

# The ERA and Smart Specialisation<sup>1</sup>

## Introduction

This paper has been produced as feedback on the initiative of the European Commission to prepare a new Communication on the European Research Area.<sup>2</sup> The future Communication will incorporate the requirements for transformative actions by the Recovery Plan and the new growth strategy. After many years of stagnation, the ERA may find its role in the effective European coordination of joint multi-level action of research and innovation policies for this strategic transformation agenda. The enormity of the tasks for each country considered separately is the driver to move from non-binding policy learning and policy recommendations to progressive joint deliberations and possible commitments for co-investment.

However, the fragmentation of the research and innovation policy frameworks is a lingering problem which has stimulated various remedies. The Friends of Smart Specialisation<sup>3</sup> wish to recall that in a previous period, when the Lisbon Strategy was the strategic challenge for systemic EU transformation, the smart specialisation approach was developed in the context of the European Commission's work (DG Research) to promote a better coordination of R&D policies through prioritisation of public expenditure based on place-based strengths of the Member States.<sup>4</sup> However, this smart specialisation policy was only implemented inside the EU's Cohesion policy as ex ante conditionality for accessing funds for research and innovation.<sup>5</sup> Smart specialisation now appears to be categorised as a policy approach within the context of EU's Cohesion (Regional) policy. But in times of huge demands on budgets, smart specialisation (prioritisation and mutual alignment of priorities for common objectives) may become a key component of efficient European, national, and regional policies for research, innovation, and transformation. That is why smart specialisation must be brought back at the heart of the new ERA paradigm.

## The new ERA Communication: a window of opportunity

The 'European Research Area' is at the brink of a new enhanced rationale to make the EU more resilient in a fragile world economy. Aiming at further integration of research and innovation strategies in the EU towards the objectives of the Recovery Plan and the Green Deal, the ERA will certainly be reinforced by the need for more strategic autonomy in critical domains. While the whole revision of the ERA paradigm started before the recent events, the current economic and social shocks require the effective sharing of knowledge since governments are dealing with challenges bigger than those that Member States are able to tackle individually. These challenges can gear-up the construction of the ERA from its past fastidious process of a cautious balancing of competences in defining small steps towards increased cooperation. The ERA Communication can stimulate a leap forward in the integration of national research and innovation systems for advancing the recovery

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<sup>1</sup> Policy Paper of the Friends of Smart Specialisation, authored by Jan Larosse, Dimitri Corpakis and Richard Tuffs

<sup>2</sup> [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12495-Research-innovation-future-of-the-European-Research-Area-communication-](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12495-Research-innovation-future-of-the-European-Research-Area-communication)

"This initiative consists of a communication relaunching and revitalising the ERA in order to: make it future-proof; make it better able to address the major challenges of the digital and green transition; increase Europe's resilience following the Covid-19 crisis."

<sup>3</sup> The Friends of Smart Specialisation is an independent expert group (see <http://www.efiscentre.eu/portfolio-item/friends-of-smart-specialisation/>)

<sup>4</sup> DG Research (ERA Directorate) together with DG JRC undertook exploratory work on the basis of the input of the Expert Group 'Knowledge For Growth' starting in 2007: "Smart specialisation in a truly integrated research area is the key to attracting more R&D to Europe" Policy Brief n° 1, October 2007, by Dominique Foray and Bart Van Ark. <https://www.kowi.de/Portaldata/2/Resources/fp/report-knowledge-for-growth.pdf>

<sup>5</sup> In the context of the European Regional Development Fund (ERDF).

and a new growth (the Green Deal) model. It is this strategic drive and the commitment that will make the difference.

Knowledge is produced in distinct, unique innovation ecosystems each having their strengths but often poorly connected and without a coherent policy framework. The ERA is a 'space' where this vital knowledge can circulate and multiply among European research and innovation actors. Place-based innovation policy in the context of the new growth model is at the heart of any attempt to structure cooperation between these heavily localised knowledge eco-systems.

The ERA should become a new governance model for a truly European research and innovation system on the condition that it can implement a multi-level governance structure for involving all policy levels and all policy fields concerned in fine tuning their priorities and jointly undertaking necessary investments.

The ERA is an institutional innovation in full development. It has its regulative foundation as Article 179 in the Lisbon Treaty amendment, with Article 182(5) explicitly reserved for "the measures necessary for the implementation of the European research area". Now is the moment to activate this article for further implementation ("As a complement to the activities planned in the multiannual framework programme.") The ERA can bring more transparency and enable more synergies between policy measures designed for the recovery and transition plans at all levels. This is not only an administrative exercise but also a living experiment in bringing cooperation to a next level of co-investment, e.g. with joint innovation infrastructures. Therefore, the ERA could set-up and monitor a regulatory framework for blending instruments and infrastructures in support of developing critical knowledge and technologies, testing, and demonstrating solutions for strategic autonomy, promoting new value chains in new growth areas at a European scale.

The challenge is to find an effective governance model for organising cooperation in a strongly decentralised decision environment for research and innovation policies such as the European Union's. This needs a combination of top-down directionality of investment goals and a bottom-up discovery process of the right investment opportunities. These two components are present in the "mission" approach and in the smart specialisation approach. They actually need and, in many ways, complement each other.<sup>6</sup>

### **Input for the 'Roadmap ERA 2020' consultation**

The Friends of Smart Specialisation (FoSS – an independent expert group promoting mainstreaming of smart specialisation), would like to draw attention to a historical momentum accompanying the preparation of this new Communication on the future of ERA. The Green Deal has laid the basis of a new European growth strategy with sustainability as a mission and research and innovation among its main drivers. But the adoption of the Recovery Plan has started a new era of institutional reinforcement of the unique multi-level governance model of the EU to construct a common future. The ERA is the only existing reference in the Treaty for the institutional underpinning of a truly European Research and Innovation System.

The ERA Roadmap 2020 notes that "Action at EU level will prove to be crucial in supporting the development of coherent national agendas providing added value in realising critical mass and efficient allocation of resources."<sup>7</sup>

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<sup>6</sup> FoSS developed this proposition in different policy papers available at <http://www.efiscentre.eu/portfolio-item/friends-of-smart-specialisation/>

<sup>7</sup> <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12495-Research-innovation-future-of-the-European-Research-Area-communication->

Therefore, it is important to draw the right conclusions from the 20-year history of the ERA policy framework. The core rationale of ERA as ‘using the potential of the internal market’ for the circulation and access to research and technology, still stands, but the context has evolved dramatically. ‘Research’ has been broadened to the whole innovation chain and grand societal challenges, and now ‘missions’,<sup>8</sup> have become the blueprints for ambitious transformational change. The former update of the ERA concept in the second half of the first decade (that resulted in articles 179 and 182(5) TEU) was linked to the Lisbon Strategy, that other great transformation project of making Europe the ‘most competitive knowledge economy’ in the world. However, the Lisbon Strategy largely failed as did one plank of the ERA - the ‘3% objective’ for R&D expenditure.<sup>9</sup> How then can the new ERA deliver on the missions and objectives for a new growth strategy?

The institutional memory in the EC is often too short for policy learning. It should be recalled that as an answer on the fragmentation and unnecessary duplication of national public R&D expenditures in the ERA, the concept of smart specialisation was developed by an expert group working for Commissioner Potočník, as a policy approach for a more efficient ERA, capitalising on the diversity of the countries, their unique knowledge eco-systems and clusters.<sup>10</sup> This was proposed to be part of national innovation strategies in the 2010 Innovation Union Flagship: *“Policies and instruments are targeted at exploiting current or emerging national/regional strengths within an EU context (“smart specialisation”).* And this was also taken-up in the 2012 Communication ‘A Reinforced European Research Area Partnership for Excellence and Growth’: *“It is vital that Member States and regions build up their own research systems, based on their own strengths, in line with smart specialisation.”*

### **Both the ERA concept and the smart specialisation approach need updating**

Smart specialisation strategies are designed as national / regional strategies for focussing research and innovation investment in priority areas for economic development that are providing a competitive advantage by identifying the strengths of the regional ecosystems in future oriented niches.<sup>11</sup> This is a bottom-up ‘entrepreneurial discovery process’ (EDP) with strong stakeholder involvement in strategy development.<sup>12</sup> More recently it is acknowledged that these strategies should be more outward looking (for better identification of priorities and more inclusive partnering) and should organise the EDP as a permanent learning process for the involved communities, especially at the implementation phase.<sup>13</sup> Such smart specialisation strategies must be part of the overall national and regional innovation strategies and not be limited to the ERDF.

Friends of Smart Specialisation propose the re-introduction of smart specialisation in the context of European integration as the search for ‘smart complementarities’ and promote its uptake in all core transformation policies and institutional processes because its ‘mainstreaming’ may provide a common European reference framework for systemic innovation and structured interconnectedness.

Smart Specialisation may provide a strong positive response to the unfinished business of coordination of European, national, and regional investments for research, innovation, and systemic

<sup>8</sup> [https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe\\_en](https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe_en)

<sup>9</sup> In 2018, there was an €109 billion gap between the actual and aimed amount for R&D spending mainly due to a lack of business investment in R&D (see: [https://ec.europa.eu/info/publications/aiming-more-research-and-development-investment-scenarios-next-decade\\_en](https://ec.europa.eu/info/publications/aiming-more-research-and-development-investment-scenarios-next-decade_en))

<sup>10</sup> Knowledge for Growth: see <https://op.europa.eu/en/publication-detail/-/publication/e46f80d7-abd0-446a-a4c2-2dbd61e71497>

<sup>11</sup> See Smart Specialisation Platform at <https://s3platform.jrc.ec.europa.eu/home>

<sup>12</sup> See <https://s3platform.jrc.ec.europa.eu/entrepreneurial-discovery-edp>

<sup>13</sup> See discussions in Vanguard Initiative (<https://www.s3vanguardinitiative.eu/>) and the European Regions Research and Innovation Network (<https://errin.eu/>)

transformation, and therefore a guiding principle for a ‘true ERA’. Why should this be re-invented when the challenge posed by President von der Leyen is “*to work with Member States to build a true European Research Area in which we pull together all national and European efforts*”?<sup>14</sup> In the previous MFF (2014-2020), smart specialisation was introduced by the Commission as an ex-ante conditionality to access the R&I budgets of ERDF.<sup>15</sup> This vast experiment has already produced more than 120 smart specialisation strategies and provided valuable experience with aligning R&I efforts in several ongoing thematic smart specialisation partnerships.<sup>16</sup> It has established the role of place-based innovation and the ‘entrepreneurial discovery process’, to complement conventional top-down settings of investment priorities for RTDI.

### **Improving and modernising ERA governance**

One of the most important lessons from this history of ‘policy discovery’ is that the ERA may need smart specialisation as a powerful tool to improve and modernise ERA governance. Taking the rich experience of the Open Method of Co-ordination<sup>17</sup> that brought together national experts in specific search and discovery exercises on research and innovation issues in the first phase of the ERA to a next level, a European Entrepreneurial Discovery Process (*where the term ‘entrepreneurial’ needs to be translated in the broadest sense*) could give rise to a real mainstreaming of smart specialisation at the European level which would provide a new governance model for advancing towards the twin transitions (green and digital) and strategic autonomy.

In addition, the European ‘top-down’ directionality of objectives on the one hand, and national / regional ‘bottom-up’ discovery of opportunities that translate into research and innovation dynamics on the other, could be mediated in the context of the national reform plans in the EU Semester.<sup>18</sup> It is important to note in this context that the ERA is not a goal in itself but rather a layer in the emerging European governance of the new growth model that is intertwined with other policies (in particular industrial policies and education and training policies) in a systemic approach (whole-of-government and quadruple helix) to transformational change.

The new ERA is taking shape in the midst of great changes. An experimentalist governance of the ERA (or ERIA<sup>19</sup>) would take-up the R&I challenges needing the critical mass and the industrial diversity of the EU internal market as a driver of new supply and demand conditions for the new growth model. But at the same time the design of ERA policies for tackling these challenges has to capitalise on the uniqueness of innovation ecosystems and their smart specialisations, to develop intra-European complementarities and international competitiveness.

### **What smart specialisation can bring to the ERA table**

Smart specialisation can bring important contributions to ERA governance that do not need to be ‘reinvented’:

1. Smart Specialisation is a **strategic approach** to efficient budget allocation and effective cooperation with an evidence-based prioritisation principle. Beyond the lobbying of vested interests or diluting resources among all stakeholders, there must be a political will to develop a strategic capacity to make choices. These are not arbitrary choices because they are challenged by the choices of others (competitors and allies) to find a place in promising European value

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<sup>14</sup> ‘Roadmap ERA 2020’, <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12495-Research-innovation-future-of-the-European-Research-Area-communication->

<sup>15</sup> European Regional Development Fund

<sup>16</sup> <https://s3platform.jrc.ec.europa.eu/thematic-platforms>

<sup>17</sup> [https://eur-lex.europa.eu/summary/glossary/open\\_method\\_coordination.html](https://eur-lex.europa.eu/summary/glossary/open_method_coordination.html)

<sup>18</sup> See ‘The EU Semester and Smart Specialisation’, FoSS, May 2020

<sup>19</sup> European Research and Innovation Area

chains. Smart specialisation holds the promise that **all countries and regions can find their niches if they invest in their unique capabilities**. Smart specialisation becomes more important when fiscal policies are dominant for recovery, and budgetary expansion has to be monitored with acceptable conditions.

2. Smart specialisation offers a **specific methodology** for choice making, informed by the best available knowledge in the '**entrepreneurial discovery process**'. This methodology is experimented with participatory techniques and specific indicators within the local ecosystems and national governance. It is expanding at European level for intercluster cooperation and international partnerships (S3 partnerships) involving new entrepreneurial actors, as an alternative or complement for the classical high-level conferences or expert groups.
3. Smart specialisation is supporting the networking of specialised actors and **access to specialised infrastructure** (in line with the ESFRI<sup>20</sup>) programme). An example is the digital transformation where European strategies (for AI, cybersecurity, HPC, training) are combined with national and regional programmes in networks and infrastructures that are embedded in local ecosystems with different application focus. The present constitution of a network of European Digital Innovation Hubs<sup>21</sup> with complementary specialisations (but at the same time interconnected to diffuse the best available services to the industrial ecosystems) is a typical challenge for the new ERA. The ERA can be a framework for setting-up a real European digital platform of innovation services (pooling efforts at EU level with division of labour as advocated by ESFRI).
4. The forthcoming **National Recovery Plans** would benefit from the integration of regional smart specialisation strategies (that identify the localised investment opportunities) and the ERA governance of European infrastructures for developing, testing, demonstrating and upscaling of innovative Green Deal projects.

The new ERA Communication is a great opportunity for research and innovation policies to play a leading role in the transformations needed for the recovery and the twin transition. The full implementation of the smart specialisation approach for efficient and effective coordination of investments – as it was designed for in the ERA - will provide the new ERA multi-level governance with the unique combination of a top-down European directionality with a bottom-up discovery process seeking new opportunities for all countries and regions.

Friends of Smart Specialisation is an initiative from an independent group of experts and practitioners (Dimitri Corpakis, Jan Larosse and Richard Tuffs) concerned for the future directions of smart specialisation. The group's goal is to support the mainstreaming of Smart Specialisation as an instrument for strengthening the multi-level European innovation system. For more information see <http://www.efiscentre.eu/portfolio-item/friends-of-smart-specialisation>.

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<sup>20</sup> European Strategic Forum for Research Infrastructures

<sup>21</sup> <https://ec.europa.eu/digital-single-market/en/european-digital-innovation-hubs-digital-europe-programme-0>