

**ERAC *ad hoc* Working Group on the future of the ERA**  
**Deliverable 2:**  
**Future ERA Objectives and Priorities**

Version 3 December 2019

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## ERA Objectives and Priorities

### 1. ERA Objectives

In order to advance and implement a fully-functioning European Research Area that meets the requirements laid down in Article 179, paragraph 1, of the Treaty on the Functioning of the EU (TFEU) and of the new ERA paradigm, the European Commission, the Member States and the Associated Countries must build on its many important achievements and progress so far, and act jointly to pursue the following three equally important strategic objectives:

- ***Be wholly inclusive, collaborative and increase Research Quality throughout Europe:*** ERA policies and actions at all levels should increase inclusiveness, openness, brain circulation and integrity, pursuing scientific excellence throughout Europe. The overarching guiding principles should be collaboration and quality of research processes, outputs and data. These principles apply with regard to geography (within Europe and the World), culture, people (including gender equality and minority integration). The ERA should involve Institutions from academia, Research & Technology Organisations (RTO) and industry as well as from the public sector and society, in order to achieve high-quality, responsible European R&I ecosystems characterised by the flourishing of existing and new collaborative links.
- ***Be seamless, connected and drive Europe's competitiveness:*** In order to fully exploit ERA's potential for a knowledge-based, innovation-led sustainable growth and development in Europe, the ERA needs to become truly effective in its capability to produce, circulate and use research-based knowledge. This entails increasing the interoperability of the European ecosystems, as well as improving the framework conditions for researchers, innovators, industry and institutions. Higher Education and skills development are integral components of an impactful ERA, requiring better coordinated R&I and Higher Education policies.
- ***Be inspiring, open and contribute to wider European policy objectives:*** ERA policies and actions at all levels should be more responsive to the needs of the ERA stakeholders and more relevant to the wider society, by means of smart directionality and investments towards solving societal needs. In particular, the ERA should contribute both to the Sustainable Development Goals (SDGs) and Europe's wider policy objectives. This can only be achieved by recognising the primordial importance of curiosity-driven basic research, and by creating, disseminating and exploiting research-based knowledge, making it visible in more inspiring and empowering ways across Europe, in the context of the new opportunities offered by Open Science and Open Innovation principles.

**To achieve these three strategic objectives, the ERA must have wide political support and commitment at the highest national and EU levels,** to drive the implementation of better coordinated knowledge-based R&I policies, while harnessing the full diversity of Europe's R&I systems. The achievement of a fully functioning ERA also needs to be supported by EU-level programmes and policies, in particular Horizon Europe (2021-2027) and future EU R&I Framework Programmes. Adequate and ambitious EU funding is a prerequisite to ensure complementarity and collaboration between European and national/transnational activities through a strategic planning process. Specifically, the "ERA-pillars" of the Framework Programmes should have sufficient funding and be designed and implemented to effectively contribute to the objectives and priorities of the new ERA paradigm.

## 2. ERA priorities

To meet the previously described Objectives, the ERA should focus on four equally important strategic priorities, fully in line with the new ERA paradigm. These four priorities might need possible legislative, soft regulatory or administrative measures, including through the European Semester process, for effective implementation.

For each strategic priority, a limited number of potential areas of intervention are listed for illustrative purposes only. They represent issues which ERAC considers to be of high relevance and importance for achieving the ERA objectives. However, defining a detailed ERA action plan, that should include adequate monitoring mechanisms and quantifiable Key Performance Indicators (KPIs), is beyond the mandate of this WG and can only be done at a later stage once specific political agendas and policy priorities are set at the appropriate level.

To provide visibility and demonstrate the implementation of these priorities as well as their impact, ERA policy tools, such as 'ERA lighthouses', could be put in place. These tools should a) allow for concrete outcomes and impacts in the short- to medium-term based on concrete societal needs; b) address issues of European-wide relevance inside and beyond the R&I system; and c) lead to an improved acceptance, recognition and support for the ERA by policy makers, ERA stakeholders and the wider society. ERA lighthouses should help to demonstrate in a tangible and concrete way the added value of the new ERA paradigm and its associated ERA objectives and priorities in practice.

### 2.1 Framework conditions for the production, circulation and use of knowledge, including research career issues

*Key issues/challenges to be addressed:* The complex interplay within the European multi-level and multi-actor ecosystems for knowledge production, circulation and use constitutes a major obstacle to a fully functioning ERA. The establishment of a functional multi-level and multi-actor steering framework for research-based knowledge policies, encompassing the whole policy cycle from design to implementation and monitoring/review, is therefore a key requirement for the future. Particular opportunities stem from more aligned approaches across Europe concerning evaluation systems for research careers, both within academia and across sectors (academia and industry) and countries.

*Description of the priority:* In order to take full advantage of possible synergies and complementarities between EU and national ecosystems for knowledge production, circulation and use, the complex legal and administrative policy frameworks should be made compatible and interoperable at all levels. An integrated approach towards effective framework conditions should address common criteria for assessing the quality of research (processes, outputs and data), linking research to innovation and higher education policies and promoting institutional change within all ERA institutions, as well as where potentially harmful effects may derive from broader policies such as EU-level IP and state aid rules. A particular focus should be placed on opportunities stemming from Open Science and Open Innovation policy approaches, in particular regarding research career interoperability and rewarding systems, including gender and minority considerations when assessing career opportunities.

Potential intervention areas include:

- Exploring ways to increase the interoperability of national and EU R&I systems to reduce the fragmentation of rules and procedures for R&I funding, such as promoting ERA seals of quality, enhancing trust and recognition between funding agencies across Europe;
- Developing a European framework for career evaluation and career progression for researchers, including intersectoral mobility (academia, industry, etc.) and gender-related issues under the Open Science and Open Innovation principles;
- Promoting a dialogue and concerted actions with horizontal policies with impact on research careers (e.g., labour, social security, education, etc.);
- Further developing Open Science and Open Innovation policy approaches at European and national levels in order to truly foster the circulation of knowledge;
- Ensuring Framework conditions for the pursuit of scientific excellence, including effective monitoring of progress to achieve a fully functioning ERA, for example, through the European Semester;
- ...

## **2.2 R&I driven joint action with other policy areas**

Key issues/challenges to be addressed: Research-based knowledge does not fully exploit its potential to provide the smart directionality needed to achieve transformative changes required to meet Europe's wider policy objectives and the SDGs. The research-based knowledge sector does not sufficiently exploit the potential for co-design, co-creation and co-implementation of R&I with other policy areas.

Description of the priority: Research-based knowledge should better provide the smart directionality needed for transformative changes based on new knowledge and technologies (e.g., digital transformation, energy and ecological transition, genetic revolution in an aging population or robotics) and contribute to meeting the SDGs, sustainable growth requirements and other societal needs. New priority setting, synchronised investments and implementation mechanisms require a holistic dimension and should be established based on co-design and co-implementation with other European policy areas. This should include a joint strategic approach for international cooperation as well as for regulation mechanisms to reduce policy fragmentation and unnecessary duplication.

Potential intervention areas include:

- Mobilising support at the highest level for knowledge-based policy design and implementation;
- Promoting cooperation of MS on specific topics (e.g., through R&I infrastructures or European partnerships);
- Promoting a dialogue and concerted actions with sectoral policies beyond the strict remit of R&I policy, to avoid fragmentation with regulation policies or impact assessments;
- Embedding R&I and promoting capacities for absorption of new knowledge and technologies in other sectoral policies, including towards the SDGs and within missions;
- Ensuring closer collaboration between MS and the EU Commission on International

Cooperation;

- ...

### 2.3 Relevance and visibility of R&I for society

*Key issues/challenges to be addressed:* Research-based knowledge and thus the ERA have not achieved an appropriate visibility in society despite their major contributions to Europe's welfare, competitiveness and the European 'way of life' and its core values. There is insufficient awareness among citizens of the impact and benefits that R&I have in their daily lives, as the interaction of research-based knowledge policies with the broader society is still underdeveloped across the policy cycle, from policy design to implementation and monitoring/review. This underdeveloped interaction with society may pose a long-term risk to the sustainability of the research-based knowledge sector and the ERA as there may not be sufficient support from policy makers for the necessary investment in R&I.

*Description of the priority:* ERA actions and initiatives addressing both curiosity-driven and applied research have to better direct national, including regional, and EU knowledge policies to increase their responsiveness to societal needs, thus raising the relevance and visibility of the R&I activities for society. Particular attention should be paid to involving stakeholders and citizens, including the most vulnerable populations, in setting R&I policy priorities and in the knowledge-creating processes. Effective branding and communication for a better outreach and visibility of the ERA's potential and achievements needs to be implemented.

*Potential intervention areas include:*

- Co-designing, implementing and assessing R&I policies with stakeholders and society, namely by finding more effective ways of involving citizens to set and implement R&I policy priorities;
- Promoting the valorisation and recognition of R&I achievements by society: design and implement better communication of the impact and benefits of R&I, its relevance and its achievements that improve the daily lives of European citizens;
- As researchers themselves are mostly unfamiliar with the ERA, targeting the whole research community and institutions in information campaigns to familiarise them with the ERA, its objectives and priorities, how they can benefit from the ERA and how they can actively influence its development and priority setting;
- Within the context of supporting Open Science and Open Innovation approaches, developing participatory approaches such as citizen science as well as socio-innovation, social entrepreneurship and the protection of cultural heritage;
- ....

### 2.4 Broad Inclusiveness

*Key issues/challenges to be addressed:* An insufficient inclusiveness of Research-based knowledge policies and thus of the ERA is one obstacle to fully activate their potential to improve the well-being of Europe's citizens. Especially since the financial and economic crisis, ERA actions and initiatives have not been sufficiently tailor-made to respond to the needs of the diverse socio-economic

situations across and within the EU Member States.

*Description of the priority:* ERA actions and initiatives have to better ensure that the European and national, including regional, R&I policies are coherent and inclusive in the broadest sense. Open and transparent engagement of all relevant actors, including the most vulnerable ones, should strengthen ERA policy to enhance quality and excellence across disciplines and reduce fragmentation. ERA actions should facilitate collaborative links between researchers, institutions and citizens, encompassing the geographical dimension, human capital, gender and minority groups-related issues, as well as both public and private institutions in all sectors. The need for institutional reform towards higher standards and core values should be considered. ERA policy should promote knowledge and brain circulation at all levels and reduce the undesirable phenomenon of brain drain.

*Potential intervention areas include:*

- Ensuring a more synchronised co-evolution of R&I systems, to strengthen their quality and promote excellence, to reduce the existing regional/geographic/territorial inequalities;
- Developing effective measures to foster brain circulation and counteract brain drain;
- Ensuring gender equality throughout research careers and research content;
- Ensuring access opportunities for all minority groups throughout research careers and research content;
- Fostering connectivity and pan-European R&I collaborative links;
- ....

### 3. Rationale for the selection of the ERA Objectives and Priorities

#### 3.1 Background – elements of a new ERA narrative

The European Research Area (ERA) is not a goal in itself but it should enable the strengthening of the scientific and technological base of Europe. The ERA is thus the basis for the creation of a fully functioning dynamic knowledge circle in Europe, building on a corresponding multi-level and multi-actor steering framework<sup>1</sup> and serving broader policy objectives while ensuring the best framework conditions for implementation of the ERA. The knowledge circle implies a more holistic federated approach to research, innovation and higher education, including skills development.

The ERA should be a framework for the free circulation of researchers, research-based knowledge and technology, a true European community of research-based knowledge producers and users.

ERA policies should be designed to help facilitate the production of new research-based knowledge, its dissemination and use, including by removing barriers and by extending its reach beyond the traditional R&I sector. ERA policies should seize all opportunities to link R&I to other sectoral areas through smart directionality, and promote R&I-driven policy change.

Deliverable 1 of the ERAC WG proposed 20 recommendations for a renewed ERA paradigm<sup>1</sup>, from which 11 “Dimensions of Change” and 5 major Challenges were derived:

- achieve a dynamic knowledge circle
- better demonstrate its societal relevance and be responsive to societal needs
- advocate a new R&I driven sustainable growth and development model
- drive the co-design of R&I with relevant horizontal and sectorial policies
- harness the diversity of Europe’s R&I systems

These Challenges, Dimensions of Change and Recommendations form the basis for the equally important three overarching ERA objectives and the four ERA priorities that were presented in the previous chapter. Their rationale is described in the next sections.

As stated in earlier recommendations (see Deliverable 1 “ERA Narrative”), the effective delivery of the ERA will depend on two essential boundary conditions:

- The ERA must have a wider political support and commitment at the highest national and EU levels to drive the delivery of better coordinated and more impactful research-based knowledge-policies and harness the opportunities arising from Europe’s diversity.
- The achievement of a fully functioning ERA needs to be supported by EU-level programmes and policies. Horizon Europe (2021-2027) and future EU framework programmes (FP) for R&I will ensure the necessary glue and complementarity for collaboration with national/transnational activities *inter alia* through a strategic planning process. Specifically, actions financed through an “ERA-pillar” of the FPs with sufficient funding should be designed and

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<sup>1</sup> See Deliverable 1 of the ERAC ad-hoc WG on “The Future of ERA”: “Options for a new paradigm on the future of the ERA narrative”, Sep 2019.

implemented so as to effectively contribute to the objectives and priorities of the new ERA paradigm.

### 3.2 New ERA objectives

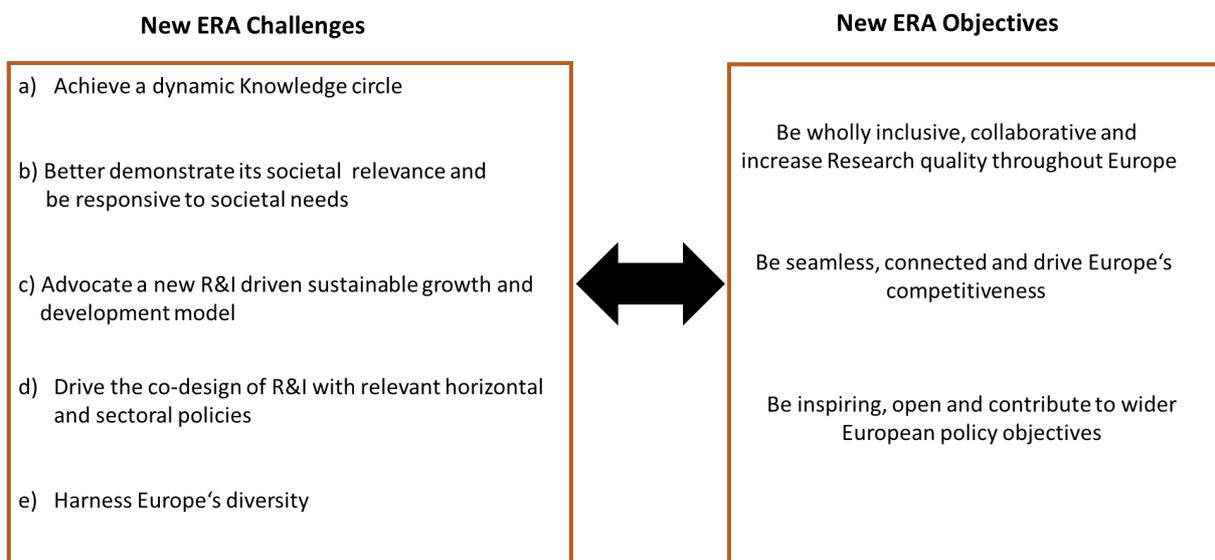
The definition of the new ERA objectives needs to ensure that the challenges and dimensions of change in the new ERA narrative are fully covered. The objectives should highlight the key novelties of the new ERA paradigm while also covering all the legal ERA-related directions of the TFEU (article 179 – 1).

The selection of three strategic and encompassing objectives will allow for a continued relevance under changing policy environments:

- ***Be wholly inclusive, collaborative and increase research quality throughout Europe***
- ***Be seamless, connected and drive Europe’s competitiveness***
- ***Be inspiring, open and contribute to wider European policy objectives***

Figure 1 outlines the relationship between the 5 challenges of the ERA narrative and the three strategic objectives. The main message of the figure is that each ERA objective contributes to all challenges in an *albeit* specific way. As an example, the objective of being ***wholly inclusive, collaborative and increase research quality throughout Europe*** contributes:

- with ‘inclusive’ and ‘collaborative’ to the dynamic knowledge circle;
- with ‘inclusive’ to better demonstrate its societal relevance;
- with ‘collaborative’ and ‘increased research quality’ to the R&I-driven sustainable growth model;
- with ‘inclusive’, ‘collaborative’ and ‘increased research quality’ to the co-design with relevant horizontal and sectoral policies;
- with ‘inclusive’ and ‘collaborative’ to harness Europe’s diversity.



**Figure 1:** Relationship between ERA challenges and the new ERA objectives.

### **3.2.1 Be inclusive, collaborative and increase research quality throughout Europe:**

The design and implementation of research-based knowledge policies at all levels should deliver on the desired dynamic knowledge circle. Research quality towards scientific excellence through European-wide collaboration are at the heart of this objective. These key goals can only be achieved if the principles of inclusiveness, openness, brain circulation and integrity are respected in the design and implementation of research-based knowledge policies. Freedom of science and the instrumental role of curiosity-driven research are the very foundations of research quality and scientific excellence.

As expressly stated in the recommendations (deliverable 1), inclusiveness must be based on a broad understanding and applies with regard to geography (within Europe and the World), culture, people (including gender equality and minority integration) and institutions from academia, RTOs and industry as well as from the public sector and society.

The principle of openness comprises several dimensions. The main manifestation is the many new opportunities offered and challenges posed by the Open Science and Open Innovation approaches for more and better collaborative links within the research-based knowledge circle and for a new quality of research processes, outputs and data, including how research careers are evaluated.

Brain circulation requires a functional and easy mobility framework for knowledge producers.

The principle of integrity is essential to achieve the desired societal recognition and support for the value of research-based knowledge.

### **3.2.2 Be seamless, connected and drive Europe's competitiveness:**

This objective addresses another set of the challenges and dimensions of change that were identified in the new ERA narrative. This objective refers mainly to the effective functioning of the research-based knowledge circle. The main emphasis is on the multi-level dimension of the ERA, notably the desired multi-level steering framework that should ensure more and better opportunities for a seamless knowledge production, circulation and use.

A seamless research-based knowledge area is widely accepted as a pre-condition for a more effective and impactful contribution of R&I to a new sustainable growth model and, thus, to Europe's long-term competitiveness.

This improved seamlessness comprises several dimensions:

- A first dimension refers to an improved interoperability of transnational cooperation between the different and diverse national, including regional, R&I systems in Europe. This will improve the working conditions of ERA's main constituencies, notably researchers, innovators, industry and research funding and research performing organisations. Obviously, the research-based knowledge related policies and funding programmes, in particular Horizon Europe, will play an instrumental role.
- A second dimension refers to a better and more integrated policy planning and implementation with other horizontal policy fields that shape the everyday life of Europe's knowledge producers and users, such as education policy, labour and employment policy, social and pension policy, as well as regional and industrial policies.

- The third dimension refers to a better recognition of the pivotal role of skills development for a functioning seamlessness, in particular with respect to the higher education sector. A particular focus on the exploitation of the potential synergies between the ERA and the higher education sector, in particular the EHEA, is required.

### 3.2.3 Be inspiring, open and contribute to wider European policy objectives:

This objective addresses the set of challenges and dimensions of change that refer to the relationship between the knowledge circle and the wider society (see Deliverable 1 “ERA Narrative”).

Again, this objective encompasses several dimensions:

- The first dimension refers to the desired smart directionality that aims at ensuring the right balance in investments and political attention between curiosity-driven research-based knowledge production and the desired directionality for knowledge production, circulation and use targeting societal needs, in particular towards meeting the SDGs.
- The second dimension refers to the need to co-design, co-create and co-implement effective and empowering research-based knowledge actions jointly with sectoral policies, including energy, health, transport, environment and agricultural policies, among others.
- A third dimension refers to new opportunities for participatory interaction with the wider society stemming from novel Open Science and Open Innovation practices. This objective can only be achieved if there is a growing awareness and support from society of the potential of R&I to improve the daily life of citizens. Consequently, this objective also calls for new, inspiring and empowering ways to improve the visibility and better communicate how R&I can improve the quality of life of European citizens. ERA policy tools, such as ‘ERA lighthouses’, could be considered for this purpose.

## 4. Rationale for the selection of the ERA priorities

Four new priorities have been selected after an intensive discussion within the Working Group, taking into good account the valuable inputs and contributions of ERA Groups and ERA Stakeholders. The detail already provided on the priorities in section 2 of this deliverable, particularly through the suggested potential areas for intervention, obviates the need for further elaboration.

In contrast to the overarching nature of the ERA objectives, the priorities allow for a clear focus of subsequent policy action and provide clear guidance for potential intervention areas to improve the functioning of the ERA. The proposed ERA priorities should be subject to regular re-evaluation and be readjusted when a goal has been sufficiently achieved or in light of changes to the political environment that may justify a new focus. Intervention areas within each priority should, in principle, be time-bound and adapted as necessary to reflect changes to the political challenges and goals.

The number of ERA priorities was expressly kept low to make it easier to communicate the key areas of focus to policy makers, ERA stakeholders and the wider society, as well as to discuss the

ERA Governance planned for 2021.

Figure 2 illustrates the **relationship between the** ERA challenges, the ERA objectives and the ERA priorities.



**Figure 2:** Relationship between the new ERA challenges, objectives and priorities

The ERA priorities were selected based on the criteria described next.

#### 4.1 Relevance & impact – ERA priorities with a purpose

**Relevance:** The new rationale for ERA priorities should shift the focus from R&I related reform requirements to a more forward-looking targeted-oriented approach. To ensure the relevance of the ERA priorities, they should visibly link to ongoing overriding strategic processes at national, EU and global level, e.g., the UN Sustainable Development Goals, the EU Leaders' Agenda, as well as national strategies such as digital transformation, innovation and education. A close link to the goals of the EU-Framework Programme for R&I is a pre-requisite. The link to broader strategic processes will enhance visibility and help position ERA as a core component of EU policy.

**Impact:** The choice of new ERA priorities should focus on areas where improvements with direct impact "on the ground" can be achieved. The core target-groups of the ERA are knowledge producers and users. This is, for instance, the improvement of framework conditions for researchers and innovators, cutting red-tape for institutions or encouragement of citizen engagement. The impact of ERA can be increased through realistic and achievable goals for the coming decade. Over-ambitious and unrealistic aims are bound to fail and risk discouraging participating actors. For a successful future ERA, realistic and concrete actions will keep the momentum going and ensure long-term commitment to this common endeavour.

#### 4.2 Effectiveness and efficiency – An impactful design of ERA priorities

**Effectiveness:** A limited set of strategic priorities will allow for an effective targeted-approach that remains flexible enough to react to long-term developments and various paths of implementation. More overarching and outward-oriented priorities allow for inspiring and

empowering communication of the relevance of the ERA.

*Efficiency:* Simplification of the EU R&I landscape has been a major pursuit during the last decade. Fewer, more strategic priorities than the current six can link several more specific aspects (and respective instruments) that are closely related to one another but have, so far, been mostly treated separately, such as “gender”, “brain circulation” and “human resources”, all of them affecting the opportunities for the individual researcher within the ERA. Integrating these sub-goals into a single priority will allow synergies to be identified and efficiencies to be enhanced.

### **4.3 Consistency and coherence – A close link to the new ERA narrative**

*Consistency:* The ERA narrative sets out a new vision for ERA post-2020. A first core criterion for the definition of ERA priorities is the consistency of the priorities with the ambitions of the new ERA narrative. The priorities, as intervention areas for ERA action, should be fully in line with the new paradigm.<sup>2</sup>

*Coherence:* The four ERA priorities combined should cover *all* the essential issues of the new ERA paradigm that require further work for a coherent strategic approach to be achieved. They of course must include all the aspects of ERA that were defined in the EU Treaty (see Art. 179 and 181, TFEU). Looking back, it is worth noting that the 2012 ERA priorities covered important goals for the achievement of what was then defined as a fully coherent European Research Area. The core elements of the current ERA priorities should therefore be incorporated within the new structure as appropriate.

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<sup>2</sup> See Recommendations 1 to 19/20, Deliverable 1 of the ERAC ad-hoc WG on “The Future of ERA”: “Options for a new paradigm on the future of the ERA narrative”, Sep 2019.