2020 Discharge to the Commission

WRITTEN QUESTIONS TO COMMISSIONER GABRIEL

Hearing on 15 November 2021

Questions concerning general issues

1. What is the evolution of gender mainstreaming in the projects funded by your DG?

**Commission's answer:**

**Gender mainstreaming in Horizon 2020:**

Horizon 2020 was the first Framework Programme for Research and Innovation (R&I) to include specific articles relating to gender equality in its Regulation, setting gender as a crosscutting issue with the three underpinning objectives: gender balance in decision-making, gender balance in funded research teams, and the integration of the gender dimension into R&I content. Regarding the integration of the gender dimension into R&I content, call topics were identified (flagged), needing specific sex and/or gender analyses, as well as asking applicants to all R&I actions whether sex and gender analysis is relevant to the contents of their projects.

Gender-flagged topics steadily increased over time, from 16% in the 2014-2015 Work Programme to over 23% in the 2018-2019 Work Programme, and above 36% in the 2020 Work Programme. In addition, Horizon 2020 had a specific programme part dedicated to promoting gender equality in R&I organisations, under ‘Science with and for Society’. In the 2020 Work Programme, funding was allocated to three collaborative projects on the implementation of Gender Equality Plans, two projects on supporting female innovators in Europe and one project to map and combat gender-based violence including sexual harassment in research performing organisations. Since the beginning of Horizon 2020, gender equality related actions under the ‘Science with and for Society’ Work Programme have benefitted over 250 organisations, through 34 projects and for a total budget of EUR 78.7 million.

**Gender mainstreaming in Horizon Europe:**

Provisions for gender equality and gender mainstreaming have been strengthened for the Horizon Europe Framework Programme with key novelties:

- A new eligibility criterion for the programme, already foreseen in the Commission’s Gender Equality Strategy 2020-2025, has been introduced in the first draft Horizon Europe Work Programme (2021-2022) and will be fully enforced as of the 2022 Horizon Europe calls for proposals. Each legal entity being a public body, a research organisation or a higher education establishment...
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in an EU Member State or Associated Country must have in place a Gender Equality Plan (GEP) in order to apply to Horizon Europe funding.

- Mandatory integration of sex and gender analysis in all topics of calls-for-proposals (for research and innovation actions), and thus in all funded projects – unless the non-relevance of the gender dimension is duly justified.

- Gender balance in teams is a ranking factor when evaluating research proposals that received the same score (ex aequo).

Dedicated support for gender equality is also planned, including, inter alia:

- Under a programme part dedicated to “Strengthening the European Research Area”, for policy-related supporting activities for inclusive gender equality in research and innovation organisations. **Planned budget for 2021: EUR 8.2 Million** for three actions. **Planned budget for 2022: EUR 7.9 Million** for five actions.


No specific gender-equality related expenditure tracking mechanism is planned in Horizon Europe, however gender monitoring will be carried out, and the development of gender equality related societal impact pathway indicators is currently being investigated. Among key implementation indicators, the gender of all researchers participating in funded projects will be recorded (options: woman/man/non-binary).

2. What is the percentage of female researchers involved in projects funded by DG Research?

**Commission's answer:**

The Commission in general and DG RTD in particular are committed to promoting gender equality in programme participation. To this end, DG R&I monitors the male/female ratio in the R&I landscape.

In brief, women researchers are underrepresented in Horizon 2020. Based on gender declarations from projects, only 36 % of the Horizon 2020 research staff are female. This percentage appears lower in projects from the European Research Council (ERC) (28 % of Principal Investigators) and significantly higher in Marie-Sklodovska Curie grants (42 % of Marie-Sklodovska Curie Actions (MSCA)
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The proportion of women among reported researchers in the other parts of the Programme (excluding ERC & MSCA) is 31%.

Considering the data solely for grants signed in the year 2020, women represent 30% of the population of Principal Investigators in the ERC Programme part. For the same period and all types of Actions in MSCA, 46% of reported researchers are women. The proportion of women among reported researchers in the other parts of the Programme for grants signed in 2020 is 30%.

According to the latest complete Eurostat figures (2017), female researchers in EU28 and EU27 represented 33.8% and 32.8%, respectively, of the total research population. This is an indication that Horizon 2020 attracted, on average, a higher relative percentage of female researchers in the Member States.

The 2020 European Research Area Communication renewed the EU’s commitment to gender equality in R&I. Horizon Europe has gender equality as a crosscutting priority and will play a key role in ensuring structural change towards gender equality in research and innovation thanks to the identification of individual researchers involved in the projects and the registration of researchers’ individual profiles.

3. Your DG is a key player in funding research policies to achieve climate neutrality. How will be the impact and performance of the programs calculated?

**Commission’s answer:**

The European Climate Law writes into law the goal set out in the European Green Deal for Europe’s economy and society to become climate-neutral by 2050. The law also sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. The Fit for 55 Package sets out a wide range of proposals to reach this objective.

Becoming the world’s first climate-neutral continent by 2050 requires modernisation of the EU’s economy and society and their re-orientation towards a just and sustainable future. Research and innovation are essential to support this societal change and to secure a continuous improvement of our knowledge on the climate-earth system. The EU’s research and innovation programmes provide powerful instruments and innovative governance. They can drive the necessary underlying transformation to reach climate neutrality and ensure an inclusive ecological and sustainable transition. Moreover, the energy and transport sectors need to be more climate and environment-friendly, more efficient and competitive, smarter and more resilient. Measuring progress towards climate neutrality needs to reflect the complexity of the systemic change and to support the policymaking. Within this approach, the contribution to climate change has been monitored and reported.

According to our tracking methodology, Horizon 2020 has invested EUR 20.3 billion on climate change at the end of 2020, which represent about 31% of the amount committed to the operational specific objectives. This does not include
expenditure outside of these specific objectives, such as administrative expenditure. Despite a considerable increase compared to FP7, investment for climate action has not yet reached its target of 35%. Targeted action was taken to address this challenge, including a new Green Deal call launched in 2020, which has brought the yearly climate expenditure for 2020 above the 35% threshold (36%) for the first time since the launching of the Framework Programme.

An assessment of the effectiveness of the programme in achieving its objectives and delivering scientific, economic and societal impact will be delivered for the ex-post evaluation of Horizon 2020 to be performed in 2022-2023, based on a mix of quantitative and qualitative analysis. This will be followed by the interim evaluation of Horizon Europe to be delivered by end 2024.

Horizon Europe represents a fundamental step-change in the way we approach the Framework Programme monitoring and evaluation, focusing on identifying where the EU can make a difference and what it must achieve such as climate neutrality. This reinforced impact approach has been implemented throughout the policy cycle, which includes EU policy priorities and global challenges, as part of the Horizon Europe Strategic Plan. This is implemented through the Work Programmes laying out specific expected impacts and targeted outcomes, to then be reflected in the projects’ proposals. On the monitoring side, the Key Impact Pathways link projects results and impacts to indicators that can be attributed to the effects of Horizon Europe, including its contribution to climate neutrality.

Actions under Horizon Europe will contribute at least 35% of the overall financial envelope of the Specific Programme to climate objectives. Relevant actions will be identified during the Specific Programme's preparation and implementation, and reassessed in the context of the relevant evaluations and review processes. A system to monitor progress towards this target is in place including ex-ante estimates and ex-post monitoring. The quantitative analysis in terms of financial expenditure will be complemented by a qualitative analysis of the impact towards climate neutrality by the Commission.

4. How do you judge the results of the funds developed for smart cities project?

**Commission's answer:**

Over the past decade, the European Commission has developed a framework to deliver concrete measures for making cities more liveable and sustainable, called “Smart Cities & Communities”, with a perspective towards climate-neutrality, which is subject to the Mission on Climate-Neutral and Smart Cities under Horizon Europe.

In 2012 the European Commission launched the European Innovation Partnership on Smart Cities & Communities (EIP-SCC), bringing together three EU
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Commissioners, a High Level and a Sherpa group with representatives from all urban sectors.

They delivered a Strategic Implementation Plan, which triggered two main strands of action:

1) Funding: A co-funding programme under Horizon 2020 for Smart Cities & Communities Lighthouse Projects, demonstrating more than 550 solutions in more than 180 sites with more than 120 participating cities across Europe and a total funding of more than EUR 430 million. These projects represent vital knowledge and have therefore informed a big part of the actual implementation of the Horizon Europe Mission on Climate-Neutral and Smart Cities.

2) Financing: A marketplace, which started as a bottom-up stakeholder platform, organised in so called Action Clusters on specific topics defined by the mentioned Implementation Plan of the EIP-SCC and which now continues as Smart Cities Marketplace, facilitating the implementation, replication and upscaling of proven urban solutions (e.g. those demonstrated by the Lighthouse Projects) with private financing. This so-called Explore-Shape-Deal Matchmaking process led to currently about 180 projects at a magnitude of EUR 600 million of private investment matched with the interest of the Smart Cities Marketplace’s own investor network.

This is genuine European added value and facilitates the rollout of climate-neutral and smart solutions and plans, especially in smaller and medium-sized cities, which do represent the biggest group of municipalities in Europe. To this end, the Smart Cities & Communities activities can be seen as a true success as they are being continued in an even more challenging setting under the mentioned Mission, which aims at nothing less than 100 climate-neutral cities by 2030.

5. What can be done in the field of synergies to maximize the impact of partnerships and better link them with industrial, green and digital strategies of the EU?

**Commission's answer:**

European Partnerships under Horizon Europe contribute to the R&D pipeline for the green and digital transformation of key industrial ecosystems. European Partnerships have been prepared following an impact-driven and coherent approach agreed in Horizon Europe to use their full potential in achieving EU policy objectives and notably the twin green and digital transitions. They support targeted research and innovation relevant to the European Green Deal initiatives, notably the EU biodiversity strategy 2030, the action plan “Towards Zero Pollution for Air, Water and Soil” and the circular economy action plan. They represent almost half of the Horizon Europe budget devoted to pillar 2 and offer a high potential for synergies with a positive impact on several EU industrial ecosystems, as well as
with ongoing or foreseen industrial alliances and Important Projects for Common European Interest.

The Fit for 55 Package and the Path to the Digital Decade Policy Programme is supported by many partnerships (e.g. Hydrogen, Batteries, Biodiversity, Zero-emission Road and Waterborne Transports, Clean Energy Transition, built environment and on Driving Urban Transitions, Processes for Planet (P4P), Clean Steel Partnership, circular bio-based Europe EuroHPC, Key Digital technologies, Smart Networks and Services). These partnerships are tools to help deliver the objectives of the EU’s twin transition.

Improved synergies are essential to achieve the ambitious objectives set for European Partnerships, so that investments in R&I would feed into the deployment pipeline and that the new solutions would also become commercially available on the market or for policy uptake. Synergies with other Horizon Europe parts including Missions are essential. In preparing the next generation partnerships, the Commission has set up a supporting framework for synergies. To highlight just some examples:

- **Design:** The objectives, outputs and activities of all European Partnerships are directed towards achieving policy impacts – all linked with the EU priorities of the green and digital transitions and the Industrial Strategy.

- **Legal Framework:**
  - The Single Basic Act for Joint Undertakings to be funded under Horizon Europe is axed around the principle that these would cooperate and create close synergies with other programmes and initiatives, including at national level.
  - We have improved the interplay between EU funding rules applicable to Horizon Europe and Cohesion Policy funds, and we have amended the State Aid General Block Exemption, to facilitate State Aid for R&I, e.g. from the Cohesion Policy funds, in synergy with Horizon Europe.

- **Strategic Planning:** All European Partnerships will need to identify priorities for synergies in their Strategic R&I Agendas (SRIAs), and translate these into concrete governance arrangements and activities in their (multi)annual work programmes.

- **Monitoring** of synergies and collaboration will be done through the Biennial Monitoring Report for European Partnerships (the first, baseline report is planned by the end of Q1 2022).

The Commission services are currently exploring further concrete ways of implementing synergies – this includes identifying coordinated and joint deployment activities in coordination with EU and national programmes. In addition, the Commission is promoting a two-way exchange between partnerships and Important Projects of Common European Interest or Alliances, where relevant.
Each partnership has a State representatives group or equivalent to facilitate discussion with the relevant national ministries. Moreover, all partnerships will have to deliver phasing out plans from Horizon Europe funding by the end of 2023. This will be a good opportunity for the partnerships to develop links with industrial and other policies in order to transition the initiative from research and innovation towards deployment.

6. What are your initial assessments of the new EU industrial strategy and the development of new partnerships with third countries?

**Commission's answer:**

The March 2020 Industrial Strategy and its update from May 2021 explicitly position research and innovation as central parts of the EU’s industrial policy toolbox. This is firstly apparent in the attention paid to open strategic autonomy, and the importance placed on actions to boost the EU’s competitiveness, particularly in the advanced technologies critical to tackle the EU’s current and potential future vulnerabilities and strategic dependencies.

Secondly, the industrial strategy update identifies large opportunities to position Europe as a technological and industrial leader of the twin digital and green transitions. Research and innovation are key to incentivise European business leadership in a number of key ecosystems, such as mobility, aerospace and defence, low carbon industries or construction. In this sense, the updated new Industrial Strategy makes a concrete step towards a better use of the EU’s excellent R&I results for competitiveness and resilience.

To reinforce the business case for the twin transitions, EU industry needs a coherent regulatory framework, access to capacities and infrastructure (including digital ones), access to finance, access to raw materials, decarbonised energy, and the right skills. Standards supporting green and digital transformation and leadership will be equally important. For this reason, the European Commission is working together with industry, Member States, stakeholders at local and regional level in the context of the Industry Forum, to develop ecosystem specific transition pathways. These will help identify the scale, costs, long-term benefits and conditions of required action.

One of the building blocks of these transition pathways will be technology – looking at the investment needs, innovation, Technology Readiness level, etc. This work is supported by the European Research Area (ERA) industrial technology roadmaps. Continued and assertive support for R&I in green technologies and their deployment, including green energy technologies, as well as technologies for the transformation of industries, will be essential to position Europe as a technological and industrial leader of these transitions. In this context, the understanding and analysis of dependencies and opportunities in the context of the global race for raw materials and technologies to support the green and digital transition are key, and
are being supported by an ongoing horizon scanning effort as well as through the Commission's Observatory of Critical Technologies.

The development of partnerships with third countries takes account of mutual benefits and EU interests, in line with the modulated cooperation approach set out in the Commission Communication on the Global Approach to Research and Innovation.

7. What measures have been implemented to develop the “open science” component in medical data?

**Commission's answer:**
The Commission's Open Science policy promotes a set of practices that improve the quality, efficiency and impact of research and innovation. With regards to data, our policy is that data should be managed in a responsible way; it should be Findable, Accessible, Interoperable and Reusable (FAIR). Data should also be made available based on the guiding principle: “as open as possible as closed as necessary”. Medical data are a subcategory that may include sensitive data, such as patient personal data. We therefore do not expect all medical data to be fully open access, but where possible they should be FAIR and reused under certain access conditions. An example of implementation can be found in the European COVID-19 Data platform that the Commission launched in April 2020. There, viral genomic sequences are available under full open access, whereas certain human host genomic sequences can only be accessed after permission is given by a Data Access Committee. Further options are being explored in the emerging European Health Data Space, where patients will be able to control their own data in a secure environment, promoting concepts for the secondary use of health data to benefit public health and health research and innovation in Europe.

8. The KPIs for the Horizon 2020 or Copernicus program are really excellent and the results generally exceed the quantified objectives. Weren't these quantified targets too low? How will they be reassessed under the next MFF?

**Commission's answer:**
Under Horizon 2020, for the first time in the history of Framework Programmes, a set of Key Performance Indicators (KPI) was introduced together with pre-defined targets for specific programme parts, and this data was made publicly available in close-to-real time through an interactive online dashboard. The interim evaluation of Horizon 2020 showed that despite these improvements, the monitoring system could still be improved to better tackle issues of data availability and quality (mainly due to self-reporting by beneficiaries), data aggregation (lack of harmonised framework for the whole programme) and attribution of impacts. In order to report on the progress made towards the objectives for the interim evaluation of Horizon 2020, the KPIs were thus complemented by ad-hoc quantitative and qualitative analysis. The approach has been revamped under
Horizon Europe, with a streamlined but more specific indicator system linked to the programme objectives, and assessment of progress along Key Impact Pathways. For this purpose, an external study was commissioned to support the definition of the baseline values, benchmarks and trends for most indicators, including based on the performance of past Framework programmes. The target-setting methodology will be based on a mix of both quantitative (trend analysis) and qualitative (expert opinion/policy workshop) methods. It will notably take into consideration the results obtained so far from previous programmes, the ambition of the new programme, wider policy objectives, while ensuring that the targets are achievable and realistic.

On what concerns Copernicus, during the first phase of the programme (2014-2020), the KPIs focused primarily on its deployment, i.e. number of satellites launched, number of service components that became operational, etc. Thanks as well to our partners in Copernicus, the deployment of the programme did not have any major setback and was completed, largely, within the initial planning. For 2021-2027, Copernicus is part of the Space Programme of the Union and the indicator framework put in place addresses more operational parameters, such as availability, reliability and user satisfaction.

9. A focus is also made on the development of innovation through the EIC fund, which will make it possible to invest directly in innovative companies or start-ups. Which first do you draw from this fund?

**Commission's answer:**

The H2020 European Innovation Council (EIC) accelerator pilot allowed applicants to ask for grants and direct equity investments. With this in mind the Commission Decision C(2020)4001 of 15 June 2020 allowed for the establishment of the EIC Fund as a financial instrument under the EIC Accelerator pilot as provided for in the Horizon 2020 Work Programme for 2018-2020 (Part 6: “Access to Risk Finance” and Annex 20). This pilot EIC Fund is currently being evaluated.

A first lesson to be drawn from the experience of the EIC Fund in the frame of the H2020 EIC accelerator pilot call is the strong demand expressed by innovative SMEs for direct equity support. This demonstrates the need for public funding in a market where private venture capital does not offer sufficient supply for disruptive breakthrough innovations that are perceived as too risky.
10. Differences in the level of research at excellence between Member States continue to exist. Studies have recommended to encourage researchers, experts and other national actors from institutions of lower levels of excellence to participate actively in joint research teams including researchers and institutions with the highest level of excellence. What is the Commission doing to encourage the formation of such joint research teams to increase the level of excellence across the EU?

**Commission's answer:**

The Commission is aware of the diversity of situations regarding research and innovation in the EU Member States. It is supporting actions that will improve the access to excellence throughout Europe, even if this remains primarily the responsibility of Member States by investing smartly and undertaking the necessary reforms.

Under Horizon 2020, a set of actions with a budget of EUR 900 million were implemented to help countries lagging behind in terms of research and innovation to boost their R&I performance and widen their participation in the Framework Programme. The efforts are reinforced for Horizon Europe, as the co-legislators have agreed to increase the budget for all widening activities to 3.3% of the total Horizon Europe budget, as compared to about 1% in Horizon 2020.

Such increased budget for widening measures will not only allow continuing and fine-tuning actions known from Horizon 2020, but it will also support additional measures that were agreed between co-legislators for Horizon Europe. Some of these novelties will include:

- activities to foster brain circulation;
- improving the quality of proposals from low R&I performing countries;
- boosting activities of National Contact Points,
- establishing match-making services;
- promoting initiatives on excellence
- and joining ongoing collaborative R&I projects (hop-on facility).

All core actions of the Widening package (Teaming, Twinning, ERA chairs, COST) will be continued and are designed to have joint research teams including researchers and institutions with the highest level of excellence.

11. How many top researchers at various stages of their careers have been funded via Horizon 2020 in 2020 and in total from the start of the Programme?

**Commission's answer:**

Key facts:

- 7 831 projects have been funded through the ERC programme in Horizon 2020 (H2020), of which 1 173 only in 2020;
- 8 064 Principal Investigators have received funding through the European Research Council (ERC) programme in H2020, of which 1 255 in 2020,
The ERC provides attractive, long-term funding to support excellent investigators and their research teams to pursue ground-breaking, high-gain/high-risk research. ERC frontier research grants are awarded on the sole criterion of scientific excellence in all areas of science, scholarship and engineering, on a ‘bottom-up’ basis without predetermined priorities.

The European Research Council Executive Agency (ERCEA) has awarded 6,607 main frontier-research grants during Horizon 2020 (2014-2020) distributed by funding schemes corresponding to various career stages of the Principal Investigator (PI): Starting, Consolidator and Advanced. The Starting, Consolidator and Advanced Grants support projects carried out by individual teams, which are headed by a single Principal Investigator (ERC grantee).

It has also awarded 1,125 Proof-of-Concept (PoC) grants which support ERC Principal Investigators by helping them bridge the gap between their research ideas and social or commercial innovation (an ERC grantee could have multiple PoC grants on the same project).

In the same period, ERCEA has also awarded 99 Synergy grants to 332 Synergy grantees. A Synergy grant enable two to four Principal Investigators to bring together complementary skills, knowledge and resources to address ambitious research problems.

Following the 2020 calls, a total of 973 Starting, Consolidator and Advanced grants were awarded, along with 166 Proof-of-Concept grants and 34 Synergy grants.

Table 1: Awarded ERC grants by type of grant and number of Principal Investigators

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<td><strong>Total main grants</strong></td>
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12. Could the Commission provide information from which countries are these researchers and how many come from a given country?

**Commission's answer:**

Key facts:

- The Principal Investigators are coming from 84 countries from all over the world: 41 European countries, 19 Asian countries, 16 countries from the Americas, six African countries (including the first researcher from Burkina Faso funded in 2020) and two countries from Oceania.
- The top five nationalities of the Principal Investigators funded between 2014 and 2020 are DE (1,392), IT (805), FR (802), UK (798) and NL (545).
The nationalities of all EU Member States are represented;
- Almost 8% of the Principal Investigators are coming from the widening countries, with the top three nationalities being Portugal, Greece and Hungary;
- 10% of the Principal Investigators come from 11 Associated Countries, with the top three being Israel, Switzerland and Norway;
- The European Research Council has attracted 695 Principal Investigators (i.e. about 9%) from 45 non-EU and non-Associated Countries (or 597 if only Starting, Consolidator and Advanced grantees are counted), the most from United States, Canada, China and India;
- Currently the H2020 ERC grantees are based with their grants in 25 EU Member States, seven Associated Countries and UK. Latvia and Malta are the only EU Member States not hosting any Principal Investigator currently, though both countries hosted one in the past. In addition, 18 Synergy grantees are based in five countries outside of the EU or the Associated Countries (United States, Canada, Australia, Chile and Japan).

ERC grants are open to researchers of any nationality applying with a Host Institution established in an EU Member State or Associated Country. Since 2019, one of the Principal Investigators in a Synergy grant group may be based outside of the EU or an Associated Country.

Principal Investigators are coming from all EU Member States, 11 Associated Countries, and UK (see Table 2 below). About 9% of the H2020 ERC grantees come from 45 non-EU and non-Associated Countries (the most from United States, Canada, China and India).

The Principal Investigators funded in 2020 calls are of 50 nationalities, coming from 23 EU Member States, 7 Associated Countries, UK and 19 third countries. They are hosted in 21 EU Member States, 6 Associated Countries and UK. The first ERC grantee based in Ukraine (UA) was funded in the 2020 calls. Ten Synergy 2020 grantees are based in five countries outside of the EU or the Associated Countries.

The breakdowns by nationality of the Principal Investigator and by country of the institution hosting the Principal Investigator are presented below in Tables 1 and 2 (data from CORDA as of 23 August 2021).

**Table 1:** ERC grants by nationality of the Principal Investigator
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* 332 Principal Investigators working on 99 Synergy grants (between 2 and 4 PIs per grant). Up to one Synergy PI per grant can be based outside EU and AC
** 116 Principal Investigators working on 34 Synergy grants (between 2 and 4 PIs per grant). Up to one Synergy PI per grant can be based outside EU and AC.
13. Which measures is the Commission taking to improve the performance of the ‘industrial leadership’ pillar of Horizon 2020, in particular on the target relating to patent applications? Similarly, how is the Commission tackling the moderate progress of the ‘societal challenges’ pillar of the programme, especially when it comes to performance indicators on peer-reviewed publications as well as patent applications? Which lessons learned have been integrated into the performance framework of Horizon Europe?

**Commission’s answer:**

The performance of Horizon 2020 as regards patents and publications is still evolving as R&I projects need time to be launched, implemented and then to produce results and benefits for society and economy. Furthermore, propensities to publish or patent differ according to R&I fields, types of action, or types of entities involved. Overall, the performance of research and innovation investments should go beyond patents and publications indicators to take into account the enabling role of R&I activities, their uncertain and risky character, and their long-term nature. Building on the interim evaluation of Horizon 2020, the ex-post evaluation of
Horizon 2020 due by end of 2023 will be the key milestone to provide further evidence on the scientific, economic and societal impact of the programme, and inform future Horizon Europe developments.\(^1\)

The overall limitations of the performance monitoring and indicator set-up for Horizon 2020, in particular the question of availability of relevant and quality data earlier in the implementation process, have been taken into account in the design of the performance framework of Horizon Europe. In particular, the development of Key Impact Pathways allows reporting for the programme as a whole on the progress made in the short, medium and long term to deliver impact for science, the economy and society - based on a streamlined monitoring system.

The last Work Programmes of Horizon 2020 and the first ones under Horizon Europe took also into account lessons from the interim evaluation of Horizon 2020, including reinforcing the dissemination and exploitation of results for more impact.

Priorities for joined investments are also strategically planned and co-created with stakeholders and citizens to reinforce the delivery on EU priorities and address global challenges while strengthening EU’s competitiveness. This includes the EU missions and European Partnerships with Member States and industry. In parallel, the European Innovation Council will identify through pan-European competition Europe’s most innovative start-ups and SMEs to help them bring new solutions to the market.

To help beneficiaries as regards the exploitation of their results, a new dissemination & exploitation strategy, including a Horizon Results platform, has been put in place to provide an ecosystem of services and tools. Moreover, the obligation of grantees to report on patents filed and obtained has been strengthened under Horizon Europe model grant agreement and reporting templates. The open science policy and open access provisions have likewise been reinforced and should contribute to a more dynamic scientific publications landscape.

**Questions concerning SME-related issues**

14. What steps have you taken and still want to take to attract even more SMEs to invest and apply in your programs?

**Commission's answer:**

The participation of SMEs is promoted throughout Horizon Europe relevant programmes. In particular, the European Innovation Council (EIC) was designed as the EU one-stop shop for innovators across Europe.

Fully dedicated to this category of companies, the EIC Accelerator currently dedicates 100% of its budget to innovative SMEs.

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\(^1\) Information on the state of play of Horizon 2020 results will continue to be updated in the online Horizon Dashboard, and integrate progressively Horizon Europe data.
Based on the EIC pilot phase (2018-2020), the new European Innovation Council and SMEs Executive Agency (EISMEA) is actively encouraging genuinely innovative SMEs to apply.

These support activities have already resulted in a very large number of applications:

As part of the enhanced pilot phase of the EIC (October 2019 to December 2020), i.e. five calls for proposals, 13,994 applications were received under the Accelerator pilot, requesting worth EUR 44.2 billion. This culminated with the last call for proposals in Autumn 2020, which made it possible to count no less than 4,200 proposals requesting more than EUR 15 billion, compared to an available budget of EUR 170 million.

Under Horizon Europe, with a EUR 10.1 billion budget, the fully-fledged EIC is intensifying its effort towards innovative SMEs and the portfolio of projects it is supporting is rapidly growing. In this context, 801 full applications for funding were submitted to the first cut-off (16 June) of the EIC Accelerator scheme with a total financial request of EUR 4.85 billion, of which EUR 3.2 billion for equity investment. For the second cut-off (6 October), 1,098 proposals from 37 countries were received requesting EUR 6.35 billion of financial request, of which EUR 4.15 billion for the investment component. These figures are expected to further increase in 2022.

In addition, we are also working with our Member States to help SMEs access funding from Member States or other alternative funding sources through, for example, the Seal of Excellence Community of Practice.

15. Has a specific monitoring policy been reinforced for new applicants, for example SMEs, who do not always have the time or knowledge of the existing rules for these programs? More generally, are information campaigns or training sessions implemented to remind people of the rules for eligible expenditure?

**Commission's answer:**

The Commission reinforced further its information campaign targeting error-prone beneficiaries such as SMEs and newcomers: Since December 2020, the Commission held six major webinars (approximately every other month). This campaign reached nearly 7,500 direct participants with 50,000 views on YouTube. The Commission will continue to provide information to all beneficiaries, focusing more on the error-prone ones. The next webinar is scheduled for 2 December 2021.

In addition:

- The Common Audit Service of the Commission has drawn specific risk based samples targeting SMEs and/or newcomers ensuring the protection of the EU Financial Interest.
- In Horizon 2020, a number of simplifications targeted specifically SMEs. One concrete example is the introduction of lump-sum funding that facilitates the
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participation of SMEs to the programme and reduces financial errors (lump-
sum payments in phase-one of the SME instrument).

- The Commission has put in place a sound system of ex-ante controls, which
  includes several automated checks. The system is expected to provide for risk-
differentiated ex-ante checks, thus addressing appropriately different risk
profiles.
- More generally, the Commission has further simplified the rules in Horizon
  Europe, in particular with regard to the calculation of personnel costs. This
simplification is expected to have a positive contribution in the reduction of
error rates in the new programme.

16. ECA also identified several issues related to subcontracting (ECA annual report 4.18-
4.21). The Court has identified staffing problems for SMEs that may have few or no staff
of their own. What can/will be done to support SMEs with these issues?

**Commission's answer:**

This question refers to cases where beneficiaries are hiring external consultants and
claim the cost of these consultants’ services as own staff costs. SME beneficiaries
were not always aware of the difference in treatment of direct personnel costs and
the cost of external consultants under EU funded programmes (Horizon 2020 and
Connecting Europe Facility - CEF). It also refers to the difficulty in understanding
the difference between the subcontracting of action tasks and the provision of “other
goods and services”.

Given the above challenges by certain beneficiaries, specific clarification and
guidance on these matters is included in the information campaign targeting error-
prone beneficiaries such as SMEs and newcomers, mentioned in the answer to
question 15.

17. What steps has the Commission taken, and would still want to take, to help the SMEs to
recover from the negative effects of the pandemic?

**Commission's answer:**

When the COVID-19 crisis hit, the Commission authorised national authorities to
grant state aid under very flexible conditions. This allowed deploying measures to
support companies and thus avoid further layoffs and bankruptcies. Swift EU
support to SMEs during the crisis significantly complemented national support
measures.

In spring 2020, Member States were given the possibility to re-allocate unspent
Cohesion policy funds under the Coronavirus Response Investment Initiative
package (CRII and CRII+). In addition, with an allocation of EUR 50.6 billion,
REACT-EU - the Recovery Assistance for Cohesion and the Territories of Europe –
supports crisis repair measures under the 2014-2020 Cohesion Policy Funds,
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continuing CRII-type of support to healthcare, workers and businesses, including SMEs, and at the same time, focusing on green and digital regional investments.

These measures allowed EUR 11.5 billion to be used in direct support to SMEs, including – on an exceptional basis – to cover also working capital to keep SMEs afloat. Grants and low-interest rate loans were provided through ERDF, with special attention to affected regions and sectors (such as tourism) and ESF provided support for social services, retention of employment, support to vulnerable groups and others, e.g. through support to short-time work arrangements, supplementary wage for health care personnel, IT equipment, protective equipment and services for vulnerable groups. Moreover, a significant amount of the REACT-EU funding is being used to further assist SMEs – EUR 6.7 billion have so far been allocated for business support through ERDF, in particular for productive investments in SMEs, business development, sustainable production of goods while EUR 7.5 billion have so far been allocated for labour market measures through ESF. The Member States will be able to use this funding until the end of 2023.

In order to allow full transparency and accountability of the use of Cohesion Policy resources during the COVID-19 crisis, the Commission’s Coronavirus Dashboard on the Open Data Platform provides up-to-date information on the use of the CRII and CRII+ measures by Member State and programme. As for the use of REACT-EU resources, data is available at this link.

In 2020, the COSME and InnovFin financial instruments for SMEs were also reinforced with additional EUR 1 billion, in order to help 100 000 European businesses.

The EIB Group in cooperation with the Member States put forward a COVID-19 guarantee fund worth up to EUR 25 billion. The fund is expected to provide European companies, especially SMEs, with up to EUR 200 billion – with a broad mix of debt and equity products.

The European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE) provided EUR 100 billion in loans to Member States to finance short-time work schemes.

Moreover, as part of the ERAvsCorona action plan, the Commission increased the support to innovative companies through the Horizon 2020 European Innovation Council (EIC) Accelerator pilot. In June 2020, nearly EUR 166 million have been awarded to 36 companies to combat the COVID-19 pandemic. Some 139 companies fighting COVID-19 that could not receive funding due to budget limitations have received the newly introduced COVID-19 Seal of Excellence, in recognition of the value of their proposal and in order to help them attract support from other funding sources.

In addition, the European Institute of Innovation and Technology (EIT) mobilised EUR 60 million for an ‘EIT Crisis Response Initiative’. This initiative aims at backing new innovation projects addressing directly the COVID-19 crisis, as well
as provide support to high growth and high impact start-ups and SMEs that will be crucial for the fast recovery of the economy. By September 2020, 207 innovation projects and ventures from 32 countries have been awarded the EIT funding.

The recently published Commission’s report on national solvency measures for SMEs, based on inputs gathered from the SME Envoys Network’s financial experts, highlights a broad variety of national measures implemented by Member States from the wake of the COVID-19 pandemic. The measures highlighted include debt moratoria, safeguards for employees or fiscal measures, which are helping to prevent a liquidity crisis from turning into broader solvency crisis for European businesses.

For the long-term recovery, the SME strategy adopted in March 2020 sets out an ambitious set of measures to support the digitalisation, sustainability, and resilience of European SMEs. SMEs and start-ups will also benefit from the measures included in the Industrial Strategy Update adopted in April 2021 to increase resilience across all industrial ecosystems, reduce supply dependencies and accelerate green and digital transitions.

The SME strategy includes a number of measures to help SMEs fully benefit from Europe’s main asset, its Single Market, and to create the right framework conditions where SMEs can prosper and grow, including cutting red tape and enhancing fairness in B2B relations. For example, the Commission will reinforce the screening of new legislative initiatives to identify those ones with significant impact on SMEs and to ensure that the impacts on SMEs are fully assessed (the ‘SME test’). The one-in one-out principle set out in the recent Better Regulation Communication allows to better addressing cumulative burden.

The Commission is also improving the effectiveness of the Late Payment Directive to increase the resilience of supply chains. To enhance fairness in business-to-business (B2B) relations, the late payment observatory will monitor businesses’ payment performance and identify unfair payment practices, which affect in particular SMEs.

The Enterprise Europe Network (EEN), active in over 60 countries, facilitates the access of European SMEs to the Single Market and third country markets and provides growth-oriented, integrated business and innovation support services to help them compete. Funded under the Single Market Programme (SMP), the EEN will play a crucial role in helping all types of SMEs in their transition to more sustainable business models through dedicated Sustainability Advisors and other sustainability services. It will also facilitate SMEs’ digitalisation by helping them to adapt their processes, to use digital technologies and to develop new products and services using digital means. Above all, it will support SMEs to become more resilient, to recover fully from the COVID-19 crisis and emerge stronger.

In the financial framework 2021-2027, the Commission established debt and equity support under its flagship programme InvestEU. A dedicated SME window will
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improve access to finance, with a budgetary guarantee of EUR 6.9 billion. InvestEU will be able to support companies affected by the crisis. In particular, there will be a possibility to provide capital support to SMEs that were not in difficulty in State aid terms already at the end of 2019, but since then face significant risks due to the crisis caused by the COVID-19 pandemic.

In addition, with a combined budget of EUR 393 billion over the course of the next programming period 2021-2027, cohesion policy will be one of the cornerstones of the EU socio-economic recovery from the COVID-19 pandemic. It will do so through ERDF with the overall budget of EUR 226 billion (and complemented by CF and JTF of EUR 48 billion and EUR 19 billion respectively) to stimulate private and public investments helping SMEs directly and indirectly via business support (in particular to ensure resilient, green and digital transition of SMEs) and improvement of their business environment (also including better infrastructure and better public services). The ESF+ with a budget of EUR 99 billion will be supporting SMEs to develop, managing and fully utilising the human capital available in their firms, including adoption of new work-organisation practices, HR tools and systems for managing human capital, and workforce upskilling and reskilling.

Finally, the Recovery and Resilience Facility makes available funds for SME digitalisation, upskilling and vocational training. SMEs will also benefit from reforms in public administrations and modernisation of procedures. Implementation of the National Recovery and Resilience Plans will be key to ensure support measures effectively reach SMEs on the ground.

Questions concerning simplification and personnel costs

18. Several researchers complain that taking part in EU funded projects is administratively so burdensome that they refrain from applying for EU funding. How can the situation be improved to make it more easy, particularly for first-time applicants, to apply for EU funding?

Commission's answer:
The Commission is committed to increasing the use of more simplified cost options in Horizon Europe, in particular lump-sums and unit costs. The Commission, under Horizon 2020, launched pilots of lump-sum funding to large, multi-beneficiary actions. This simplified form of funding substantially reduces the administrative burden during the lifetime of the project by shifting the focus of project monitoring from financial checks to performance and content. Feedback from SMEs and newcomers indicates that they are rather positive about this development, which in addition is helping reduce the error rate, and lowers substantially the administrative burden for beneficiaries. SMEs and newcomers, in particular, stand to benefit from lump sums and unit costs as they often lack the experience and administrative capacity to deal with the complex rules of real cost reimbursements. The share of
newcomers in the lump sum pilot under Horizon 2020 was slightly above the Horizon 2020 average.

In the case of start-ups, the European Innovation Council is also striving to radically simplify access to its Accelerator instrument thanks to its new platform, which allows start-ups to submit a short application with their idea at any time and to receive an evaluation result on whether to proceed with their application in less than four weeks. The platform not only guides applicants throughout the preparation of their application but also improves regularly its performance in this area thanks to the use of artificial intelligence. The aim is to get even first-time applicants to apply for EU funding in a fast, natural and start-up friendly way. So far, over 3 000 start-ups and SMEs have applied (approximately 700 every month).

19. Can you tell us about the new initiatives taken by your DG to continue simplifying and digitalizing procedures and programs, bearing in mind that the complexity of the rules is often blamed for the error rate?

**Commission’s answer:**
The Commission is committed to increasing the use of more simplified cost options in Horizon Europe, in particular lump-sums and unit costs. The concrete measures to achieve this are currently being prepared in DG RTD (Common Implementation Centre), in close collaboration with DG BUDG and the services concerned.

Other measures taken to achieve the target to reduce the error rate include:

- Simplification of the Model Grant Agreement, including daily rate for personnel costs.
- Application form with simpler built-in guidance, improved Funding and Tenders Portal, and better IT tools (e.g., personnel cost wizard for beneficiaries to support correct reporting, risk module for Project Officers showing past audit results and flags under the Early Detection and Exclusion System (EDES))
- Simplified partnerships (harmonised set-up of JUs, uniform user experience across all JUs);
- Exploration of the possibility to use artificial intelligence and data analytics for reduction of the error rate in research spending.
20. The rules for declaring personnel costs under H2020 remain complex, despite simplification efforts, and their calculation remains a major source of error in the cost claims. What simplification efforts the Commission has done? Why do the quantifiable errors remain high?

**Commission's answer:**

As acknowledged by the European Court of Auditors, the Commission has substantially simplified the R&I Framework Programme under H2020, and the Commission continues to improve via:

- flexibility through the underlying rules;
- support and automation through IT tools;
- targeted information to beneficiaries, especially to error-prone beneficiaries.

The scope for further fundamental simplification of the real cost reimbursement system in Horizon 2020, which was already limited in the past, has been exhausted at this stage of implementation of the framework programme. The complexity of the rules, in particular those regarding staff costs, is the main reason why the error rate remains at a high level.

However, in Horizon Europe, provisions on personnel costs have been further substantially simplified. The concept of productive hours and the various prescriptive and complex methods to determine and report eligible personnel costs in Horizon 2020 are discontinued. Instead, a single and simpler corporate daily rate formula applies to align the very diverse and complex landscape of provisions currently in use across all directly managed EU programmes. Having such a corporate and simpler formula will reduce the risk of error for beneficiaries while simplifying administration and auditing across directly managed EU programmes.

Despite the increased number of simplification measures introduced by the Commission, it should be highlighted that a real cost reimbursement system is inherently relatively complex. Thus, error rates will inevitably remain relatively high. This is why the extensive use of lumps sums and unit costs is of vital importance in order to achieve further simplification and ultimately reduce the level of error in the programme.

21. The ECA Annual report 2020 stresses that one of the largest source of errors comes from declaring ineligible costs, in particular direct personnel and direct other costs, in research spending (Horizon 2020 and FP7). What measures has the Commission taken to reduce the frequency of errors in this area? How is it tackling problems such as complex subcontracting rules?

**Commission's answer:**

The Commission is fully aware that SMEs and newcomers to the research and innovation programmes are particularly prone to error given the relatively limited administrative capacity they possess, as well as their lack of familiarity with research and innovation rules of reimbursement. In order to tackle this issue, a
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number of communication campaigns have been launched, targeting particularly error-prone beneficiaries. These campaigns include specific guidance on Horizon 2020 cost eligibility rules, including calculation of personnel costs and further information on subcontracting rules.

For Horizon Europe the Commission is organising a series of webinars for participants that are recorded and available in the Funding and Tenders Portal. The webinars have so far been focussing on submission and evaluation of proposals with more planned from next year on, focussing on reporting and payment.

This communication campaign together with the development of better IT tools (e.g., personnel cost wizard for beneficiaries to support correct reporting) will help participants to have a better understanding of the costs eligibility rules.

22. ECA notes in its annual report (4.13) that the rules for declaring personnel costs under H2020 remain complex, and in some respects, the methodology for calculating personnel costs has become even more complex. The Commission has established a corporate Model Grant Agreement that foresees a very simple method for charging personnel costs, based on a daily rate calculation. Is the Model Grant Agreement being applied across the board? Does it deliver the intended results?

**Commission's answer:**

The corporate Model Grant Agreement, where the simplified daily rate calculation method is embedded, applies to all grants under Horizon Europe and other directly managed programmes. It is too early to report on its results, as we are still initiating the implementation of the programmes.

However, the Commission is already studying the large-scale use of lump sum grants and the possibility to complement the new simplified personnel cost calculation with one or more optional unit cost models to further reduce the risk of error in personnel costs declarations. This is combined with simplified requirements regarding the justification of the time worked in the Horizon Europe actions, which, altogether, must result in a decrease of unintentional errors by beneficiaries of EU grants.

23. What the EC intends to do to simplify the rules on personnel costs under the next Research Framework Programme (Horizon Europe)?

**Commission's answer:**

In Horizon Europe, provisions on personnel costs have been further simplified. The concept of productive hours and the various prescriptive and complex methods to determine and report eligible personnel costs in Horizon 2020 are discontinued. Instead, a single and simpler corporate daily rate formula, using the calendar year instead of the use of the last closed financial year, applies to align the very diverse and complex landscape of provisions currently in use across all directly managed EU programmes. Having such a corporate and simpler formula will reduce error
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risks for beneficiaries while simplifying administration and auditing across directly managed EU programmes.

In addition, the Commission is committed to using more simplified cost options in Horizon Europe, in particular lump sums and unit costs.

24. Personnel costs continue to constitute the principal source of error in research. The ECA’s annual report again contains several examples. The errors included the use of theoretical salary costs rather than actual figures, ineligible salary elements, ineligible hours worked outside the project eligibility period, and incorrect declaration of costs for staff seconded from linked third parties. What is the Commission doing or intending to undertake to reduce these errors? For Horizon Europe, personnel costs will be calculated on the basis of a daily rate formula using the calendar year instead of the use of the last closed financial year. However, deficiencies in time recording may still occur in Horizon 2020 grants. What tools does the Commission have at its disposal to remedy these deficiencies?

Commission's answer:
The Commission has reinforced further its communication campaigns focusing, amongst others, to the calculation of personnel costs and the methodology for calculating hourly rates in H2020 grants. In addition, guidance documents such as the Annotated Grant Agreement provide detailed information to Beneficiaries on the calculation methodology of all types of costs, including personnel costs. Furthermore, the Commission has developed and put at the disposal of Horizon 2020 beneficiaries a personnel costs wizard, which is embedded in the on-line reporting tool. Beneficiaries have only to encode a set of basic data (e.g. salaries, hours worked on the action, options chosen) and the wizard automatically calculates the eligible personnel costs. Apart from ensuring the correctness of the mathematical calculations, the wizard also prevents beneficiaries from choosing ineligible combinations of options and adjusts the results, if necessary, to conform to the ‘double-ceiling’ rule. The wizard is, however, optional and most beneficiaries have been reluctant to use it. The Commission will continue promoting the tool with the objective of increasing the number of beneficiaries using it.

25. Only when the contractual relationship and working arrangements between the external consultant and the beneficiary fulfil the conditions of the Horizon 2020 grant agreement can the costs be declared under personnel costs. What exactly are these conditions?

Commission's answer:
The conditions to declare as personnel cost the work of a person working for the beneficiary under a direct contract other than an employment contract, in Horizon 2020 actions, are defined in Article 6.2.A.2 of the grant agreement signed between the beneficiary and the granting authority. They are the following:
(a) the person works under conditions similar to those of an employee (in particular regarding the way the work is organised, the tasks that are performed and the premises where they are performed);

(b) the result of the work carried out belongs to the beneficiary (unless exceptionally agreed otherwise), and

(c) the costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.

If any of these conditions is not fulfilled the costs do not fall under the category of personnel costs, but they can still be declared under other categories, namely costs of other goods or services or subcontracting.

**Questions concerning audits, risk and error rate**

26. How do you explain your important error rate given the increase in digitalisation (procedure, public procurement etc.)?

**Commission's answer:**

The Commission is working in digitalising the control process even further. In this respect, the Commission has established a number of automatic controls related to the handling of the financial management of the projects.

However, the impact of those endeavours on the error rate can only become apparent after a given period of time.

It should also be noted that these automatic controls will help reduce the error rate only in the cases where the error could have been detected with the information at hand in the ex-ante controls. Still some errors detected by the Court could only have been detected with an on-the-spot (ex-post) audit.

27. What are the reasons behind the fact that the error rate is the same as in 2019 (3.9% in 2020, 4% in 2019)? What steps is the Commission planning in order to reduce it?

**Commission's answer:**

The error rate reported by the Court is calculated on an annual basis and does not take into account any corrections and regularisations carried out by the Commission.

The Commission, on the other hand, has a multiannual audit control strategy for research expenditure, thus improvements in the control system of the Commission will be visible in the medium term as well as by the end of the Programme. The Commission has reported a multiannual residual error rate of 2.16 % at the end of 2020 (2.15% at the end of 2019). This error rate accounts for recoveries, corrections and the effects of all Commission controls and audits over the whole implementation period of the programme.
The similarity in the error rate reported by the Court for 2019 and 2020 stems mainly from the fact that both refer to the same framework programme (Horizon 2020) following the same complex rules. Any scheme based on the reimbursement of eligible costs has a high inherent risk of error. A series of rules on eligibility is necessary, but unfortunately, it is also adding complexity. In particular, SMEs and newcomers, whose involvement in Horizon 2020 has been crucial to the successful implementation of the programme, have error rates up to three times higher than other beneficiaries do.

Most errors are due to the complexity of the rules in particular those regarding staff costs. In this respect, the Commission is committed to continue investing in further simplification and to enhance further the controls in place in order to ensure the legality and regularity of all transactions. Regarding Horizon Europe, the successor of Horizon 2020, the Commission is committed to using more simplified cost options, in particular lump sums and unit costs. The concrete measures to achieve this are currently being prepared in DG RTD (Common Implementation Centre), in close collaboration with DG BUDG and the services concerned.

Regarding Horizon 2020, the Commission has adapted its outreach campaign to beneficiaries in two aspects:

- focus the content of the seminars on the cost category contributing by far the most to the error rate (personnel cost calculation, time registration, annual productive hour methods)
- undertake active steps to ensure the participation of the categories of beneficiaries most vulnerable to errors (newcomers, SMEs, third country participants, one-time participants)

A series of compact, bespoke webinars are being organised, with dedicated personal invitations to the identified target groups

Other measures taken to achieve the target to reduce the error rate include:

- Simplification of the Model Grant Agreement in Horizon Europe, including daily rate for personnel costs.
- Application form with simpler built-in guidance, improved Portal, and better IT tools (e.g., personnel cost wizard for beneficiaries to support correct reporting, risk module for Project Officers showing past audit results and flags under the Early Detection and Exclusion System (EDES))
- Simplified partnerships (harmonised set-up of JUs, uniform user experience across all JUs);
- Exploration of the possibility to use artificial intelligence and data analytics for reduction of the error rate in research spending.

The incidence on the level of error rate of such actions is expected to materialise at the time of payments of such grants and thus is only measurable over a longer period of time.
28. One would expect a lower error rate in an area under direct management by the Commission as compared to expenditure areas under shared management. However, this is not the case. What is the Commission undertaking to reduce the error rate?

**Commission's answer:**
A scheme based on the reimbursement of eligible costs has a high inherent risk of errors. A series of rules on eligibility is necessary, but unfortunately, it is also adding complexity. In particular, SMEs and newcomers, whose involvement in Horizon 2020 has been crucial to the successful implementation of the programme, have error rates up to three times higher than other beneficiaries do.

Complexity of rules is often the main cause of errors. In order to help participants to cope with the complex rules, the Commission has adapted its outreach campaign targeting the most error-prone participants (see answers to previous questions).

In Horizon Europe, the Commission is committed to using more simplified cost options, in particular lump sums and unit costs.

29. Research remains a high-risk spending area under the new MFF. The RRF also funds research. How will the Commission avoid double-funding in this area and measure the error rate?

**Commission's answer:**
The Recovery and Resilience Facility (RRF) is the centrepiece of NextGenerationEU, a temporary recovery instrument that allows the Commission to raise funds to help repair the immediate economic and social damage brought about by the COVID-19 pandemic. The Facility is also closely aligned with the Commission’s priorities ensuring a sustainable and inclusive recovery that promotes the green and digital transitions.

The Horizon Europe Work Programme fully integrates the NextGenerationEU (NGEU) budget available for the research programme (EUR 5.4 billion) and the topics relevant for NGEU clearly identify the NGEU part of the budget envelope for each action. This clear split of funds avoids any possibility of double funding within Horizon Europe.

The NGEU funds allocated to Horizon Europe are integrated into its budget and the error rate of these funds will be measured as an integral part of the Horizon Europe.

The Commission carries out systematic checks for double funding before the signature of a grant. This is carried out with the help of an IT application (ARIS/SIMBA) which systematically checks for similarities between projects that are in the eGrants database.

In addition, with the help of the same IT application, deliverables and periodic reports may also be checked for similarities between all projects included in the eGrants database.
30. OLAF concludes in its annual report that research projects remain at risk. What are the main financial risks to the EU budget in the area of research? Why do the research and innovation funds under direct management don’t show significant improvements?

**Commission's answer:**
A scheme based on the reimbursement of eligible costs has a high inherent risk of error. A series of eligibility rules is necessary, but unfortunately, it is also adding complexity. In particular, SMEs and newcomers, whose involvement in Horizon 2020 has been crucial to the successful implementation of the programme, have error rates up to three times higher than other beneficiaries do.

The main risk is that beneficiaries would claim reimbursement of costs, which are not (fully) eligible for funding, as a result of unintentional errors, mostly under personnel costs.

On the other hand, cases of fraud detected in R&I projects are rare.

According to the 2020 Annual Report on the protection of the European Union's financial interests, for Research and Innovation and between 2016 and 2020, the ratio between the financial amounts related to fraudulent irregularities and expenditure in the period is very small, and remains close to zero (0.021%).

Still, it should be stressed that the Commission shows zero tolerance towards fraud. All services involved in the management of R&I funds work closely with OLAF in the fight against fraud, and will assist the European Public Prosecutor's Office when necessary. All potential fraud cases are communicated in due time to OLAF.

31. The ECA annual report 2020 argues that, when it comes the competitiveness chapter, ‘Had the Commission, or the auditors contracted by beneficiaries, made proper use of all the information at their disposal, the estimated level of error for this chapter would have been 1.6 percentage points lower.’ Why did these errors remain undetected? Which measures did the Commission take improve the situation?

**Commission's answer:**
The comment of the European Court of Auditors relates to the quality of the Certificates on Financial Statements (CFS) produced by external independent auditors at the request of beneficiaries (contracted directly by them). These Certificates are a key part of the Horizon 2020 ex-ante controls and provide assurance to the Authorising Officers before payments.

The main reason why external independent auditors (contracted by the beneficiaries) do not always identify errors in the cost claims, relates to the fact that they may not be fully familiar with the detailed rules of Horizon 2020. The Commission identifies all the cases where, although cost claims have been subject to “clean” CFS, a subsequent audit reveals errors that were not picked up by the providers of the CFS.

To mitigate this risk, the Commission has organised a series of meetings targeting beneficiaries and the auditors contracted by the beneficiaries to raise awareness of
the most common errors that stem from the audits of beneficiaries. The Commission created an online webinar training for CFS providers explaining the steps of the process and focusing on areas that have proven particularly challenging, such as personnel costs. In addition to the self-explanatory template for Horizon 2020 audit certificates, the Commission provides feedback to those auditors contracted by beneficiaries when the errors in CFS are identified via ex-post financial audits.

It is important to bear in mind that even when the auditors contracted by beneficiaries do not identify every single error in the cost claims, they play an important role in reducing the overall error rate and protecting the financial interest of the EU.

32. Auditors contracted by the beneficiaries themselves at the end of a project provide certificates on financial statements (CFS). These certificates are intended to help the Commission check whether costs declared in the financial statements are eligible. However, ECA has repeatedly reported weaknesses in these certificates. What are the main weaknesses of the certificates?

**Commission's answer:**

The Commission acknowledges the Court’s concerns about the quality of the Certificates on Financial Statements (CFS) produced by external independent auditors at the request of beneficiaries (contracted directly by them). The main reason why auditors contracted by the beneficiaries do not always identify errors in the cost claims relates to the fact that they may not be fully familiar with the detailed financial rules of H2020. For instance, there have been cases were these auditors provided a “clean” CFS ensuring the eligibility of personnel costs in a cost claim, whereas a subsequent audit performed by the Commission issued major concerns over the eligibility of these costs.

Despite these known weaknesses, these Certificates are a key part of the Horizon 2020 ex-ante control and provide assurance to the Authorising Officers before payments.

The Commission is taking action to further improve the quality of these Certificates, see answer to question 31.

33. Moreover, certain categories of unit costs, such as the costs of providing transnational access to research infrastructure, are not tested by the contracted auditors, as the Commission does not require them to conduct this type of check. Why not? Do you plan to extend the scope of the certificates on financial statements?

**Commission's answer:**

The Commission is dedicated to increase the level of detection and correction of the errors incurred by the beneficiaries. Please see the reply to Q41 regarding the scope of the Certificate on the financial statements.
34. In its 2020 AAR, DG RTD disclosed 22 open IAS recommendations. According DG RTD, it has already approved an action plan for their implementation. Could you please comment on the progress of the implementation of these recommendations according action plan?

**Commission's answer:**
At the end of 2020, DG RTD managed to close all recommendations stemming from the Internal Audit Service (IAS) in previous years, except two (rated ‘important’) which were still within the original deadlines. The IAS performed three new audits in 2020 (with final reports issued at the end of January 2021), which resulted in 20 new recommendations, included in the 2020 Annual Activity Report (AAR).

Therefore, DG RTD reported 22 open recommendations in its 2020 AAR, four rated ‘very important’ and 18 ‘important’. Action plans have been prepared and approved by the IAS for all these recommendations. The IAS audit reports performed in 2020 covered several bodies (Directorates-General and Executive Agencies) in the Research and Innovation family. The Common Implementation Centre (CIC) hosted by DG RTD proposed and already implemented, or is implementing the commonly agreed actions.

Six of these recommendations have already been declared implemented by DG RTD. Another five are planned to be closed before the end of 2021. The other 11 recommendations (including the four ‘very important’) have deadlines along and until the end of 2022.

These recommendations are set for conclusion within the established original deadlines. In line with its standard audit policy, the IAS will follow-up on these recommendations to check their effective implementation once declared completed by DG RTD.

The audits of the IAS carried out in the Research and Innovation family have consistently contributed to the improvement of the services and performances.

35. ECA’s report suggests that for both their 2018 and 2019 annual reports, they have reviewed a random sample of 20 ex post audits and found number of cases (17) where they could not rely on the conclusions. Can you explain why and what kind of measures have you envisaged?

**Commission's answer:**
The Court concluded that in 17 out of 40 audits performed by the Commission and reviewed by the European Court of Auditors (ECA) in 2018 and 2019, it could not rely on the Commission’s audit conclusions. The Commission analysed in detail the results of the work of the Court. Specifically:
- Most points raised by the ECA could easily be clarified by the Commission. Moreover, the 17 audits included findings of a minor degree or findings for which the financial impact could not be quantified.
The ECA’s observations mainly relate to the outsourced audits. For example, the ECA referred to lack of documentation kept by auditors. However, the Commission’s audit reports are based on the principle of “reporting by exception”. This implies that only audit findings (errors) need to be reported and documented into the audit file. In case of doubt, the Commission can request the working papers from the external audit firm or additional documentation from the beneficiary.

In some specific cases, the Commission has been taking a more inclusive interpretation of the funding rules in line with the Financial Regulation and the Horizon Rules for Participation, while the ECA took a more restrictive approach.

Nevertheless, the Commission took note of the ECA’s observations and undertook concrete actions in order to address the ECA’s concerns and to improve the quality of its audits. These measures include:

- Communication of the findings with regard to the outsourced audits to the audit firms, with a clear and explicit request to take them into account for future audits;
- A quality control team has been established in the Common Audit Service (CAS) in order to ensure quality and consistency in all audits (own audits as well as outsourced ones);
- Information campaigns and intense training for auditors, organised by the Commission;
- Regular meetings with (including visits to) the audit firms in order to discuss quality requirements;
- Introduction of improved Terms of Reference in the new framework contract with the external audit firms, including stricter quality requirements;
- The CAS has undertaken joint missions with the external audit firms and quality reviews on the spot.

36. What are the plans for improving further the quality of ex post audits in relation to Horizon 2020?

**Commission’s answer:**

The Commission is pleased to note that the European Court of Auditors (ECA) has acknowledged the actions undertaken by the Commission to increase the quality of its ex-post audits. At the same time, the Commission will continue its targeted measures. This will include continuous training to auditors (our own auditors as well as the contracted audit firms) and communication campaigns to beneficiaries with a particular focus on newcomers and SMEs. In that respect, the Commission is paying special attention to the most recurrent errors found in the ex-post audits. The Commission is also focussing on the necessary circular feedback mechanism between the two arms of control (ex-ante and ex-post). Lessons learnt from ex post
controls (e.g. major sources of errors and irregularities detected during ex post audits) will be continuously fed back to the ex-ante controls ensuring continuous improvement in the effectiveness and efficiency of the control strategy overall.

The Commission’s Horizon Europe ex-post audit strategy will be based on the experience gained during the implementation of the audit strategy for Horizon 2020 and on the observations issued by the ECA.

37. According ECA Annual Report 2020, around 20% of ex post audits of the entire H2020 family are carried out by DG RTD’s Common Audit Service (CAS), and 80% on its behalf by private audit firms selected through a tendering procedure. Were there any major issues encountered by external auditors in 2020 due to pandemics and if yes how they were resolved?

**Commission's answer:**

As a result of the COVID-19 pandemic and the related travel restrictions imposed in 2020, the Common Audit Service (CAS) – in line with the instructions of the Commission – had to postpone on-the-spot missions until further notice. To minimise the impact of the lockdown on the implementation of the audit campaign, the vast majority of on-the-spot audits were replaced by remote audits, in line with international best practice and auditing standards. In cases where the independent auditors were not able to perform fully their audit tests remotely, audits were postponed until travel restrictions are eased.

Despite some delays in the implementation of the annual audit plan due to the pandemic, the Commission is confident that the level of assurance provided via its multi-annual audit strategy is comparable to the pre-pandemic situation.

38. We read in the Commission's replies to ECA 4.13. that the concept of productive hours and the various prescriptive methods that proved to be prone to errors in Horizon 2020 will be discontinued in Horizon Europe. When do you expect the effects to show?

**Commission's answer:**

The corporate Model Grant Agreement, where the simplified daily rate calculation method is embedded, applies to Horizon Europe. As correctly indicated, it removes many of the complex elements of the Horizon 2020 rules for calculating eligible personnel costs. Its positive effects should be shown from the first Horizon Europe costs declarations. Nonetheless, as with any change in the rules, we can expect a learning curve and therefore the full effect of the new approach will be visible later on in the implementation of the Programme.

39. Last year in the final period of Horizon 2020, Commission was planning to organize webinars for SMEs, newcomers and participants from third countries to demonstrate to the participants how to declare their costs correctly under the programme’s rules. Could you tell if these webinars took place and how many participants attended? Do you think they had positive impact in reducing errors?
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**Commission’s answer:**
Since December 2020, we held six major webinars (approx. one every other month). This campaign reached nearly 7,500 direct participants and 50,000 views on YouTube. The next webinar is scheduled for 2 December 2021.

Based on feedback from participants and National Contact Points, we believe that the webinars are perceived as a useful tool in helping participants understand the financial reporting rules. However, it will take another couple of years to see whether this will materialise in a reduced error rate.

40. The ECA Annual report 2020 highlights that for Horizon 2020, the beneficiaries contracted auditors to provide certificates on financial statements of their projects, but that these auditors have frequently failed to discover detectable errors. To what extent does the Commission rely on such certificates?

**Commission’s answer:**
The Certificates on Financial Statements (CFS) are one of several elements of the Commission’s comprehensive control strategy, which are complemented and corroborated with additional elements such as the full spectrum of ex-ante controls as well as the possibility to perform on-the-spot ex-post audits. The Commission is aware of their limitations, however, despite the identified weaknesses, CFS provide an additional degree of assurance to the Authorising Officers before payment and play an important role in reducing the overall error rate.

In any case, the Commission is taking initiatives to improve the quality of the Certificates. It has organised a series of meetings targeting both beneficiaries as well as the auditors contracted by the beneficiaries to raise awareness of the most common errors that stem from the audits carried out on beneficiaries. The Commission has also created an online webinar training for CFS providers. In addition to the self-explanatory template for Horizon 2020 audit certificates, the Commission provides feedback to the auditors contracted by beneficiaries on the errors identified.

In this way, the Commission is focussing on the necessary circular feedback mechanism between the two arms of control (ex-ante and ex-post). Lessons learnt from ex post controls (e.g. major sources of errors) are continuously fed back to the ex-ante controls ensuring continuous improvement in the effectiveness and efficiency of the control strategy overall.

The Commission’s Horizon Europe control strategy will be based on the experience gained during the implementation of the control strategy for H2020.
41. Does the Commission plan to extend the scope of the certificates on financial statements to include unit cost categories for the new Research Framework Programme, Horizon Europe?

**Commission's answer:**

The scope of the Certificate on the Financial Statements (CFS) has been extended under Horizon Europe as regards the threshold (amount and costs covered) for submission. The main aim was to align to the corporate approach under the new multiannual financial framework and thus simplify the life of the beneficiaries when participating in several EU directly managed programmes. More precisely, under Horizon Europe, beneficiaries must submit the CFS at the payment of the balance when the requested EU contribution calculated on all costs (not only actual costs and unit costs calculated in accordance with usual costs accounting practices as in H2020) is equal or higher than EUR 430 000. This is in line with the simplification objectives aimed at reducing the administrative burden for beneficiaries.

At the same time, given the nature of the CFS (i.e. an independent report on factual findings and not an audit or a review report defined as such under the International Standards on Auditing where the Auditor gives a statement of assurance on costs declared in the Financial Statements), its content focuses on actual costs and unit costs calculated according to the usual costs accounting practices of the beneficiaries (e.g. internally invoiced goods and services and average personnel costs). These types of costs are the ones most prone to errors and, therefore, they should be subject to more in-depth ex-ante checks carried out under the CFS (i.e. in support of payments made to beneficiaries during the action implementation) in order to ensure a reasonable assurance on the use of EU funds.

The other types of costs (such as SME owner unit cost) where the methodology is usually defined by the European Commission will be subject to checks (which may be carried out at any moment and without any time-limit) as well as to ex-post audits (for instance to check that the number of units are identifiable and verifiable, in particular supported by records and documentation) as any other unit costs (including those covered by the CFS).

**Questions concerning COVID-19**

42. Many countries faced difficulties in their education systems due to Covid-19. Online teaching and learning had a major impact and confirmed deep inequalities among Member States in relation to the preparedness for digital education from infrastructure to access to technologies. What were Commission’s actions to mitigate these inequalities? In the context of the Digital Education Plan, which actions have been implemented or in the way of implementation?

**Commission's answer:**

In 2020, the Commission launched two extraordinary Erasmus calls as a response to the challenges resulting from the COVID-19 pandemic. The two new calls were
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launched on 25 August 2020, each providing EUR 100 million. The call for Digital education readiness aimed at supporting projects in school education, vocational education and training, and higher education to enhance online, distance and blended learning. The call for ‘Partnerships for creativity’ aimed at supporting projects in the fields of youth, school education and adult education in developing skills and competences that encourage creativity and boost quality, innovation and recognition of youth work.

Many ongoing Horizon 2020 projects were also adjusted as to address gaps created by distance learning requirements brought by the confinement.

Regarding the Digital Education Action Plan, all actions have started their implementation phase and several are delivering their outputs. For instance, in August the Commission published a proposal for a Council Recommendation on blended learning to support high quality and inclusive primary and secondary education. In October, SELFIE for teachers was launched, offering teachers of primary and secondary education the possibility to self-assess their digital competences. Moreover, two expert groups have kicked-off their activities: one on ethical guidelines on artificial intelligence (AI) and data usage in teaching and learning for educators; and one on common guidelines for teachers and educational staff to foster digital literacy and tackle disinformation through education and training.

43. The COVID-19 pandemic has affected learners and teachers during the year of 2020 and has tested not only the resilience of education and training systems across Europe, but also the well-being of our young people. At the same time the COVID-19 pandemic threatens increase the rural/urban divide and exacerbating differences between education systems. Only six Member States have highly digital school provision for 80% or more of students.

  o Question : What does the Commission intend to do to ensure that inequalities in the area of digitalisation do not increase between rural and urban areas?

  **Commission's answer:**

  Ensuring equality in terms of access and use of technology by all students has always been an important dimension in the Commission’s endeavours in this area. The Commission carries out regular benchmarking surveys across the EU with the objective of providing comprehensive data and evidence regarding access, use and attitudes towards the use of technology in education. The results of such studies aim at contributing to the development of updated, relevant and efficient indicators as well as to the establishment of a long-term and continuous monitoring system in the field of digitalisation of education.

  In its last comprehensive survey published in March 2019, “Survey of Schools: ICT in Education”, the Commission highlighted the disparity existing between big cities and rural areas as well as with smaller cities. The survey showed wide differences.
between European countries and between schools located in and outside of big cities with regard to having access to and the use of digital technologies.

One of the preparatory actions implemented by the Commission aims at increasing access to educational tools in areas and communities with low connectivity or access to technologies. The action will support digital education for children in remote areas and communities, such as mountain areas, rural areas, islands and deltas. This action aims to contribute to addressing inequalities in relation to access to digital education by enhancing inclusion and by reducing the digital gap suffered by pupils from remote areas and communities with low connectivity, limited or no access to devices and digital educational tools and content.

The action will develop a strategy designed to increase access to digital education in the remote areas and communities that mostly need such support, and by running deployment actions in primary, secondary and vocational schools in order to implement and test some of the most suitable technical solutions to reduce the digital gap.

Under the Digital Education Action Plan, the Commission put forward an action to support Gigabit connectivity of schools, as well as connectivity in schools under the Connecting Europe Facility programme. This is paired with Connectivity4Schools awareness raising actions on funding opportunities. Moreover, the Commission encouraged Member States to include broadband in investment and reform projects in national recovery and resilience plans under the Recovery and Resilience Facility, in line with the European Connect flagship.

**Question:** How Commission will ensure that in the future member states are on the same line regarding digitisation in education?

**Commission's answer:**

As part of the Digital Education Action Plan, the Commission is establishing a Digital Education Hub, aiming at improving cooperation and exchange on digital education at EU level across all sectors of education and training. The Digital Education Hub will have at the core of its activities the creation, promotion and engagement of a dynamic and committed digital education community.

As part of this community, the Commission set up a network of National Advisory Services (NASs) on digital education. NASs are existing bodies and organisations that are working on the implementation of digital education in Member States. The main purpose of the network is to support the exchange among member states on hands-on experience and good practice in implementing digital education.

This cooperation will be further supported by the work of the new Support, Advanced Learning and Training Opportunities (SALTO) resource centre for digital education, to be launched in Spring 2022.

In addition, and delivering on Action 1 of the Digital Education Action Plan 2021-2027, the Commission has launched a structured dialogue on digital education and skills with all Member States to support them in tackling the challenges related to
the shortages of ICT specialists and digital skills in general. The dialogue will include different branches and institutions of government, from education and training institutions to infrastructure providers, to private sector, social partners and civil society.

Moreover, in its Communication on ‘2030 Digital Compass: the European way for the Digital Decade’, the Commission set a number of key targets to shape the digital transformation in Europe by 2030. The Digital Decade aims at increasing the share of adults with basic digital skills to 80% by 2030, and increasing the number of employed ICT specialists to 20 million by the same year, with convergence between women and men. The Commission will define projected trajectories in close cooperation with the Member States to ensure these targets are met.

44. During the Covid-19 pandemic the self-employed, those hired on fixed-term contracts and part time workers took the hardest hit. This means young people were particularly vulnerable to the employment effects of the pandemic.

Question: What kind of actions Commission is planning to ensure we don't have a "COVID-19 lost generation", in terms of access to digital education and job opportunities?

Commission's answer:

Indeed, the global crisis, triggered by the COVID-19 pandemic, added to the urgency of addressing the needs of young people entering the labour markets. As announced by President von der Leyen, the Commission will soon launch the ALMA (Aim, Learn, Master, Achieve) initiative, which aims to strengthen support to young people not in any kind of employment, education or training (NEETs). ALMA will help these young people find their way to the job market by combining support for education, vocational training or employment in their home country, with a work placement in another EU country.

Furthermore, various other actions are ongoing such as the Recommendation on Effective Active Support to Employment (EASE), which provides guidance to Member States on active labour market policies, including a focus on young people. Also, the Commission’s Youth Employment Support (YES) – A Bridge to Jobs for the next generation is part of the ambitious Recovery plan for Europe and aims at making sure that the EU’s digital and green transitions are ingrained in the next generation of youth employment policies. The reinforced Youth Guarantee is part of this package and caters for the changing skills requirements of ongoing technological developments (e.g. automation) and digital and green transitions.

Digital skills and jobs are more than ever a key priority in our EU strategy documents, such as the European Digital Strategy, the Digital decade and compass and the Pillar of Social rights and its action plan. Commission services are working together to address the digital upskilling challenge.

With the Skills Agenda and the Digital Education Action Plan, the Commission sets concrete measures to support the development of digital skills at all levels. For
instance, the Digital Competence Framework supports the acquisition and recognition of digital skills. It is being updated to take account of emerging technologies such as Artificial Intelligence, datafication and phenomena such as increased misinformation and disinformation. Another tool on which the Commission is working is the European Digital Skills Certificate (EDSC), which can represent a step-change in facilitating the common European-wide recognition of Europeans’ digital skills levels.

Beyond these concrete tools on digital skills, the Commission is working on initiatives to empower individuals to keep on learning throughout their careers and lives, such as:

1. Individual Learning Accounts, which will put the individual directly at the centre of skills, including digital skills development, and;

2. A European approach to Micro-credentials. Micro-credentials have an enormous social and economic potential in offering quick and targeted upskilling and reskilling for workers, learners and jobseekers.

The Digital Skills and Jobs Platform brings together information and resources on digital skills including free digital skills courses and resources. The Digital SkillUp project also offers free digital courses on topics like emerging technologies and Safety online.