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## Audit preview

Information on an upcoming audit



# What is the EU doing to address the innovation divide?

February 2021

In the EU, the capacity of private and public actors to undertake state-of-the-art technological research and innovation (R&I) differs between Member States. This divide between innovation leaders and underperforming countries prevents the EU from exploiting its R&I potential to the full and thus poses a major threat to its economic growth, prosperity and social stability.

To tackle the innovation divide, the EU has focused increasingly on ensuring that all Member States participate in its R&I funding programmes. The programme for the 2014-2020 period, Horizon 2020, introduced specific measures to unlock the potential of low-performing, so-called “widening” countries, and promoting synergies with the European Structural and Investment Funds (ESIFs) The latest proposals for the post-2020 period place even greater emphasis on both “widening” measures and synergies.

The European Court of Auditors is conducting an audit to assess the action taken by the Commission to achieve the Horizon 2020 “widening” objective. We will be looking at the results of the measures in place since 2014 – including the focus on synergies with the ESIFs – and taking into account the likely impact of the changes proposed for 2021 onwards.

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## Research and innovation in the EU

### A top priority in the EU

Research and innovation (R&I) is a key part of productivity and economic competitiveness. About two thirds of Europe's economic growth in recent decades has been driven by technological innovation, and one third of all European jobs are now in knowledge-based industries. One of the EU's political aims is for R&I activities to be spread evenly across the Member States to ensure that growth is sustainable and inclusive and addresses many of the social challenges facing Member States<sup>1</sup>.

The EU has long recognised the importance of R&I in high-level policy and strategy documents:

- It was the **Lisbon Strategy of 2000** that first established the objective of the EU's becoming a knowledge-based economy centred on an ambitious R&I agenda<sup>2</sup>.
- The **Lisbon Treaty**, adopted the same year, formalised the challenge of achieving a European Research Area (ERA)<sup>3</sup> – a single EU market for research, innovation and technology which would help countries to become more effective by aligning their research policies and programmes.
- In 2010, the **Europe 2020 Strategy** for growth and jobs reiterated the importance of innovation activities in boosting growth and employment in the EU. One of the seven flagship initiatives of the Strategy, the "Innovation Union"<sup>4</sup>, aimed to create an innovation-friendly environment that would make it easier to convert great ideas into products and services, generating economic growth and jobs.
- Most recently, R&I was central to at least four of the six priorities in the **new Commission President's manifesto for 2019-2024**: a European Green Deal; an economy that works for people; a Europe fit for the digital age; and a stronger Europe in the world<sup>5</sup>.

## A persistent R&I divide among Member States

Despite these ambitious objectives, numerous studies<sup>6</sup> have shown that there is a persistent divide among private and public actors in different Member States in terms of their research performance and capacity to innovate. The European Innovation Scoreboard<sup>7</sup> assesses relative strengths and weaknesses of national innovation systems over time and provides a comparative analysis of innovation performance in the Member States, other European countries and the EU's regional neighbours.

Most Member States have improved their innovation score since 2012, and the R&I divide has shrunk slightly over the same period. However, the Commission reports that it is still far larger than the gap for most other basic economic indicators, such as GDP per capita, employment and productivity<sup>8</sup>. Persistently low scores will affect a country's competitiveness and hinder long-term cohesion across the EU.

Studies<sup>9</sup> have shown that a strong link exists between investment and R&I performance – countries that devote a larger share of their GDP to research and development, including innovation, tend to perform better. However, investment alone does not have the same effect in each country. Other relevant factors increasing R&I performance are “links between public and private bodies involved in innovation, incentives for firms to innovate, and the ability of firms to create and capture value from their innovations on world markets”<sup>10</sup>, while “deficits in human capital endowments, brain drain [...] and inadequate institutional ecosystems” seem to be main obstacles<sup>11</sup>.

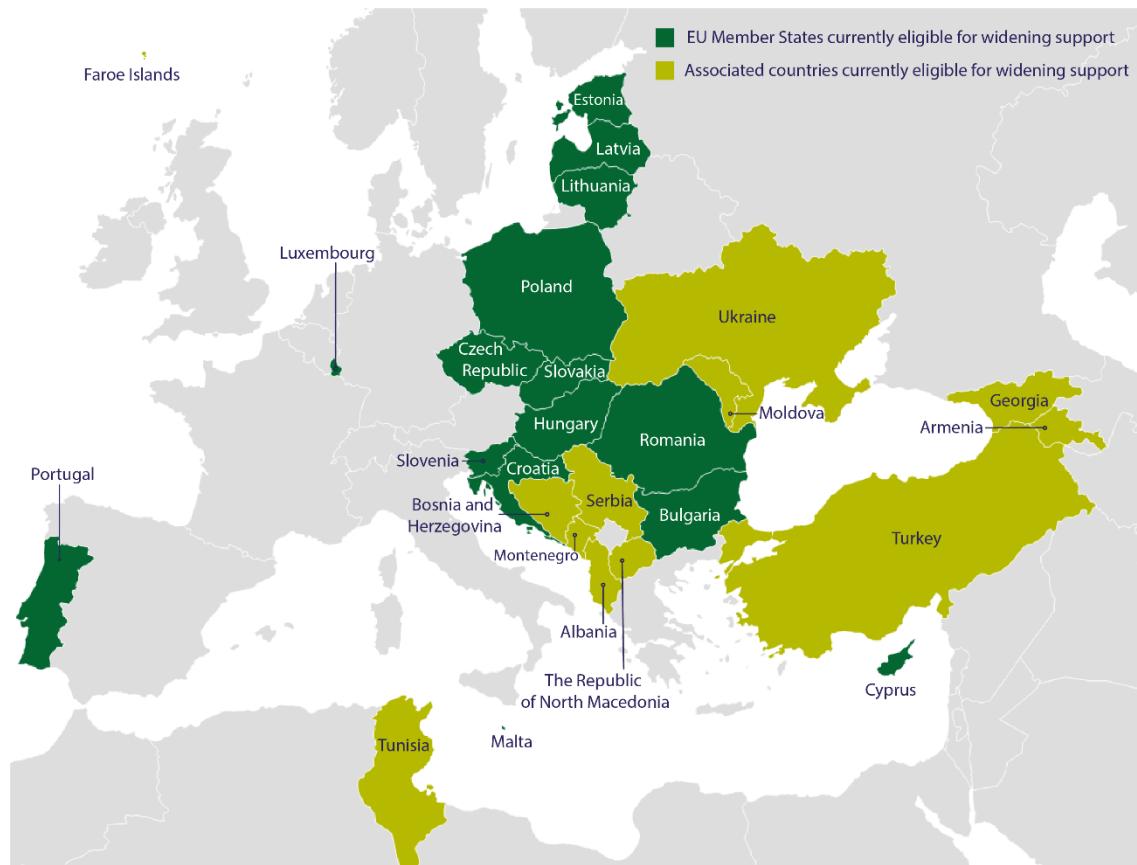
## How does the EU support R&I?

Horizon 2020, the EU's eighth framework programme for R&I, was introduced for the multiannual period from 2014 to 2020. It works by co-financing cutting-edge R&I collaborative projects in Member States and partner countries, and is the main funding instrument for the Europe 2020 Strategy and the aims of the European Research Area (ERA).

Evaluations of earlier framework programmes repeatedly noted a strong correlation between Member States' participation rates and their R&I performance. To counter this trend, which was holding back the ERA, Horizon 2020 introduced a specific “Spreading excellence and widening participation” objective. This objective aims to “fully exploit the potential of Europe's talent pool and [...] ensure that the benefits of an innovation-led economy are both maximised and widely distributed across the Union in accordance with the principle of excellence”. Horizon 2020 also identified

targeted actions to pursue this objective: (i) **specific measures to unlock excellence** in low-performing countries (referred to as **“widening” countries**) (see [Figure 1](#)); and (ii) **exploiting synergies** between H2020 and the European Structural and Investment Funds (ESIFs).

**Figure 1 – “Widening” countries**

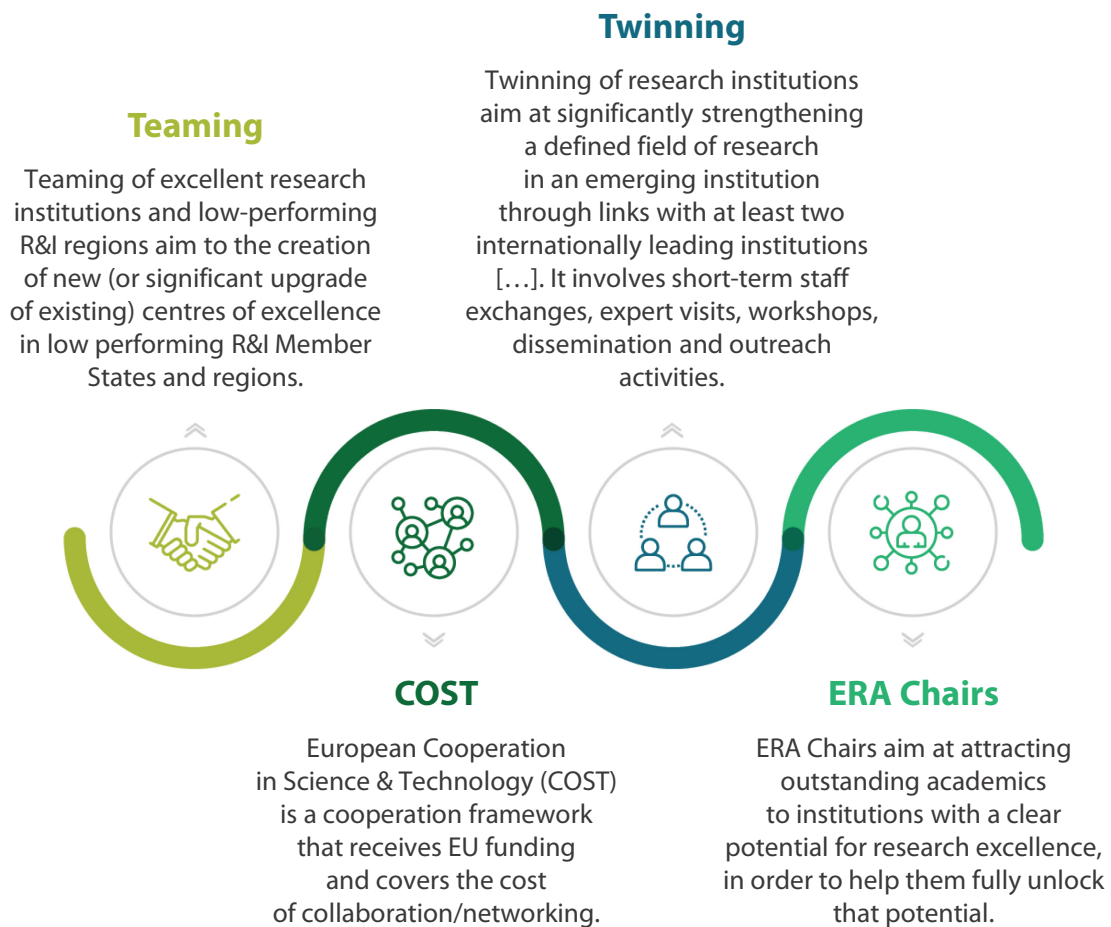


Source: ECA, based on visual from the Commission.

### Unlocking excellence in “widening” Member States

“Widening” measures are meant to address the causes of low participation of “widening” countries in H2020. They consist of expert policy support, capacity-building and creating links between leading research institutions and low-performing regions (setting up new “centres of excellence”, attracting outstanding academics to existing establishments, twinning and networking – see [Figure 2](#)).

**Figure 2 – Main “widening” actions in Horizon 2020**

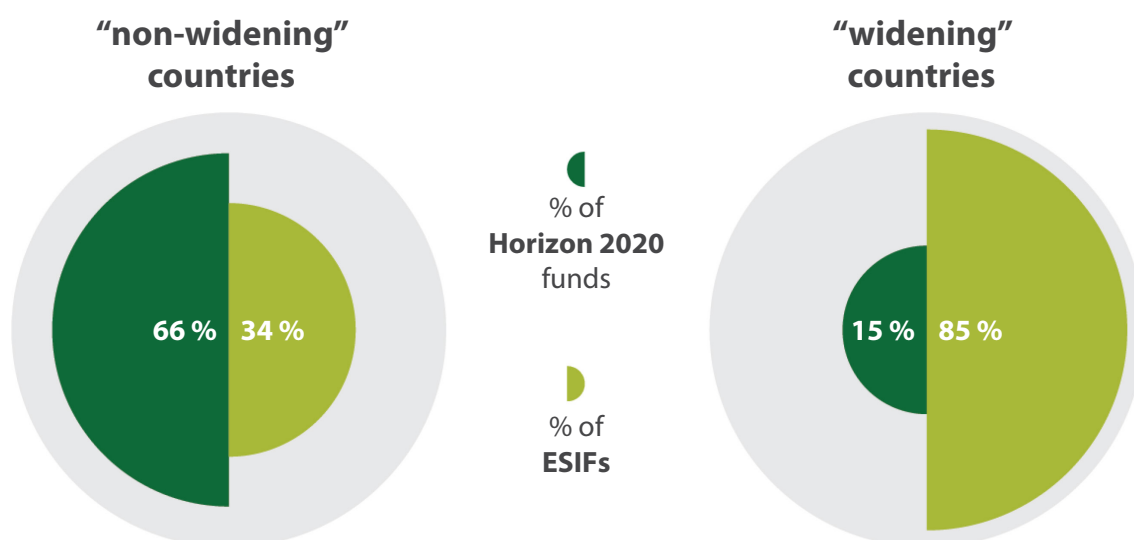


Source: ECA, icons made by Pixel perfect from <http://www.flaticon.com>.

### Exploiting synergies

The ESIFs aim to strengthen economic and social cohesion in the EU by reducing disparities among regions. For this reason, R&I funding from the ESIFs is far more likely to go to “widening” countries, where it can help reduce the innovation divide.

**Figure 3 – EU funds for R&I: share of Horizon 2020 and ESIFs**



Source: ECA, based on data from the Commission.

Synergies may be exploited by:

- combining funding from H2020 and the ESIFs for coordinated parallel actions;
- co-funding the same project: bringing together funding from H2020 and the ESIFs in one integrated R&I project;
- sequentially upstreaming funding: using the ESIFs to fund actions that build the R&I capacities needed to compete in H2020 and participate in international networks;
- sequentially downstreaming funding: using the ESIFs to fund actions that capitalise on already implemented H2020 projects to exploit and diffuse R&I results;
- “Seal of excellence” labels: providing funding from the ESIFs for project proposals which were positively evaluated under H2020 but were not funded due to an insufficient budget.

The exploitation of synergies is also a specific focus of the “Stairway to excellence” project<sup>12</sup>, which provides independent advice and support to Member States and regions in this regard.



## New multiannual financial framework (2021-2027)

The Commission's interim evaluation of Horizon 2020<sup>13</sup> concluded that there was slow and uneven progress on the "widening" objective, with little noticeable change in some more recent Member States and some programme sectors. This raised concern at the European Parliament<sup>14</sup> and the Council<sup>15</sup>. The proposal for the ninth R&I framework programme for the 2021-2027 period, "Horizon Europe"<sup>16</sup>, therefore places greater weight on the use of "widening" measures and synergies.

The latest "common provisions regulation" (CPR) establishing rules for the ESIFs and other funds also underlines the need for Member States and the Commission to improve coordination and develop synergies with the R&I framework, in particular by combining funding from the two policy areas.

## Legal framework

Horizon 2020, the eighth framework programme for R&I (covering the 2014-2020 period), was established by Regulation (EU) No 1291/2013 and is implemented under Council Decision (EU) No 743/2013.

Horizon Europe will replace Horizon 2020 for the 2021-2027 period.

Regulation (EU) No 1303/2013, the CPR, lays down common rules for shared management measures in the five ESIFs.

The Commission has made a proposal for a new CPR<sup>17</sup> covering seven shared management funds, including four concerned by the current regulation. The new regulation would apply during 2021-2027.

## Financing

The Horizon 2020 budget for 2014-2020 was €76.4 billion at 2014 prices, including around €1 billion for “widening” measures (see [Figure 4](#)).

**Figure 1 – “Spreading excellence and widening participation” budget breakdown (in million euros)**



Source: ECA, based on data from the Commission.

The share of R&I in the ESIFs budget for 2014-2020 was €43 billion at 2014 prices.

As of December 2020, the latest proposed budget for 2021-2027 for Horizon Europe is €84.9 billion at 2018 prices<sup>18</sup>. This would include around €2.8 billion for “widening”.

## Roles and responsibilities

At the Commission, the Directorate-General for Research and Innovation (DG RTD) is responsible for designing and coordinating the R&I framework programme.

The Research Executive Agency implements Horizon 2020 “widening” measures and has responsibility for R&I project selection, approval and monitoring.

The Directorate-General for Regional and Urban Policy (DG REGIO) is responsible for the ESIFs. Its tasks include approving Member States’ operational programmes of measures and assessing project compliance with funding conditions. In the Member States, managing authorities are responsible for the design and implementation of these operational programmes.

National contact points in the Member States and associated countries provide guidance, practical information and assistance domestically on all aspects of participation in Horizon 2020.

## Focus of the audit

This audit aims to assess whether Commission's actions under Horizon 2020 and the ESIFs since 2014 have helped to reduce the R&I divide in the EU.

In particular, we will examine the effectiveness of Horizon 2020 "widening" measures, with a special focus on Teaming and ERA Chairs, and the action taken by the Commission and Member States to promote and create synergies between Horizon 2020 and the ESIFs.

In this context, we will also take account of changes proposed for the new multiannual financial framework (2021-2027).

### **ABOUT ECA SPECIAL REPORTS AND AUDIT PREVIEWS**

The ECA's special reports set out the results of its audits of EU policies and programmes or management topics related to specific budgetary areas.

Audit previews provide information in relation to an ongoing audit task. Since we identified the issues underlying these areas of enquiry before the audit work commenced, they should not be regarded as audit observations, conclusions or recommendations. They are based on preparatory work undertaken before the start of the audit and are intended as a source of information for those interested in the policy and/or programme being audited.

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- <sup>1</sup> See the explanatory memorandum to the Commission’s proposal for a Regulation establishing Horizon Europe (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0435>).
- <sup>2</sup> Lisbon European Council 23 and 24 March 2000, Presidency Conclusions ([https://www.europarl.europa.eu/summits/lis1\\_en.htm#:~:text=PRESIDENCY%20CONCLUSIONS&text=The%20European%20Council%20held%20a,of%20a%20knowledge%20Dbased%20economy](https://www.europarl.europa.eu/summits/lis1_en.htm#:~:text=PRESIDENCY%20CONCLUSIONS&text=The%20European%20Council%20held%20a,of%20a%20knowledge%20Dbased%20economy)).
- <sup>3</sup> Article 179 of the Treaty on the Functioning of the European Union (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012E%2FTXT&qid=1606913836502>).
- <sup>4</sup> [http://ec.europa.eu/research/innovation-union/index\\_en.cfm](http://ec.europa.eu/research/innovation-union/index_en.cfm)
- <sup>5</sup> Ursula von der Leyen, “A Union that strives for more: My agenda for Europe” ([https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf)).
- <sup>6</sup> Some examples: (i) European Commission R&I paper series 2020/03, “The research and innovation divide in the EU and its economic consequences”, December 2019 (<https://op.europa.eu/en/publication-detail/-/publication/58a10d4f-a9f6-11ea-bb7a-01aa75ed71a1/language-en>); (ii) R. Veugelers, “The European Union’s growing innovation divide”, *Bruegel Policy Contribution*, issue 2016/08 (<https://www.bruegel.org/2016/04/the-european-unions-growing-innovation-divide/#:~:text=There%20is%20a%20significant%20divide,the%20least%20capacity%20to%20innovate.&text=The%20evidence%20shows%20that%20the,aggravate%20the%20intra%20DEU%20divide>).
- <sup>7</sup> European innovation scoreboard 2020, main report (<https://ec.europa.eu/docsroom/documents/42981>).
- <sup>8</sup> European Commission R&I paper series, op. cit.
- <sup>9</sup> Idem.
- <sup>10</sup> R. Veugelers, op. cit.
- <sup>11</sup> European Commission R&I paper series, op. cit.
- <sup>12</sup> <https://s3platform.jrc.ec.europa.eu/stairway-to-excellence>
- <sup>13</sup> Commission Staff Working Document “In-depth Interim Evaluation of Horizon 2020”, June 2017 (<https://op.europa.eu/en/publication-detail/-/publication/33dc9472-d8c9-11e8-afb3-01aa75ed71a1/language-en>).
- <sup>14</sup> European Parliament report on the assessment of Horizon 2020 implementation in view of its interim evaluation and the Framework Programme 9 proposal ([https://www.europarl.europa.eu/doceo/document/A-8-2017-0209\\_EN.html](https://www.europarl.europa.eu/doceo/document/A-8-2017-0209_EN.html)).

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- <sup>15</sup> Special meeting of the European Council (17-21 July 2020), Conclusions (<https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf>).
- <sup>16</sup> Proposal for a Regulation of the European Parliament and of the Council establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, COM(2018) 435 final, 7 June 2018.
- <sup>17</sup> Proposal for a Regulation of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument (COM(2018) 375 final) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2018%3A375%3AFIN>).
- <sup>18</sup> Key MFF and NGEU facts and figures, 11 November 2020 ([https://ec.europa.eu/info/sites/info/files/about\\_the\\_european\\_commission/eu\\_budget/mff\\_factsheet\\_agreement\\_en\\_web\\_20.11.pdf](https://ec.europa.eu/info/sites/info/files/about_the_european_commission/eu_budget/mff_factsheet_agreement_en_web_20.11.pdf)).

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