obstacles impede the free flow of knowledge, while proposed actions focus on harmonization, open access, and infrastructure development.

Stakeholders consistently highlight the interconnectedness of hurdles and actions. For instance, the lack of harmonized copyright exceptions is both a barrier and a target for legislative action. Similarly, the dominance of commercial publishers and restrictive contractual practices are seen as hurdles that can be addressed through policy interventions promoting open access and rights retention. The analysis reveals a shared understanding among stakeholders that overcoming these hurdles requires coordinated efforts at the EU level, with actions tailored to address specific challenges.

7.2. Problems

The current obstacles to the free circulation of scientific knowledge encompass legal, technical, and cultural dimensions. A significant legal barrier identified by stakeholders is the fragmented copyright landscape across EU member states. This fragmentation complicates cross-border collaboration and limits access to research outputs. Stakeholders from NGOs and academic institutions in Sweden and Poland emphasize that "EU copyright exceptions are outdated, fragmented, and unfit for digital, cross-border work" (F3711196_008), they highlight the "fragmented legal landscape, making it difficult for researchers to navigate or comply uniformly" (F3714500_006).

Technical barriers also play a crucial role in hindering the free circulation of knowledge. The lack of standardized metadata and interoperable data infrastructures is a recurring theme in stakeholder feedback. NGOs and academic institutions from Sweden and Belgium note that "the lack of standardized metadata, as noted in the Barcelona Declaration, hinders discoverability" (F3711196_002) and "valuable data remains siloed across institutional domains" (F3714975_013). These technical challenges are compounded by the dominance of proprietary systems, which restrict access and interoperability.

Cultural and institutional barriers further complicate the landscape. Stakeholders from NGOs in the Netherlands and Germany highlight the inequities arising from article processing charges (APCs) and the dominance of English in scientific publishing, which marginalizes non-native speakers. "Inequities have grown from APC consequences" (F3717506_001) and "dominance of English marginalises non-native speakers" (F3717506_004) are cited as significant hurdles that affect the inclusivity and accessibility of scientific knowledge.

Underlying these hurdles is a pervasive reliance on commercial publishers and restrictive contractual practices. NGOs from Bulgaria and Germany point out that "licensing obligations imposed by traditional publishing models prevent broad access to scientific publications, even among researchers themselves" (F3714471_002) and "contracts often include terms that would be unacceptable" (F3640661_009). These practices create an uneven playing field, where major commercial publishers hold disproportionate power over the dissemination of research outputs.

7.3 Proposed actions

In response to the problems identified, stakeholders propose a range of actions aimed at facilitating the free circulation of scientific knowledge. A prominent theme is the harmonization of legal frameworks, particularly concerning copyright exceptions and secondary publishing rights. NGOs and academic institutions from Sweden, Belgium, and Germany advocate for "introducing a mandatory, flexible, and technologically neutral research exception" (F3712111_010), they point out that a "harmonised EU-level Secondary Publication Right is essential" (F3640661_004). While these actions are seen as crucial for enabling cross-border collaboration and ensuring equitable access to research outputs, a call for caution points to the need for "dialogue between all key stakeholders, including publishers, to scope and understand different models for Secondary Publishing Right, so as to ensure they safeguard research integrity and sustainability" (F3710241).

Open access emerges as a central pillar in the proposed actions, with stakeholders emphasizing the need for immediate and unrestricted access to publicly funded research. NGOs and trade unions from France, Ireland, and Belgium stress the importance of "open access to publicly funded results" (F3710047_018) and recommend a "mandate open access to all publicly funded research" (F3590180_005). These actions are supported by calls for rights retention policies and the elimination of embargoes, which are seen as barriers to timely access.

Infrastructure development is another key area of focus, with stakeholders advocating for investments in interoperable data systems and sustainable open science ecosystems. NGOs and academic institutions from Belgium and Finland propose to "support sustainable infrastructures and staffing for open science" (F3716241_018) and "setting minimum standards in data management" (F3714494_013). These actions would aim to reduce reliance on proprietary systems and enhance the discoverability and interoperability of research data.

Stakeholders also highlight the need for cultural and institutional change to support open science principles. NGOs and academic institutions from Sweden and Germany call for "promoting open science initiatives" (F3674963_003) and "embedding open science as a legislative foundation" (F3717607_010). These actions are seen as essential for fostering a culture of openness and collaboration, where researchers are empowered to share their work freely.

Overall, the proposed actions reflect a broad consensus among stakeholders on the need for coordinated efforts at the EU level to address the barriers to the free circulation of scientific knowledge. While there is agreement on the importance of harmonization, open access, and infrastructure development, stakeholders also recognize the need for tailored interventions that address specific challenges within different sectors and regions.

8. Knowledge Valorisation in the European Research Area

8.1 Overview

The concept of knowledge valorisation within the European Research Area (ERA) is pivotal to transforming research outputs into societal and economic value. Stakeholders across various sectors have highlighted the importance of addressing systemic hurdles and implementing effective actions to enhance knowledge valorisation. Stakeholders identify structural obstacles and propose diverse solutions to bridge the gap between research and its practical application. Identified problems often revolve around issues such as fragmented commercialization pathways, inadequate funding, and the lack of recognition for valorisation activities. Conversely, proposed actions emphasize regulatory reforms, enhanced collaboration between academia and industry, and the establishment of robust intellectual property frameworks. The interplay between these hurdles and actions underscores the need for a cohesive strategy that aligns EU priorities with national efforts to foster a thriving innovation ecosystem.

8.2 Problems

The hurdles associated with knowledge valorisation reflect a range of challenges that stakeholders experience differently based on their sector and geographical location. A recurring theme is the "valley of death" between laboratory findings and market deployment, which academic institutions in Belgium have identified as a significant barrier (F3716831_003). This gap is exacerbated by chronic underfunding of the research-market bridge, as noted by German academic institutions (F3714513_003). The lack of dedicated funding for knowledge sharing further compounds these issues, with Danish academic institutions emphasizing the need for financial support to facilitate valorisation activities (F3692081_007). Stakeholders also highlight the contradictions between open access and commercial exploitation of knowledge, which can hinder effective valorisation (F3680399_006). This tension is particularly pronounced in Spain, where stakeholders note the challenges of balancing open science principles with traditional patenting mechanisms. Additionally, the fragmented nature of commercialization pathways is a concern for businesses in Czechia, who argue that this fragmentation limits the translation of research into applied innovation (F3590589_005). The issue of intellectual property (IP) procedures being slow and cumbersome is another hurdle that academic institutions in Germany face, which can delay the valorisation process (F3589999_005). Moreover, the variability in transaction costs across institutions, as reported by EU citizens in Ireland, adds another layer of complexity to the valorisation landscape (F3593283_021).

A significant barrier identified by trade unions in Kosovo and the Netherlands is the commodification of research, which they oppose due to concerns about market-driven funding models that may not align with the broader goals of societal benefit (F3606418_013, F3711611_012). This sentiment is echoed by other stakeholders who resist the notion of valorisation being driven solely by market forces. The limited intersectoral mobility between academia and industry, as noted by stakeholders in

Germany, further restricts the flow of knowledge and innovation across sectors (F3695992_009). This limitation is compounded by the absence of defined impact indicators, which NGOs in Greece argue are necessary to measure the effectiveness of valorisation efforts (F3717122_012). Overall, the hurdles identified by stakeholders reveal a complex interplay of structural, financial, and cultural challenges that must be addressed to enhance knowledge valorisation within the ERA. These obstacles highlight the need for targeted interventions that can bridge the gap between research and its practical application.

8.3 Proposed actions

In response to the hurdles identified, stakeholders have proposed a range of actions aimed at enhancing knowledge valorisation within the ERA. A prominent suggestion is the establishment of regulatory acceptance and innovation-friendly rules, as advocated by NGOs in Belgium (F3717190_005). This approach seeks to create a conducive environment for research outputs to be effectively translated into market applications. The integration of open science monitoring as a structural element is another action proposed by NGOs in Greece, who argue that this would formalize the process of valorisation and ensure that research outputs are accessible and impactful (F3717122_005). Similarly, the reinforcement of the role of research and technology organizations (RTOs) as neutral, trusted partners is seen as crucial by academic institutions in Belgium, who believe that RTOs can facilitate the valorisation process by bridging the gap between academia and industry (F3716831_004). Stakeholders also emphasize the importance of supporting sustainable infrastructures and staffing for open science, as noted by NGOs in Belgium (F3716241_007). This action is seen as essential to maintaining the momentum of valorisation efforts and ensuring that research outputs are preserved and disseminated effectively.

The promotion of technology transfer to industry is another key action identified by stakeholders, with various groups advocating for closer links between academia, industry, and society (F3708530_003). This sentiment is echoed by business associations in Sweden, who argue that stronger business-to-science links are imperative for effective valorisation (F3712113_005). The development of joint public-private models and instruments for disruptive innovation is proposed by academic institutions in Germany, who believe that such models can facilitate the translation of research into market applications (F3714513_012). Additionally, the creation of alternative business models for ultra-rare diseases is suggested by NGOs in Belgium, highlighting the need for innovative approaches to valorisation in niche areas (F3714336_006). Stakeholders also advocate for the establishment of EU-wide intellectual property frameworks to accelerate knowledge valorisation, as proposed by academic institutions in the Netherlands (F3696259_015). This action is seen as crucial to providing a consistent legal framework that supports the valorisation process across the EU.

The integration of societal impacts into research evaluation is another action proposed by academic institutions in the Netherlands, who argue that this would ensure that valorisation efforts are aligned with broader societal goals (F3709620_015). This approach is complemented by the suggestion to mandate participatory research, as advocated by academic institutions in Italy, which would involve stakeholders in the valorisation process and enhance its impact (F3711503_012). More specifically, several contributions underline that the ERA Act should play a stronger role in reinforcing evidence-based policymaking. Respondents call for establishing more structured and legally embedded channels for dialogue between scientists, policymakers, political actors, and citizens in

order to strengthen institutional trust and support the uptake of scientific knowledge in decision-making processes (F3679204). Additional feedback highlights the importance of deliberate public engagement strategies, emphasising that citizens should have opportunities to co-shape research agendas and that researchers require better support for science communication and outreach activities (F3589999).

Finally, several contributions highlight the broad need to strengthen the recognition of the social and human sciences and the arts (SSH and SHAPE disciplines) within ERA policy development. Respondents stress that alignment and investment measures should explicitly reflect these fields when addressing societal challenges, ensuring they are not overshadowed by a narrow focus on competitiveness, defence, or technology. They call for maintaining balanced attention between fundamental research and SSH-oriented contributions, emphasising the importance of integrating these perspectives into strategic ERA priorities (F3714470, F3679204).

Overall, the actions proposed by stakeholders reflect a comprehensive approach to enhancing knowledge valorisation within the ERA. These solutions emphasize the need for regulatory reforms, enhanced collaboration, and robust intellectual property frameworks to ensure that research outputs are effectively translated into societal and economic value, including policymaking, and that all scientific disciplines are considered as sources of potential value.

9. Artificial Intelligence Guidance in Research

9.1 Overview

Academic and research institutions, trade unions, companies, and NGOs have contributed insights, highlighting both challenges and potential solutions on artificial intelligence (AI) guidance in research. The hurdles primarily revolve around issues of marginalization, inequality, skills gaps, and algorithmic bias, while proposed actions focus on ethical AI use, skills development, and collaborative frameworks. The interconnections between these hurdles and actions suggest a need for comprehensive policy approaches that address both technical and ethical dimensions of AI in research.

9.2 Problems

The hurdles identified in the consultation data can be clustered into several key themes: marginalization in AI legislation, inequality and skills gaps, algorithmic bias, and limitations in datasets. Each of these themes presents specific challenges that stakeholders experience differently, depending on their sector and geographical context.

Firstly, the marginalization of research organizations in AI legislation is a significant concern, particularly for NGOs in the Netherlands. One respondent noted the "marginalisation of research organisations in data, digital market, and AI legislation" (F3680306_004), indicating a perceived exclusion from critical legislative processes that shape the AI landscape. This marginalization can lead to a disconnect between policy and practice, where research institutions struggle to influence or adapt to rapidly evolving AI regulations.

Inequality in AI persists as another major hurdle, with stakeholders from Czechia emphasizing the ongoing disparities in AI access and development (F3617532_009). The

feedback highlights that "skills gaps and lack of diversity remain barriers" (F3617532_010), underscoring the need for inclusive policies that address these systemic issues. The lack of diversity in AI research and development can perpetuate biases and limit the scope of innovation, affecting the overall quality and applicability of AI solutions.

Algorithmic bias is a critical concern raised by academic institutions in Italy, where algorithms are seen as having "the potential to sustain unfairness or bias in the handling of data" (F3589796_008). This issue is particularly relevant in scientific research, where biased algorithms can skew results and undermine the integrity of research findings. Addressing algorithmic bias requires a multifaceted approach, including the development of fair and transparent AI systems and the implementation of robust ethical guidelines.

Finally, the limitation of safe, representative datasets for AI education is highlighted by stakeholders from Poland, who point out the "limited safe, representative datasets for practical AI education" (F3590302_003). This hurdle affects the ability to train AI systems effectively and equitably, as the lack of diverse datasets can lead to biased outcomes and hinder the development of AI technologies that are truly representative of diverse populations.

9.3 Proposed actions

Stakeholders have suggested a range of solutions, from ethical guidelines to collaborative frameworks, each with its own potential impact and feasibility.

Academic institutions in the Netherlands advocate for measures to promote and ensure responsible and ethical use of AI in research (F3696259_010; F3696259_022). These proposals emphasize the importance of integrating ethical considerations into AI development and application, ensuring that AI technologies are used in ways that respect human rights and societal values.

The creation of specialized bodies to oversee AI ethics is another proposed action, with stakeholders from Spain suggesting the "Activation of a symbiotic European Ethics Committee 6G AI" (F3590125_005) and the establishment of an "Independent Ethics Board with experts in data protection, AI ethics" (F3590302_008). These bodies would provide oversight and guidance, helping to harmonize ethical standards across the EU and address concerns about AI misuse.

Skills development is a critical area of focus, with stakeholders from Czechia advocating that "inclusive AI skills development must be supported" (F3617532_011). This action aims to bridge the skills gap ensuring that all individuals have the opportunity to contribute to and benefit from AI advancements.

Collaborative frameworks and infrastructure development are also emphasized, particularly by academic institutions in the Netherlands. They propose actions to "support collaborative programmes, cross-domain infrastructures" (F3709620_019) and "reduce fragmentation of data and know-how" (F3709620_020). These initiatives seek to foster collaboration across sectors and countries, enhancing the exchange of knowledge and resources to drive innovation in AI research.

The feasibility and impact of these actions vary, with some requiring significant investment and coordination at the EU level. However, the broad support for ethical guidelines and skills development suggests these areas could be prioritized in future policy initiatives.

10. Consistency in International Cooperation and Research Security

10.1 Overview

The consultation responses regarding consistency in international cooperation and research security reveal a complex landscape of hurdles and proposed actions. Stakeholders from various sectors, including academic institutions, NGOs, businesses, and public authorities, have highlighted the fragmented nature of national policies and the need for harmonized EU-level standards. The hurdles identified are deeply intertwined with geopolitical risks, regulatory disparities, and structural inequalities, which collectively undermine the European Research Area's (ERA) potential. Proposed actions focus on establishing robust frameworks, enhancing collaboration, and ensuring security without stifling innovation. The analysis below delves into these hurdles and actions, exploring the positions of different stakeholders and the connections between identified challenges and solutions.

10.2 Problems

The obstacles to achieving consistency in international cooperation and research security are primarily centred around fragmented national policies, geopolitical risks, and regulatory disparities. Academic institutions, particularly from Germany and Finland, have emphasized the weakening effect of fragmented security policies on the ERA. One respondent noted, "fragmented national policies on security weaken the ERA" (F3714513_013), highlighting the need for a unified approach to research security across member states. This fragmentation is further exacerbated by the dual-use nature of technologies, which poses significant challenges in maintaining research security. As one academic institution from Germany stated, "research security is a major hurdle due to dual use of technologies" (F3713096_003), underscoring the complexity of balancing openness with security.

Geopolitical and geoeconomic risks also play a crucial role in shaping the hurdles faced by stakeholders. An academic institution from Finland pointed out that "the growing geopolitical and geoeconomic risks call for clear EU-level guidance on dual-use and research security" (F3713431_005). This sentiment is echoed by other stakeholders who recognize the need for clear guidance to navigate the intricate landscape of international cooperation. The regulatory disparities among member states further complicate efforts to achieve consistency. A company from the United States highlighted "divergent national rules" (F3714654_008) as a significant obstacle, indicating the need for harmonized regulations to facilitate collaboration.

Structural inequalities between states and world regions also contribute to the hurdles in international cooperation. An Irish respondent noted, "structural inequalities between states and world regions imply that access to evidence varies greatly" (F3592540_019), suggesting that disparities in resources and capacities hinder effective collaboration. Additionally, regulatory path dependence, as mentioned by an NGO from Belgium, "remains a significant obstacle" (F3717190_008) and further entrenches these inequalities, making it challenging to implement uniform standards across the EU.

10.3 Proposed actions

In response to the identified hurdles, stakeholders have proposed a range of actions aimed at enhancing consistency in international cooperation and research security. Academic institutions, NGOs, and businesses have advocated for the establishment of EU-level

standards and frameworks to address the fragmented nature of current policies. An academic institution from Germany suggested, to "develop a proportionate and harmonised minimum standard for research security across the EU" (F3714470_029), emphasizing the need for a unified approach to ensure consistent security measures. A company from the United Kingdom suggested, to "promote harmonised standards and shared frameworks" (F3642643_001), advocating for greater regulatory alignment to facilitate collaboration.

The integration of international partners and infrastructures is another key action proposed by stakeholders. An academic institution from France recommended, "integration of R&I infrastructures outside the EU with EU infrastructures" (F3719087_007), highlighting the importance of fostering global collaboration while maintaining security. In turn, NGOs and business associations advocate for responsible openness and safeguards against foreign interference. A business association from Belgium stressed the need to "establish safeguards against foreign interference" (F3714449_009), underscoring the importance of protecting intellectual property and research integrity.

Harmonizing legal frameworks and risk assessment standards is also a priority for stakeholders. An academic institution from Germany proposed, "EU-level standards for risk assessment" (F3714513_014), indicating the need for consistent criteria to evaluate and manage risks associated with international cooperation. This approach is supported by companies and NGOs, who recognize the potential benefits of streamlined regulations.

Stakeholders have also emphasized the importance of embedding gender equality principles in international R&I collaborations. An academic institution from Ireland recommended, to "embed gender equality principles in all international R&I collaborations" (F3593667_011), highlighting the need for inclusive practices that enhance research quality and societal impact. This action aligns with broader efforts to address structural inequalities and ensure equal opportunities for all researchers.

The proposed actions aim to create a cohesive and secure research environment across the EU. By establishing harmonized standards and frameworks, stakeholders can mitigate the risks associated with fragmented policies and geopolitical challenges. The integration of international partners and infrastructures, coupled with safeguards against foreign interference, can enhance collaboration while protecting research integrity. Moreover, the inclusion of gender equality principles can foster a more inclusive and innovative research landscape, benefiting society as a whole.