

Management Plan 2020

DG RESEARCH AND INNOVATION

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INTRODUCTION

When COVID-19 hit Europe with an unprecedented strength, European research and innovation immediately delivered a multi-layered response. During 2020, the R&I will remain at the forefront of the common European efforts to meet health, social and economic challenges brought with the novel virus. With its power to drive growth, to boost competitiveness, to create jobs and to leverage approximately EUR 11 of additional investments for each euro invested at the European level, the EU R&I policy is at the heart of the post-corona recovery plan for Europe. Scientists and innovators are conducting research and developing new solutions to heal Europe's wounds and bring us all to the 'new normal'. In 2020, the R&I actions will increase their focus on four pillars of recovery: health, resilience, digital and climate.

The Directorate General for Research and Innovation will therefore contribute to the six headline ambitions of the von der Leyen Commission, accelerating green and digital transitions in Europe, as well as to contribute to a modern, high performing and sustainable European Commission.



Faced with long-term social and economic effects of the global pandemic, our vision remains unchanged: a sustainable, safe, fair and prosperous future for people and planet, based on solidarity and respect for common European values.



The policy can only be understood and owned by citizens, when supported by effective communication. The complex communication strategy will accompany policy development on its all stages with its culmination during the European Research and Innovation Days. The 2020 edition of the event will gather stakeholders, citizens and policymakers to shape future R&I landscape, working across polices, spurring innovation and triggering investment. The R&I Days are expected to gather over 10.000 online participants for the policy conference and over 5.000 citizens for the 'Science is Wonderful!' exhibition.

This Management Plan defines the most important outputs of DG Research and Innovation for 2020, in order to deliver on the objectives set in the Strategic Plan 2020-2024. It follows the structure of the Strategic Plan and fully reflects the priority actions identified in the Commission Work Programme for 2020.

THE R&I POLICY FOR ACCELERATING TRANSITIONS IN EUROPE

DG R&I SPECIFIC OBJECTIVES TO THE COMMISSION'S HEADLINE AMBITIONS

GENERAL OBJECTIVE 1: A EUROPEAN GREEN DEAL

- Specific objective 1.1: High-quality science, knowledge and innovative solutions support climate policies and help to preserve biodiversity, ecosystem and natural resources
- Specific objective 1.2: Mainstreaming of the public and private research and innovation investments for climate actions strengthens the European Green Deal's impact
- Specific objective 1.3: Co-creation of Horizon Europe and its missions and partnerships increases awareness of the key role of research and innovation for achieving climate neutrality

GENERAL OBJECTIVE 2: A EUROPE FIT FOR THE DIGITAL AGE

- Specific objective 2.1: High-quality science, knowledge and innovative solutions facilitate a digital transition in Europe, including a new European approach to Artificial Intelligence
- Specific objective 2.2: The revitalised European Research Area sets directions for societal, economic and ecological transitions in Europe and contributes to spreading excellence, closing research and innovation gap and working out a common global response to emerging challenges
- Specific objective 2.3: Research and innovation actions and the European Innovation Council in particular support development and scaling-up of SMEs with breakthrough and disruptive technologies

GENERAL OBJECTIVE 3: AN ECONOMY THAT WORKS FOR PEOPLE

Specific objective 3.1: Research and innovation actions, increased R&I investments and the R&I component of the European Semester boost economic growth and jobs creation

GENERAL OBJECTIVE 4: PROMOTING OUR EUROPEAN WAY OF LIFE

- Specific objective 4.1: Research and innovation develop and deploy solutions, technologies and innovations to tackle emerging threats and improve crisis preparedness
- Specific objective 4.2: Research and innovation support the European health initiatives, including the European plan to fight cancer

GENERAL OBJECTIVE 5: A STRONGER EUROPE IN THE WORLD

Specific objective 5.1: Regional research and innovation strategies and broader association policy contribute to promoting common European R&I values and creating a global Research and Innovation Space

GENERAL OBJECTIVE 6: A NEW PUSH FOR EUROPEAN DEMOCRACY

Specific objective 6.1: European research and innovation support citizens' involvement, social inclusion and equalities in Europe, including through communication of the European R&I added value

GENERAL OBJECTIVE 7: A MODERN, HIGH PERFORMING AND SUSTAINABLE EUROPEAN COMMISSION

Specific objective 7.1: The Common Implementation Centre and the Common Policy and Programming Centre provide user-friendly services and tools to the European Commission for effective and efficient planning, programming and implementation of the Research and Innovation Framework Programme and other EU programmes

PART 1. Delivering on the Commission's priorities: main outputs for the year

General objective 1: A EUROPEAN GREEN DEAL

The European Green Deal and a 'green' recovery from the crisis caused by the global pandemic require a highly ambitious agenda linking research, innovation and investments with reforms and regulation, that mobilise a collective response of the European institutions, Commission services, Member States, regions, companies of all sizes, academia and the public, in collaboration with partners around the globe.



Horizon Europe's powerful instruments and innovative governance can drive the necessary systemic changes to reach climate neutrality and ensure an inclusive ecological and economic transition.

In 2020, the DG will contribute to the **Biodiversity Strategy for 2030**, the new **Chemicals Strategy**, R&I component of **Farm to Fork, sustainable and smart mobility** and **hydrogen** strategies.

The **Green Deal Call** under Horizon 2020 with an expected budget of EUR 1

billion to be launched by the end of this year will address the urgency of climate action and green recovery. It is complemented by a specific **EIC Accelerator Green Deal call** of more than EUR 300 million

The **revision of Council Decision 2008/376/EC on Research Fund for Coal and Steel** aims to update the coal and steel research objectives in line with the Paris Agreement, the European Green Deal and the European Sustainable Investment Plan.

The **Strategic Planning process of Horizon Europe** involves the European and national institutions, citizens and the stakeholders. In result, the **co-created Strategic Plan** will be delivered and adopted in 2020 to secure a strong R&I response to the climate challenges and to provide clear strategic guidance for the drafting of the Horizon Europe Work Programmes.

Horizon Europe's new powerful tools - partnerships and missions will massively contribute to the Green Deal's ambitions The legislation for the institutionalised European Partnerships (set up based on Article 185 or 187 of the TFEU), which are a key response to the current crises due to its investment leverage and the areas they cover. will be adopted by the end of 2020. Many of them allow teaming up with the private sector and Member States as well as Associated Countries to decarbonise energy. mobility and steel sectors and to



provide innovative solutions for biodiversity and sustainable management of natural resources. In particular:

- **Transforming Europe's rail system** partnership will define, design and implement the full spectrum of rail research and innovation activities, from fundamental research to large-scale demos, to trigger a major transformation of the railway system towards integrated and sustainable mobility in Europe.
- **Integrated Air Traffic Management** partnership will enhance performance of the Union's air traffic management system as technological pillar of the Single European Sky (SES).
- Clean aviation partnership will accelerate and amplify the impact of the European aviation research and innovation on Energy Union, Mobility Package, renewed industrial policy strategy, air pollution emissions, tackling energy and climatechange challenges, industrial competiveness and sustainable mobility.
- Clean hydrogen partnership will accelerate the market entry of nearly-zero GHGemission hydrogen-based technologies across energy, transport and industrial endusers, covering the full value chain for competitive hydrogen and fuel cells technologies.
- Circular Biobased Europe partnership will deliver on sustainable and climateneutral solutions accelerating the transition to a healthy planet, where renewable products and nutrients will be produced from biomass and waste instead of nonrenewable fossil and mineral resources.

The DG R&I contribution to the Commission's headline ambition 'European Green Deal' is reflected by the R&I actions under three specific objectives included to the performance tables in the annexes:

- Specific objective 1.1: High-quality science, knowledge and innovative solutions support climate policies and help to preserve biodiversity, ecosystem and natural resources
- Specific objective 1.2: Mainstreaming of the public and private research and innovation investments for climate actions strengthens the European Green Deal's impact
- Specific objective 1.3: Co-creation of Horizon Europe and its missions and partnerships increases awareness of the key role of research and innovation for achieving climate neutrality

General objective 2: A EUROPE FIT FOR THE DIGITAL AGE

Research and innovation policy serves as an **engine of the European digital strategy**. High quality science, knowledge and innovative solutions accelerate all of its aspects – in particular through innovative measures of the R&I Framework Programmes (current Horizon 2020 and future Horizon Europe) and modernised European Research Area.

In 2020, DG Research and Innovation will prepare the first **Work Programme for Horizon Europe**, which should be adopted shortly after the final adoption of the Horizon Europe legal base. The DG will also focus on **synergies between framework programme and other European programmes** to foster the digital transformation.

In order to ensure that Horizon Europe missions are supported by the other EU, national and third country programmes and to identify potential regulatory bottlenecks to be tackled through the innovation principle, a **Communication on Horizon Europe research and innovation missions** is foreseen for the fourth quarter of 2020.

Four institutionalised partnerships will deliver scientific and innovative solutions for the digital transformation:

- **Smart Networks and Services** partnership will enable the infrastructure basis in terms of key technologies and deployment for Next-Generation Internet services and for "smart" services required by such sectors as transport, energy, manufacturing, health and media.
- **High Performance Computing** partnership will establish an integrated worldclass supercomputing & data infrastructure and support a highly competitive and innovative HPC and Big Data ecosystem.
- **Key Digital Technologies** partnership will maintain the European Electronics Components and Systems industry at the technological forefront and boost competitiveness of the EU's industries.
- **European Metrology partnership** (art. 185 TFEU) will accelerate the global lead in metrology research that Europe currently holds, and create sustainable metrology networks.

The R&I policy will be a key factor for **digitalisation of the health sector** and thus making our response to the corona crisis stronger and more accurate. In 2020, DG R&I will deliver on roadmap for the 1+ Million Genomes Declaration and provide unified FAIR data standards in the area of rare diseases.

work out an Artificial Intelligence

(AI) R&I investment strategy to identify the needs for research in Artificial Intelligence and its applications, which will serve as an input for Horizon Europe programming. The DG will also deliver **ethical guidance** for the AI-related research projects in order to ensure that the ethical aspects are considered and fundamental values respected.

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During the global COVID-19 pandemic, ERA proved to be a unique forum to discuss, work out and implement common

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European solutions to the emerging challenges. Agreed by Member States the **ERAvsCorona Action Plan** allowed to respond to the most pressing needs of the pandemic in the fields of testing, treatment and prevention. In line with this plan, the European COVID-19 Data Platform has been provided. As an integral part of ERA, cooperation with Associated Countries to jointly address the COVID-19 challenge will intensify.

The Commission 'Communication on the new ERA for Research and Innovation' will start the process of empowering and revitalising of the European Research Area anchored on the principle of excellence that draws on the lessons learned from the COVID-19 crisis. It will incentivise Member States to reinforce R&I at national level and to deepen joint efforts at the European level. ERA will bring together Europe's best brains and become a pole of attraction for the world's best talents. It will also support European companies to scale up and become world leaders in key strategic areas (e.g. Artificial Intelligence, quantum computing, 5G, batteries, hydrogen) where Europe can occupy a sovereign position. The new ERA will operate in synergy with the European Education Area, with simplified processes and governance. They will mutually reinforce each other to promote coordinated education, training, R&I and investments to build a true knowledge society and economy.

Four strategic objectives for a new ERA:

- **Prioritising investments and reforms**: R&I policy needs to steer, facilitate and align R&I efforts to accelerate the digital and green transformation of Europe's society and economy to increase competitiveness and the speed and depth of the recovery. This includes simplifying and facilitating the inter-play between national and European R&I systems. The principle of excellence should stay as a cornerstone for all investments under ERA.
- **Improving access to excellence:** R&I policy can only strive towards more excellence with a stronger R&I system where best practice is disseminated faster across Europe. Building also on Cohesion Policy, Member States, who are willing to increase the performance of their R&I system towards excellence, should be encouraged and supported to do so.
- **Translating R&I results into the economy:** R&I policy is key to boost the resilience and competitiveness by ensuring Europe's competitive leadership in the global race for technology, improving the environment for business R&I investment and enhancing the take up of excellent research results in the economy.
- Deepening the ERA: R&I policy needs to make further progress on the free circulation of knowledge in an upgraded, efficient and effective R&I system. ERA will continue to support free circulation of knowledge, promote adequate framework conditions, help develop the skills that researchers need for excellent science, connect all actors across Europe.

To turn the above ambition and objectives into action, we will take following approach:

- A **set of actions**, to deliver on the four objectives of the new ERA - where appropriate, developed in co-creation with Member States and stakeholders, and implemented in the short to medium term, according to an ERA Roadmap.

Member States will reinforce their commitment to a set of shared values and principles,



by adopting a **Pact for Research and Innovation in Europe**.

- The existing ERA governance process will be made more effective and impactful, with close and regular political dialogue with Member States on priorities for future implementation and progress.

A **complex communication strategy** will support the promotion of the new ERA. Communication actions will focus on the positioning of Europe as a global R&I powerhouse, where talents can flourish and move freely, innovation and competition is stimulated and research results work for the benefit of society. DG Research and Innovation will work together with DG EAC, JRC and other

partners to highlight the importance and added value of EU knowledge infrastructures

among policy makers, stakeholders and citizens, while ensuring a high level of engagement in the development of European Research Area.

The European Union (EU) has a history of world class scientific and technological achievements, but its research and innovation potential fails to be fully exploited. A transformative R&I policy needs to embrace excellence with inclusiveness creating an R&I system that works for everyone. In line with the ambitions of a renewed European Research Area (ERA), a more inclusive approach will be taken, through new Work Programmes under Horizon Europe. **Widening strategy** will continuously help to overcome disparities between Member States.

Improvement of working conditions of researchers will contribute to the successful digital transition. The EU is the economy with the largest number of researchers (two million), ahead of China and the United States. **The European Charter for Researchers** and the Code of Conduct for the Recruitment of Researchers will be revised in 2020.

Digital transformation requires strengthened ecosystem of innovative and resilient industries and companies. Now only five percent of European start-ups scale-up and pursue the position towards world tech leaders. The new **European Innovation Council** (EIC) aims to reverse this trend. In 2020, DG R&I will prepare the Work Programme for the EIC, and make the **EIC Fund** fully operational. The Fund will seek to attract private investors that could complement and ultimately replace its financial support.

DG R&I has published a call for start-ups and SMEs with technologies and innovations helpful in treating, testing, monitoring or other aspects of the Coronavirus outbreak. The fast track approach will be used for awarding of the EIC grants and blended finance (combining grant and equity investment) to Coronavirus relevant innovations.

The **EUvsVirus Hackathon and Matchathon**, organised by the EIC, was a virtual initiative to link researchers and innovators working on corona-related innovations. Over 2100 multi-disciplinary teams will spark the development of 2,235 new cross-European partnerships by matching partners from public and private sectors.

The fully virtual **European Research** & Innovation Days (22-24 September) – the biggest R&I event in Europe – will serve as a forum to codesign our main activities with citizens and stakeholders.



The DG's contribution to the Commission's headline ambition 'Europe fit for Digital Age' is reflected by the R&I actions under three following specific objectives included to performance tables in the annexes:

- Specific objective 2.1: High-quality science, knowledge and innovative solutions facilitate a digital transition in Europe, including a new European approach to Artificial Intelligence
- Specific objective 2.2: The revitalised European Research Area sets directions for societal, economic and ecological transitions in Europe and contributes to spreading excellence, closing research and innovation gap and working out a common global response to emerging challenges
- Specific objective 2.3: Research and innovation actions and the European Innovation Council in particular support development and scaling-up of SMEs with breakthrough and disruptive technologies

General objective 3: AN ECONOMY THAT WORKS FOR PEOPLE

Research and innovation policy will remain at the heart of the post-pandemic recovery. Each euro invested in research and innovation at the European level is expected to generate about EUR 11 of additional investments. European R&I policy drives the development of knowledge-intensive activities, which make up over 33% of total employment in Europe.

In 2020, DG R&I will focus on further synergies with other EU Programmes, including **InvestEU**, in order to stimulate investment in research and innovation, notably by the private sector, and to leverage and complement national and regional initiatives.

In the context of the **European Semester**, DG Research and Innovation will deliver evidence-based analyses, identifying the key bottlenecks in the national R&I systems impeding their full contributions to competitive sustainability. Through the **Country Specific Recommendations**, DG R&I aims to convey clear and relevant messages about the critical role of R&I policy in the green and digital transitions, highlighting the need to secure appropriate R&I investments in the national recovery strategies and to undertake necessary reforms. The **Policy Support Facility 2.0** will be launched this year, as well.

DG R&I will enhance strategies and capabilities for knowledge valorisation by engaging stakeholders in the exchange of best practices, it will also strengthen link between standardisation and harness the potential of **people's** engagement in **valorisation of research results** and innovation.

The **Euratom** programme funds research and training on all aspects of nuclear safety, security and waste management, reducing risks associated with radiation exposures and supporting emergency preparedness, and non-power applications of ionising radiation. The programme aims to support research on the development of fusion energy, in view of its potential major impact on the decarbonisation of the energy mix. In 2020 the **implementation of the 2019-2020 work programme for Euratom** will be continued.

DG Research and Innovation will prepare the launch of the **Euratom Research & Training Programme** (2021-2025), pending completion of the inter-institutional negotiations.

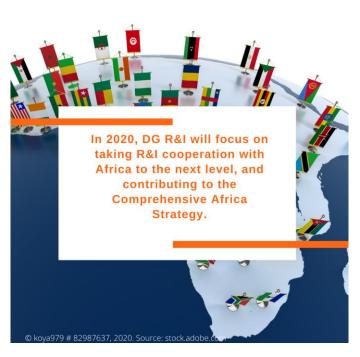
The DG R&I contribution to the Commission's headline ambition 'An economy that works for the people' is reflected by the R&I actions under the following specific objective included to the performance tables in the annexes:

- Specific objective 3.1: Research and innovation actions, increased R&I investments and the R&I component of the European Semester boost economic growth and jobs creation

General objective 4: A STRONGER EUROPE IN THE WORLD

In the course of 2020 DG Research and Innovation will take steps to **tighten R&I** cooperation with global leaders.

The DG aims to deliver on the EU-China Joint Roadmap for Future Science, Technology and Innovation Cooperation focused on reaching a level playing field and reciprocity in innovation with this strategic partner. A Letter of Intent on Strengthening Cooperation in Science, Technology and Innovation between the European Commission and the Government with Japan was already signed.



In 2020, the cooperation with Africa will be of the highest importance. The DG organized the first of its kind **EU-African Union (AU) Ministerial** on Research and Innovation. Based on this policy debate, the DG will continue to strengthen EU-AU R&I cooperation, and work on further deliverables in view of the EU-AU Summit in 2021.

A flagship of that cooperation will be the **EU-Africa Global Health Partnership**. This proposed institutionalised partnership builds on the ongoing European and Developing Countries Clinical Trials Partnership (EDCTP2). It will develop the diagnostics, vaccines and therapeutics

appropriate for use in Africa, as the vital starting point to contain infectious diseases. More specifically, it will support the conduct of clinical trials to test these products and build research capacity in sub-Saharan Africa.

In view of the EU enlargement, DG R&I will focus on strengthening research and technological cooperation with partners from Western Balkans. The DG will contribute to the **Agenda for the Western Balkans.** In addition, **Smart Specialisation Strategies** can mobilise the entrepreneurial discovery process of local opportunities in digital and green transformation.

The integration of ten R&I deliverables in the revised architecture of the Eastern Partnership (EaP) and the intensification of the integration of the Eastern partners with the EU R&I systems will boost their innovation capacities

The **revamped association policy for Horizon Europe** will increase the R&I impact of the European research and innovation policy and thus strengthen the global leadership of the Union. During 2020, DG Research and Innovation will engage in exploratory talks with 14 to 24 third countries, interested in association in order to prepare for possible future association

The scientific and technological agreement with **India and Ukraine** were renewed. In the case of India, this was acknowledged at the 15th EU-India Summit. In addition, an **Implementing Arrangement with Indian Council of Social Science Research** under the framework of ERC grants will be signed in 2020.

The DG will continue to engage in specific actions in 2020, such as the full implementation of the Central Asian Water Regional Science Diplomacy Stakeholders' Platform, as well as targeted outreach activities organised by the Science Counsellors and R&I correspondents posted in EU Delegations around the world.

The DG will also strengthen cooperation with the **Latin America and the Caribbean** region, in particular through the upcoming EU-CELAC Joint Initiative on R&I Senior Officials Meeting.

The DG R&I contribution to the Commission's headline ambition "A Stronger Europe in the World" is reflected by the R&I actions under the following specific objective:

Specific objective 4.1: Regional research and innovation strategies and broader association policy contribute to promoting common European R&I values and creating a global Research and Innovation Space

General objective 5: PROMOTING OUR EUROPEAN WAY OF LIFE

DG Research and Innovation has been at the forefront of coordinating European and global research efforts to combat the COVID-19 outbreak and to strengthen



preparedness for different health threats, including pandemics.

The DG launched several **special actions** related to epidemiology, preparedness and response to outbreaks, the development of diagnostics, treatments and vaccines as well as the infrastructures and resources that enable this research.

The DG played a key role in kickstarting an **international pledging event** by the Union and its international partners. The global pledge has raised EUR 15.9 billion so far to secure development, deployment and fair distribution of testing, treatment and vaccines.

In January 2020, the DG launched an **emergency call under Horizon 2020**, through which EUR 48.2 million were awarded to 18 research projects. They involve 151 teams from across Europe and beyond, and focus on improving preparedness and response to outbreaks, rapid diagnostic tests, new treatments and vaccines. In April, the guidance on testing methods has been published to support Member States in effectively using testing tools.

The fast track call under the **Innovative Medicines Initiative (IMI)** – an instrument of Horizon 2020 – has been launched for research proposals responding to the COVID-19 outbreak. EUR 45 million were dedicated from Horizon 2020, a commitment of a similar scale was provided by the pharmaceutical industry. The IMI is a public-private partnership between the European Commission and the pharmaceutical industry represented by the European Federation of Pharmaceutical Industries and Associations (EFPIA).

DG Research and Innovation in cooperation with the European Investment Bank (EIB) reviewed the allocation and prioritisation of the financial means under the **Horizon 2020 InnovFin financial instruments**. Around **EUR 400 million** has been secured for additional financing and re-allocated to **Horizon 2020 InnovFin Infectious Disease Finance Facility** (H2020 InnovFin IDFF), a debt facility guaranteed at 100% by the European Commission, which provides support from clinical studies to scaled-up

manufacturing to key innovative players developing innovative COVID-19 vaccines candidates.

Through its **Accelerator** scheme the **EIC** has provided **EUR 164 million** to **36 start-ups** and **SMEs** combatting the coronavirus: three of them focus on testing, 22 on treatment, five on prevention and six on other relevant innovations.

The **EIC Horizon Prize for 'Early Warning for Epidemics'** will deliver a scalable, reliable, and cost-effective early-warning system prototype, building on a wealth of environmental observation, to forecast and monitor vector-borne diseases in order to contribute to the prevention of outbreaks, mitigating their impact on local, regional and global scales, and providing support to existing elimination efforts.

On **Research and Innovation foresight**, the DG will deliver analysis of the exit conditions from the COVID 19 crisis, focusing on public health, social and infrastructural conditions. The project will draw on expert consensus around the progress for effective vaccines, therapeutics, diagnostics, or the state of public health infrastructures. Future scenarios will be also developed based on megatrends that may be impacted by the COVID-19 outbreak.

DG Research and Innovation will contribute to the Commission's work on lessons' learned from Covid-19 and on pandemic preparedness (expected in Autumn).

The evaluation of the **Orphan** Medicinal Products Regulation is based on an independent study commissioned to an external contractor. The purpose is to assess the strengths and of weaknesses legal instrument, and give insight on how the various incentives of the legislation have been used and financial what were their consequences.

The **Partnership for Health Innovation** will enable the integration of cross-sectoral technologies, know-how, products, services and workflows for people-centred health care. Its



ambition is to support the delivery of timely and well-informed health solutions (prevention, diagnosis, treatment). It will keep EU citizens in good health, decrease disease burden for patients, care givers and health care professionals. It will also contribute to the environmental and fiscal sustainability of healthcare systems, competitiveness of health industries and EU technological sovereignty.

The DG's contribution to the Commission's headline ambition 'Promoting our European Way of Life' is reflected by the R&I actions under two specific objectives included to the performance tables in the annexes:

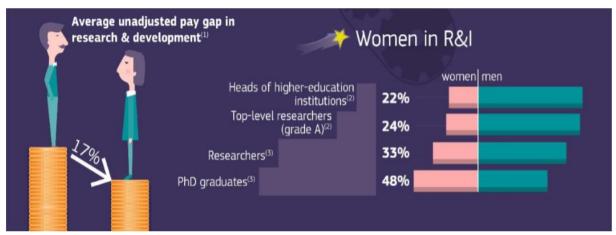
- Specific objective 5.1: Research and Innovation develop and deploy solutions, technologies and innovations to tackle emerging threats and improve crisis preparedness
- Specific objective 5.2: Research and innovation support the European health initiatives, including the European plan to fight cancer

General objective 6: A NEW PUSH FOR EUROPEAN DEMOCRACY

When democracy is being challenged, science helps to develop better strategies and support citizens' involvement, social inclusion and equalities in Europe.

In 2020, DG Research and Innovation will contribute to the **Democracy Action Plan** and **strengthen the role of R&I in fighting disinformation.**

Research and innovation aspects will be included to the Commission's report on the impact of demographic change, focusing on active aging, quality of life, healthcare and healthcare systems.



In line with Commission's approach to strengthen gender aspects of the European policies, the 2020 actions will be oriented towards the efficient implementation of Horizon Europe's gender equality objectives, supporting an inclusive and sustainable institutional change and overcoming the barriers to women entrepreneurship.

The DG's contribution to the Commission's headline ambition 'A New Push For European Democracy' is reflected by the R&I actions under the following specific objective:

- Specific objective 6.1: European research and innovation support citizens' involvement, social inclusion and equalities in Europe, including through communication of the European research and innovation added value

General objective 7: A MODERN, HIGH PERFORMING AND SUSTAINABLE EUROPEAN COMMISSION

The **Common Implementation Centre (CIC)** provides frames for implementing the Research & Innovation Framework Programme. It acts for simplification, harmonisation and equal treatment of beneficiaries through optimised tools and processes - including for partnerships and missions - synergies, feedback to policy-making and the exploitation of results.

In 2020, the Common Implementation Centre will continue to fine-tune the **Implementation Strategy for Horizon Europe** and, on this basis, will put in place the actual implementation framework needed to start the programme in 2021. It covers the processes and tools of the entire project lifecycle, including legal documents, guidance and training. This will help reduce red tape and treat applicants and beneficiaries in a consistent manner.

As an important part of the implementation strategy, the CIC will deliver the **Horizon Europe Model Grant Agreement** and help setting up a corporate Model Grant Agreement. This will introduce wider **reliance on beneficiaries' usual practices** for internal invoicing and, in line with the corporate approach, **simplified calculation of personnel costs** based on daily rates.

The CIC will also prepare a **Model Basic Act for all institutionalised partnerships** and contribute to the **establishment acts for Executive Agencies** and to the corresponding **delegation instruments and memoranda of understanding**.

The Common Implementation Centre leads the **corporate IT suite for grant management** (eGrants) and ensures smooth operation and continuous enhancement of the **Funding and Tenders Portal**, which serves as a one-stop shop for all our applicants, beneficiaries, and external experts. **The eGrants IT tools and the portal are already used by 24 Commission programmes.** In 2020, eGrants and the Funding and Tenders Portal will be **adapted to the needs of Horizon Europe** and the next MFF. The CIC will continue to **onboard new programmes** in view of supporting all centrally managed funding programmes under the next MFF.

The Dissemination & Exploitation Strategy will be revised based on the lessons learned from Horizon 2020. As a consequence, a **framework for feedback to policy** will be designed and it will be tested in a number of pilot actions in order to better **link programme implementation with policy-making,** which is crucial **for** collaboration between Directorates-General and Executive Agencies.

Finally, the CIC will moderate the co-creation exercise for setting up the **governance of Horizon Europe.** Given that the new framework programme will involve more services than before, we need a governance structure that is even **more efficient and inclusive**.

The CIC will work with all services concerned to deliver the **draft Horizon Europe operating rules** in view of adopting them by Commission decision in the second half of 2020.

The DG's contribution to the Commission's general objective 'A modern, high performing and sustainable European Commission' is reflected by the R&I actions under the following specific objective:

- Specific objective 7.1: The Common Implementation Centre and Common Policy and Programming Centre provide user-friendly services and tools to the European Commission for effective and efficient planning, programming and implementation of the Research and Innovation Framework Programme and other EU programmes

PART 2. Modernising the administration: main outputs for the year

This section will focus on human resources management, sound financial management, fraud risk management, digital transformation and information management, sound environmental management as well as a few examples of initiatives to improve economy in the service.

In 2020, the human resources correspondent will focus their activities on setting of Horizon Europe and the final externalization phase of Horizon 2020. The gender balance in our service will remain a priority and actions to recruit female at the level of the management will continue.

The internal control framework¹ supports sound management and decision-making. It notably ensures that risks to the achievement of objectives are taken into account and reduced to acceptable levels through cost-effective controls.

DG Research and Innovation has established an internal control system tailored to its characteristics and circumstances. The effective functioning of the service's internal control system will be assessed on an ongoing basis and be subject to a specific annual assessment covering all internal control principles.

As digital transformation and information management are key priorities of the von der Leyen Commission, particular efforts will be made to improve the methodology and equipment for a transition to a full digital environment.

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¹ Communication C(2017)2373 - Revision of the Internal Control Framework

A. Human resource management

In 2020, DG Research and Innovation will continue **the R&Innovate process** with the aim to transform the Directorate-General into a modern, agile and cross-silos administration, fit for the challenges of the 21st century. A Staff Survey has been foreseen to take stock of the impact of the measures implemented last year to improve the work environment.

The response to the needs expressed in the Staff Survey, and those that are emerging in the confinement period, will be developed in a collaborative way through discussions and exchanges both at management and staff level. The experience of working remotely and the lessons learnt during confinement time will be a paramount contribution to the collective reflection on the future work environment and its digitalisation.

B. Sound financial management

This section describes the measures implemented to provide the authorising officer by delegation with reasonable assurance that **resources have been used in accordance** with the principles of sound financial management and that cost-effective controls are in place, which give the necessary guarantees for legality and regularity of underlying transactions.

In 2020, the major part of DG Research and Innovation's expenditure will be – as in 2019 – related to Horizon 2020 grants, complemented by payments to the other implementing bodies such as Executive Agencies, Joint Undertakings, Public-Public-Partnerships and the European Investment Bank / European Investment Fund.

Ex-ante controls are rigorously implemented for each transaction (commitments and payments). Standard ex-ante control measures are in place for Horizon 2020. They are tailored to the different forms of costs and combine trust-based baseline checks and risk-based targeted controls. In addition, a robust Horizon 2020 ex-post audit strategy contributes to assessing the legality and regularity of Horizon 2020 project payments by means of ex-post financial controls. Together, ex-ante and ex-post controls provide the Authorising Officers by Delegation (AODs) with the necessary elements of assurance on the research and innovation budget under their responsibility.

Regarding Horizon 2020 grants, the internal control system of the DG is designed to maintain error rates within an acceptable range. For Horizon 2020 the objective is to obtain a cumulative residual error rate within a range of 2-5 % aiming to be as close as possible to 2%.

Indicators² based on the 17 principles of the Internal Control framework have been revised beginning of 2020 and will be used for the assessment of the internal control system in the Annual Activity Report 2020. Actions taken and further planned in the DG, especially those prepared and coordinated by the Common Implementation Centre (CIC), contribute to the economy, effectiveness and efficiency of operations under Horizon 2020 in all implementing services.

The pilot for lump sum funding was launched in 2017 and extended in 2018 and 2019. In 2020, ten additional pilot calls will be launched. This will provide a broad base to judge the feasibility of lump sum funding, and its potential. The conclusions drawn based on the experience with Horizon 2020 calls using lump sum funding will feed into the preparation of the next MFF and Horizon Europe.

In addition, grant management processes, documentation and IT systems will be adapted to cover the European Innovation Council pilot actions under the 2018-20 Horizon 2020 Work Programme³. The costs of supervision of grant management, and delegated/externalised bodies (Executive Agencies, Joint Undertakings, Public-Public Partnerships, EIB/EIF) will be kept to the minimum appropriate to a satisfactory balance with the risks to sound financial management.

The Common Implementation Centre (the post-2019 reorganisation successor of the Common Support Centre) provides common services in legal support, ex-post audit, IT systems and operations, business processes, programme information and data to all Research and Innovation DGs, the Executive Agencies and the Joint Undertakings implementing Horizon 2020. It helps to coordinate and deliver the programme across eight Commission Directorates-General (DG AGRI, DG CNECT, DG EAC, DG GROW, DG HOME, JRC, DG MOVE and DG ENER), four Executive Agencies (REA, ERCEA, EASME, INEA), and eight Joint Undertakings (BBI, CleanSky, ECSEL, EuroHPC, FCH, IMI, SESAR, Shift2Rail). Acting as a hub for the above activities the CIC helps reduce costs using economies of scale.

The ex-post control for grant management, part of the common audit strategy adopted in 2007, is largely centralised in the Common Implementation Centre, in particular in the Common Audit Service (CAS) for the whole Research and Innovation Family. CAS undertakes all audits (representative and complementary), including those concerning the Executive Agencies and the Joint Undertakings ensuring a harmonised approach, minimising the audit burden on beneficiaries and ensuring and contributing to sound financial management.

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² Internal Control Monitoring Criteria

³ The European Innovation Council Fund (EIC Fund) will be established in 2020

DG research and Innovation manages and controls its assets in the context of direct and indirect grant management and the management of financial instruments. The regular supervision of direct and indirect grant management and financial instruments did not identify particular issues or impacts in the activities of 2020 warranting mention in this report.

In order to improve the accuracy of the financial and management reporting of local systems, action plans are under implementation and will continue in 2020. With regards to the (significant) part of its budget implemented through indirect management, DG Research and Innovation relies on the reports and accounts provided by the relevant implementing bodies. This information is considered reliable sufficient and, therefore, supervision does not affect 2020 activities.

C. Fraud risk management

DG Research and Innovation shares with the other Research and Innovation (R&I) implementing services the main sectorial fraud risk, which is related to research and innovation grants. The Common Audit Service (Unit RTD.B2-CAS) coordinates the common R&I anti-fraud strategy and actions that are established and implemented jointly by all the services involved. This unit is also the OLAF correspondent for the Directorate General Research and Innovation.

The Common Anti-Fraud Strategy in the Research and Innovation family (RAFS) and its Action Plan were updated in 2019. They covered expenditure on FP7/Horizon 2020 grants, where the fraud risk is concentrated. Both documents take into account the different actions proposed in the Commission Anti-Fraud Strategy (CAFS), particularly in the new actions outlined below.

The Action Plan contains seven common actions. It addresses key challenges such as fraud proofing the future Horizon Europe Programme. In accordance with the first priority objective of the CAFS, enhanced data analysis is also a main action. Furthermore, it focuses on prevention measures at the earliest phase of the grant life cycle through reinforced monitoring measures and simple checks. Special attention is given to improving controls on legal entities, and to plagiarism and double funding controls, which are now supported by a new back office IT application.

Staff awareness is still considered to be the main prevention measure. Thus, a priority is to continue raising the level of anti-fraud awareness through innovative ways such as staff surveys, online self-assessment tool or workshops. In this area, it was decided to give precedence to the update of common anti-fraud training material and provide a more corporate approach to sectorial trainings.

The Fraud Prevention and Irregularities in Research Committee (FAIR), chaired by RTD.B2-CAS, is the key forum for the coordination of the implementation of the RAFS and its Action

Plan and for the coordination between the R&I family members on anti-fraud matters, on OLAF cases and recommendations.

In addition, DG Research and Innovation collaborates closely, via the Common Audit Service, with OLAF for its yearly financial monitoring exercises.

DG Research and Innovation updated its own strategy, the 3rd Anti-Fraud Strategy, and its Action Plan in July 2019 following the adoption of the new CAFS; it is fully aligned both with CAFS and with the RAFS. It covers areas, which are not related to Grant Management, i.e. fraud risks related to financial instruments, procurement, expert management, internal fraud etc. Its Action Plan includes one action aiming to raise awareness among DG Research and Innovation staff about the ethics rules of the Commission, with a particular emphasis on possible conflicts of interests in the DG.

D. Digital transformation and information management

Digital Workplace

The Commission's Digital Workplace Strategy, placed in the context of the Synergies & Efficiencies Review in the ICT Domain, implements the vision to provide staff with the right IT tools, platforms and services, enable users to work and collaborate anywhere, anytime with a fit-for purpose security and optimising their work experience and productivity. It will be adaptive and flexible to incorporate different types of users, new behaviours and new technologies.

DG Research and Innovation holds the ambition to play a leading role in this domain, and to fully embrace the opportunities for new ways of working that have been made so apparent by the Covid-19 pandemic. It aims to stay at the forefront of corporate Digital Workplace strategies, and Human Resources strategies that will transform our workplace into the workplace of the future.

The DG will vigorously pursue the uptake of laptops for all, the adoption by all of SECEM-2 based authentication technology, and the familiarity by all of available web / video-conferencing tools, including Member States' teams. The DG will invest in equipping all management offices and all meeting rooms with video / web conferencing systems that enable seamless collaboration by those working in the office and those tele-working. The DG will join the transition to Microsoft M365, and will pay particular attention to blending this in with the existing Collaboration environment.

Digital solutions

With Horizon 2020 and the setting up of the Common Implementation Centre, simplification and harmonisation turned into a policy goal. Gradually, harmonised business processes and IT tools were deployed to cover fully electronically all stages of the grant

lifecycle via eGrants and the Funding & Tenders Portal as the one-stop shop for applicants and beneficiaries.

Today eGrants has automated processes from publication through submission, evaluation, grant agreement preparation, project follow-up, payments, closure of projects to complete support to ex-post audit, interaction with external audit firms and implementation of any audit findings. It further covers selection, contracting and payment to experts as well as validation of all the beneficiaries.

This success led to the decision to provide by the start of the next MFF fully electronic management of all centrally managed EU funding programmes. The on-boarding of programmes beyond Horizon 2020 started by aligning requirements of these programmes with the procedures and IT tools in place. The implementation of the eGrants suite of IT tools evolved from an R&I tool to a corporate endeavour for the next MFF.

As such, eGrants is contributing to the Digital Transformation of the Commission, with a high visibility to the external stakeholders. These IT tools will be further developed, to release their full potential, for instance in terms of support to policy making as technologies today allow harvesting information from large corpus of unstructured or semi-structured documents, even across programmes.

Data assets

With the 2019 reorganisation, DG R&I has enshrined the priority for Data, Information and Knowledge Management in its core structure, creating a unit dedicated to a large extent to these activities (The Common data and Knowledge service RTD.B6). DG R&I is designing its Data Strategy and Knowledge Management Strategy, fully aligned with the Corporate Data strategy and the Commission's 2020-2021 work programme on data, information and knowledge management, including:

- putting transparency and data sharing/interoperability at the forefront (e.g. extended Horizon Dashboard)
- pushing for the use of data for Policymaking, in the Commission but also throughout Europe (e.g. European Data for R&I Policy Initiative)
- contributing to the corporate initiative on the Country Knowledge
- working very closely with the corporate One Stop Shop, developing for instance one of the Teams/M365 pilot receiving Strong support from the corporate deployment team, at the crossroads of Knowledge Management and Feedback to Policy.

Data protection

DG Research and Innovation aims at implementing privacy by default and privacy by design in its business processes and IT systems, hereby contributing to the digital transformation of a data-driven Commission whilst guaranteeing high standards of compliance with Regulation (EU) 1725/2018. To this end, DG Research and Innovation encourages and

develops awareness-raising trainings and actions for its statutory and non-statutory staff, including its IT intra-muros prestataires, whilst designing its processes and IT systems respectfully of the principles of necessity, data minimisation, risk management and confidentiality.

With the aim of a rigorous implementation of the data protection rules and principles by its staff, DG Research and Innovation develops its data protection awareness raising activities. In particular, in 2020, DG Research and Innovation will:

- Continue the provision of a data protection course at induction days for new-comers whilst encouraging other staff to register for EC-corporate data protection trainings;
- Set-up a data protection training dedicated specifically to its IT intra-muros prestataires, the tasks of whom have a direct impact on our compliance with Regulation (EU) 1725/2018.

E. Sound environmental management

DG R&I is an active contributor in the EMAS (EU Eco-management and audit) scheme, with notable successes in particular at the level of reduction of paper-use. The current global attention for Climate Change and the adoption of the European Green Deal has given fresh impetus and energy to these greening efforts. The work on EMAS, combined with results of a bottom-up initiative 'R&I Greeninnovate', have allowed to formulate a consolidated tenpoint action plan, in which three categories of initiative are proposed.

The first category covers actions with a significant, direct and measurable impact on Green House Gas (GHG) emissions. Building on the fresh experience of COVID-19, these actions aim at the substitution of physical missions, meetings, and transactions with external stakeholders by their virtual equivalents. DG R&I is already committing to an investment of around 1.8M€ in the necessary technology. Furthermore, under the motto of 'sustainable events and conferences', the 2020 R&I Days will be an exclusively virtual event, thereby avoiding air-travel for thousands of stakeholders.

The second category covers actions that have smaller, but measurable impact, predominantly in the EMAS frame. Actions focus on waste-reduction and waste-separation, on commuting, and on reduction of circulation of physical newspapers and scientific / research journals.

The third category addresses the crucial area of awareness-raising, volunteering and staff engagement. Actions in this category may not have major and quantifiable impacts, but they provide ample space for individual / collective enthusiasm and bottom-up initiative.

Specifically, in 2020 DG R&I will focus on the following tangible deliverables:

Beyond a variety of smaller actions in the third category, in 2020 DG R&I will focus on the following bigger and tangible outputs:

1. Reducing emissions (Corporate EMAS Indicator 2)

Installation of web / video conferencing equipment in meeting rooms and management offices, in cooperation with SCIC, in the objective to significantly reduce travel-related GHG emissions.

2. Waste separation (Corporate EMAS Indicator 3c)

Installation of waste sorting stations in collaboration with OIB in all floors of the ORBN building.

3. Phasing out remaining paper circulations (Corporate EMAS Indicator 3c)

Move exclusively to electronic distribution – subject to availability of suitable business models by the publishers – of newspapers, periodicals and scientific journals.

4. Green Public Procurement

Since 2019 DG R&I uses the eSubmission tool for the reception and opening of tenders in all open procedures. In 2020 DG R&I will go on rolling out the eProcurement corporate tools which allow the electronic reception and opening of tenders also for procedures on reopening of competition under existing framework contracts.

The recent introduction of the Qualified Electronic signature will also allow in the medium term the electronic signature of contracts, thus reducing the associated carbon footprint.

The staff of the public procurement team in DG R&I advises, in the context of the revision of the files prior to launch of the procedures, on the green procurement criteria⁴ to be considered for specific services (i.e. organisation of events, promotable materials, catering services, etc.) applying the tool kit centrally developed and available at https://ec.europa.eu/environment/gpp/toolkit_en.htm.

F. Example(s) of initiatives to improve economy and efficiency of financial and non-financial activities

- To improve the economy and the overall efficient functioning of DG Research and Innovation, it will continue to review its resource allocation to policy priorities,

⁴ The European Commission has developed criteria to facilitate the inclusion of green requirements into public procurement tenders for more than 20 product groups. These include 'core criteria' suitable for any contracting authority and focused on key environmental issues, and 'comprehensive criteria' with a higher level of ambition aimed at purchasing the best environmentally-friendly products available on the market

including the revision of the existing organisational structure and resource allocation following the delegation of the implementation of Horizon Europe to Executive Agencies and other EU bodies and the adoption of the Multiannual Financial Framework. This process was already initiated with Horizon 2020 and it will be finalised with the launch of Horizon Europe where DG Research and Innovation will focus its activities on policy.

The Common Implementation Centre (CIC) leads the corporate IT suite for grant management "eGrants". The eGrants suite already supports 24 Commission programmes, and new programmes are integrated continuously in view of covering all centrally managed programmes under the next MFF. It ensures smooth operation and continuous enhancement of the 'Funding and Tenders' Portal, which will be the "one stop shop" for all our applicants, beneficiaries, and external experts, with fully integrated IT tools and guidance for the entire grant life cycle.

ANNEX: Performance tables

PART 1. Delivering on the Commission's priorities: main outputs for the year

General objective 1: A EUROPEAN GREEN DEAL

The DG R&I contribution to the Commission's headline ambition "European Green Deal" is reflected by the R&I actions under three following specific objectives:

General objective 1: A EUROPEAN GREEN DEAL

Specific objective 1.1: High-quality science, knowledge and innovative solutions support climate policies and help to preserve biodiversity, ecosystem and natural resources

Related to spending programme(s): Horizon 2020 Horizon Europe, EURATOM

Main outputs in 2020:

All related to the green deal call

An related to the green dear can			
New policy initiatives			
Output	Indicator	Target	
Contribution to the European Green Deal	R&I aspects included in the European Green Deal documents and publication of a factsheet on the role of R&I in the European Green Deal	Completed 14.01.2020	
Contribution to protecting our environment, in particular the Biodiversity Strategy for 2030	R&I aspects included in Strategies and publication of a factsheet on the role of R&I in the Biodiversity Strategy	Completed 20.05.2020	
Contribution to the new Chemicals Strategy for sustainability	R&I aspects such as safe and sustainable by design materials and products. included in in the strategy	Q3 2020	
Contribution to sustainability of food systems, in particular the Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system	R&I aspects included in Strategy and publication of a factsheet on the role of R&I in the Strategy Food 2030 Pathways Policy Report highlighting relevance to SDGs and build up towards UN Food Systems Summit priorities Organisation of the Bioeconomy Core Group Meetings	Completed 20.05.2020 Q3-Q4 2020	
Contribution to the Strategy for	R&I aspects included in Strategy	Q4 2020	

sustainable and smart mobility	and publication of a factsheet on the role of R&I in the Strategy	
External communication actions		
Output/ Result	Indicator	Target
Green Deal Hub during R&I Days	Number of attendees	1000 per day
Support of the corporate Green Deal campaign starting at the end of 2020	Launch of the campaign	Q4 2020
Industrial Scoreboard 2020 edition with data on industries investments in green technologies and transition to sustainability.	Report published by the designated target date	Q4 2020
Other important outputs		
Output	Indicator	Target
Contribution to the Green Hydrogen Strategy	R&I aspects included in the Hydrogen Strategy (to be launched in early July 2020)	Q2 2020
An initiative for a plastic free Mediterranean (an action of the Bio-Economy Action Plan linked to the EU Plastics Strategy).	Implementation of a pilot with 10 countries bordering the Mediterranean Establishment of hubs connecting local and national initiatives from research, social innovation to citizens engagement	by the end 2020
A new ambition for Atlantic Ocean research from the Arctic to the Antarctic	Launch of the Atlantic Ocean Youth Forum Increase the number of research teams working together from pole to pole in the Atlantic to 1000 Administrative Arrangement with Morocco to join the All Atlantic Ocean Research Alliance	Q1 2020 By the end 2020 By the end 2020
Contribution to the Green Deal related revision of EU State aid rules	Proposals delivered in the designated timing of the interservice process	Adoption in Q4 2020

Specific objective 1.2: Mainstreaming of the public and private research and innovation investments for climate actions strengthens the European Green Deal's impact		Related to spending programme(s): Horizon 2020, Horizon Europe, EURATOM
Main outputs in 2020:		
New policy initiatives		
Output	Indicator	Target
Amendments to Horizon 2020 Work Programme 2018-2020 to	Amendments timely adopted	Q4 2020
align activities, including the European Innovation Council (EIC) Pilot, with the objectives of the European Green Deal	Amount invested in the extended ⁵ Green Deal call	EUR 1.3 billion by end of 2020
RFCS Legal Package Revision (Decisions 2003/76/EC and 2008/376/EC).	Adoption by the College	Q3 2020
Other important outputs		
Important Projects of Common European Interest (IPCEI) on Batteries (second group of 50+ proposals)	Finalised assessment of projects	end of 2020
Mission Innovation on clean	COP26	In 2021
- EC to promote high level of ambition for MI2.0, based on impact and inclusiveness in the spirit of global outreach under the EGD - EC to lead scoping of future missions on clean hydrogen and cities and provide support for a new	Establishment of initial list of future missions, agreement on the key features of MI platform and the rules of engagement and membership for MI2.0	Q3-Q4 2020

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⁵ Extended Green Deal Call means: Green Deal Call + EIC Accelerator Green Deal call

Specific objective 1.3: Co-creation of Horizon Europe and its missions and partnerships increases awareness of the key role of research and innovation for achieving climate neutrality

Related to spending programme(s): Horizon 2020, Horizon Europe, EURATOM

Main outputs in 2020:			
New policy initiatives			
Output	Indicator	Target	
First Strategic Plan of Horizon Europe for the years 2021-2024 to prepare the contents of the Horizon Europe Work Programmes and to establish Horizon Europe missions and co-programmed/co- funded partnerships	Adoption	Q4 2020	
Proposal of a Council regulation on Article 187 initiatives:— Institutionalised partnerships	Adoption by the College	Q4 2020	
Proposal for a Decision of the European Parliament and Council (Article 185 initiatives)	Adoption by the College	Q4 2020	
Evaluations and fitness checks			
Output	Indicator	Target	
Staff Working Documents on the impact assessments of institutionalised European Partnerships under Horizon Europe accompanying the Commission proposals of Council regulations for Article 187 and Article 185 initiatives	Up to 12 impact assessments of institutionalised European Partnerships reviewed by the Regulatory Scrutiny Board and published	Q4 2020 – all Staff Working Documents on the impact assessments of Institutionalised European Partnerships published	
External communication actions			
Output/ Result	Indicator	Target	
Hubs on 'Horizon Europe' (codesigning the first Work Programmes and discussion on partnerships) and 'Horizon Europe missions' during R&I Days	Number of participants in these hubs	1000 per day	
Citizen engagement activities by mission boards	Green Deal will be covered where possible and appropriate	On-going	
Stakeholder consultations on the Horizon Europe Strategic Plan	Number of contributions	September 2020	
Other output			
Green Deal Missions: Healthy oceans, seas, coastal and inland waters; Climate-neutral and smart cities; Soil health and food; and Climate adaptation, including societal transformation.	Launch of the missions	Q4 2020	

General objective 2: A EUROPE FIT FOR THE DIGITAL AGE

General objective 2: A EUROPE FIT FOR THE DIGITAL AGE			
Specific objective 2.1: High-quality science, know solutions facilitate a digital transition in Euro European approach to Artificial Intelligence	Related to spending programme(s): Horizon Europe		
Main outputs in 2020:			
New policy initiatives			
Output	Indicator	Target	
Contribution to the Digital Strategy for Europe and the Digital Education Action Plan and its iplementation	R&I aspects included in the Strategy and Action Plan	Q2-Q3 2020	
Contribute to new industrial strategy for Europe	R&I aspects included in the Strategy and foreign subsidies documents	Q4 2020	
Evaluations and fitness checks			
Contribution to the evaluation of the 'SME Definition '			
External communication actions			
Output/ Result	Indicator	Target	
Digitalisation, Implementation and Synergies, EIC and EIT Hubs during R&I Days:	Number of participants	1000 per day	
Other important outputs			
Output	Indicator	Taxaat	
	Illuicator	Target	
First Horizon Europe Work Programme	Adoption of the Work Programme	Depended on the final adoption of the Horizon Europe Regulation and the Decision on Horizon Europe Specific programme	
First Horizon Europe Work Programme Fostering synergies between R&I Framework	Adoption of the Work	Depended on the final adoption of the Horizon Europe Regulation and the Decision on Horizon Europe Specific	
	Adoption of the Work Programme	Depended on the final adoption of the Horizon Europe Regulation and the Decision on Horizon Europe Specific programme	

	Information provided to SoE Community of Practice Information on new schemes at national/regional level to support the Horizon 2020 proposals awarded with a Covid19 or a Green Deal Seal of Excellence.	Q3-Q4 2020
Open Research Europe publishing platform	Launch of platform for use by Horizon Europe beneficiaries	Q3 2020
Final report from the Open Science Policy Platform with recommendations on rewards and incentives	Published report from the European Commission to the European Competitiveness Council	May 2020
Implementation of the European Open Science Cloud	Timely adoption and publication of SRIA, recommendations from the EOSC Executive Board Working Groups and statutes of the new EOSC asbl under Belgian law	Q4 2020
Guidelines for high quality Ethics evaluation for Artificial Intelligence research proposals under Horizon Europe	Publication of the Quality guidelines ensured for participants and evaluators	Q4 2020
Contribution to the implementation of the Communication on enabling the digital transformation of health and care in the Digital Single Market	- Report on unified FAIR data standards in the area of rare diseases	Q4 2020
	- Roadmap for the European '1+ Million Genomes' Initiative	Q1 2020

Specific objective 2.2: The revitalised European Research Area sets directions for societal, economic and ecological transitions in Europe and contributes to spreading excellence, closing research and innovation gap and working out a common global response to emerging challenges

Related to spending programme(s): Horizon Europe

Main outputs in 2020:

Main outputs in 2020:			
New policy initiatives			
Output	Indicator	Target	
Communication on the future of Research and Innovation and the European Research Area:	Adoption of the Communication	Q3 2020	
Staff Working Document accompanying the Communication on the future of R&I and the ERA (analytical document to support the Communication°	Adoption and publication of the SWD	Q3 2020	
Communication on Horizon Europe research and innovation missions	Adoption of the Communication	Q4 2020	
Initiatives linked to regulatory sim		1	
Output	Indicator	Target	
Simplification of procedure to launch new wave of Innovation Deals	Publication of the new procedure	Q4 2020	
Public consultations			
Consultation Event with key stakeholders on European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, the Human Resources Strategy for Researchers and EURAXESS	Number of attending stakeholders	Q3 2020	
Consultation of stakeholders on the Future of Universities in Europe , to support institutional transformation in the R&I dimension of universities	Workshops and bilateral meetings with stakeholders and university umbrella organisations Intermediate and final reports of the consultation report, coordinated by external contractor	Q1-Q2 2020	
Consultation of stakeholders on the Future of Universities in Europe holistic approach (education and R&I dimension combined), contribution to upcoming Q2 2021 communication on the future of	Debate with stakeholders during R&I Days Rectors' Conference Feeding Council Conclusions on	September 2020 Q4 2020 Q4 2020	
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universities	European Universities	
External communication actions		
Output/ Result	Indicator	Target
Contribution to the corporate recovery campaign	R&I stories included in the campaign	3
ERA Tour de Capitales: consultation/outreach events in Member States and Associated Countries to get inputs in view of modernisation of ERA communication	Number of Member States involved	14 countries
Other important outputs		
Output	Indicator	Target
'Science, Research and Innovation Performance of the EU 2020' (SRIP) report	Publication of the report and launching event	Published in May 2020
Annual Report on Research and Technological Development Activities of the European Union and Monitoring of Horizon 2020 in 2019	Report published on time	Q3 2020
Commission Implementing Decision on Research Infrastructure for Microbial Resource Research Infrastructure (MIRRI)	Decision adopted	Q4 2020
Commission Implementing Decision on Research Infrastructure for Phenotyping and Archiving Model Mammalian Genomes (INFRAFRONTIER)	Decision adopted	Q3 2020
Commission Implementing Decision for Extreme Light Infrastructure (ELI)	Decision adopted	Q4 2020
Strategy 'Widening 2.0'	Strategy elaborated and published	Q3 2020
First Horizon Europe Work Programme for widening actions	Adoption of the Work Programme	Depended on the final adoption of the Horizon Europe Regulation and the Decision on Horizon Europe Specific programme
Guidelines on how to tackle foreign interference in European Higher Education Institutions and Research Organisations (following consultation with stakeholder platform)	Concept note and respective guidelines published	Q2-Q4 2020

Specific objective 2.3: Research a European Innovation Council in part and scaling-up of SMEs with technologies	Related to spending programme(s): Horizon Europe			
Main outputs in 2020:				
New policy initiatives				
Output	Indicator	Target		
Commission Decision on the	Decision adopted	Q2 2020		
establishment of the European Innovation Council Fund (EIC	EIC Fund fully operational	Q3 2020		
Number of private investors supporting innovative start-ups selected by the EIC Accelerator and amount of financing provided		Q4 2020		
External communication actions				
Output/ Result	Indicator	Target		
EIC Hub during R&I Days, 24-26 September 2020	Number of participants	128.000 participants		
Other important outputs				
Output	Indicator	Target		
EUvsVirus Hackathon and Machathon	Number of innovative solutions	Q2 2020		

General objective 3: AN ECONOMY THAT WORKS FOR PEOPLE

General objective 3: AN ECONOMY THAT WORKS FOR THE PEOPLE				
Specific objective 3.1: Research and innovation actions, increased R&I investments and the R&I component of the European Semester boost economic growth and jobs creation Related to spending programme(s): Horizon 2020, Horizon Europe				
Main outputs in 2020:				
New policy initiatives				
Output	Indicator	Target		
Launch of Euratom Research & Training Programme (2021-2025)	Adoption of the Regulation by the Council	Q4 2020		
R&I Contribution to deepening the Capitals Market Union , in particular the Action plan	R&I aspects included in the Action Plan	Q4 2020		
External communication actions				
Output/ Result	Indicator	Target		
Report and conference of high-level group on the integration of R&I in macroeconomic modelling	Publication of report, organisation of conference, recommendations for R&I policy	Publication and event Q3 2020		
Publication of report on R&I Valorisation Channels and Tools" and	Number of readers	960		
6 factsheets recommendations for R&I policy in 4Q 2020	number of downloads of e- version	256		
Other important outputs				
Output	Indicator	Target		
Semester Country Specific Recommendations (CSRs)	Presence of R&I in the CSRs	Relevant inclusion (at least 70%) of R&I in the CSRs		
Launch of Policy Support Facility 2.0	Start of PSF 2.0 operations	Q4 2020		
R&I Contribution to Intellectual Property Action Plan in support of industrial competiveness	R&I aspects focused on better update of research and innovation results included in the action plan	Q3 2020		

General objective 4: A STRONGER EUROPE IN THE WORLD

General objective 4: A STRONGER EUROPE IN THE WORLD			
Specific objective 4.1: Regions strategies and broader associate promoting common European R&I Research and Innovation Space	iation policy contribute to	Related to spending programme(s): Horizon Europe	
Main outputs in 2020: New policy initiatives			
Output	Indicator	Target	
Contribution to the Comprehensive Africa Strategy	new priorities, including on the Green Deal, for collaboration on R&I and investment with Africa agreed	Q3 2020 (*depends also on negotiations with third countries)	
EU Africa Global Health Partnership	Legal base for the institutionalised partnership adopted	Q4 2020	
Contribute to enlargement , in particular the Western Balkan strategy	Include Research and Innovation related actions in the Economic Investment Plan, in line with the Western Balkan agenda actions	End of 2020	
Proposal for a Council Decision on the renewal of the EU-India S&T Cooperation Agreement	Adoption of Council decision	June 2020	
Proposal for a Council Decision on the renewal of the Agreement on cooperation in science and technology between the European Community and Ukraine	Adoption of Council decision	June 2020	
Commission Decision on the endorsement of 'EU-China Joint Roadmap for Future Science, Technology and Innovation Cooperation	Endorsement by both sides (on the EU side - following endorsement by the Council after adoption of Commission Decision)	Q4 2020 (*negotiations with a third country)	
Commission Decision on the signing of a Letter of Intent on Strengthening Cooperation in Science, Technology and Innovation between the European Commission and the Cabinet Office of the Government of Japan	Signature of the letter of intent	May 2020	
Commission Decision on the signing of an Administrative Arrangement with Morocco on marine R&I cooperation	Signature of the Administrative Arrangement.	Q4 2020 (*negotiations with a third country)	

Evaluations and fitness checks				
Output	Indicator	Target		
ERA Progress Reports for the Western Balkans	Timely completion of ERA Country Progress Reports	End of 2020		
Take up of Smart Specialisation Strategies for the Western Balkans —	Finalised reports of S3 mapping	End of 2020		
External communication actions				
Output/ Result	Indicator	Target		
International cooperation hub at the R&I Days	Number of participants	1000 per day		
Other important outputs				
Output	Indicator	Target		
EU-African Union Ministerial declaration on Research and Innovation ahead of EU-African Union Summit	Organisation of the Ministerial with endorsed Declaration	July 2020		
New approach to the association policy under Horizon Europe: - Engage in exploratory talks with third countries interested in association to prepare the formal negotiation phase - Roadshow promoting Western Balkans Agenda and Horizon Europe Association (possibly virtual)	Launch of exploratory talks with 14-24 third countries One roadshow per country	By the end of 2020		
Contribution to the White Paper on an Instrument on Foreign Subsidies	R&I contribution fully reflected	Q3 2020		
DG R&I contribution to the Screening of Foreign Direct Investment	R&I contribution fully reflected	Q4 2020		

General objective 5: PROMOTING OUR EUROPEAN WAY OF LIFE

General objective 5: PROMOTING OUR EUROPEAN WAY OF LIFE				
Specific objective 5.1: Research and Innovation develop and deploy solutions, technologies and innovations to tackle emerging challenges and improve crisis preparedness Related to spending programme(s): Horizon 2020, Horizon Europe				
Main outputs in 2020:				
New policy initiatives				
Output/ Result	Indicator	Target		
Communication on Improving Health Security in the EU – a one health approach to counteracting the threat from infectious diseases	Communication adopted with the R&I role	Q3-Q4 2020		
Two amendments to the Horizon 2020 Work Programme 2018- 2020 to help address the COVID- 19 global pandemic	Amount invested in R&I Covid- 19 projects Amount invested in start- ups/SMEs selected under EIC Accelerator COVID related call	EUR 48.5 million EUR 165.63 million		
Other important outputs				
Output	Indicator	Target		
EU Covid-19 Data Platform	Launch of the Platform	Q2 2020		
IP Manifesto to maximise research results to fight COVID-19	Launch of the manifesto with important signatories from the research community	Q2 2020		
External Communication Actions				
Launching an information website on the R&I Contribution to the Global Coronavirus Response	Number of visits to the R&I Coronavirus website	Q3 2020		

Specific objective 5.2: Research European health initiatives, includ cancer	Related to spending programme(s): Horizon 2020, Horizon Europe			
Main outputs in 2020:				
New policy initiatives	New policy initiatives			
Output	Indicator	Target		
Contribution to protecting health, in particuar the Europe's Beating Cancer Plan and the Pharmaceutical Strategy for Europe	R&I aspects included in the Pharmaceutical Strategy	Q3 2020		
Launch of the cancer mission	Mission launched in 2020	Q4 2020		

Evaluations and fitness checks			
Output	Indicator	Target	
Contribution to the evaluation of Orphan Medicinal Products Regulation		Q3 2020	

General objective 6: A NEW PUSH FOR EUROPEAN DEMOCRACY

General objective 6: A NEW PUSH FOR EUROPEAN DEMOCRACY				
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Specific objective 6.1: European research and innovation support citizens' involvement, social inclusion and equalities in Europe, including through communication of the European R&I added value		Related to spending programme(s): Horizon Europe		
Main outputs in 2020:				
New policy initiatives				
Output	Indicator	Target		
Contributing to democracy , in particular on the Disinformation – getting the facts right/European Democracy Action Plan	Publication of a factsheet on the Role of R&I in fighting disinformation.	Q2-Q4 2020		
Contribution to addressing the impact of demographic change included in report on the impact of demographic change and the Green Paper on Ageing		Q4 2020		
External communication actions				
Output/ Result	Indicator	Target		
'Women Innovator Prize' awarded	Number of applications	Q3 2020		
Other important outputs				
Output	Indicator	Target		
Eurobarometer survey on public knowledge and perceptions of science, research and innovation	Report on Eurobarometer survey	Q4 2020		
Integration of a gender dimension E-publication of the policy report across Horizon Europe		September 2020		
Women CEO pilot under EIC Accelerator	Amount dedicated to start-ups led by women	20% of EIC funding to companies with a female CEO		

General objective 7: A MODERN, HIGH PERFORMING AND SUSTAINABLE EUROPEAN COMMISSION

General objective 7: A MODERN, HIGH PERFORMING AND SUSTAINABLE EUROPEAN COMMISSION

Specific objective 7.1: The Common Implementation Centre and the Common Policy and Programming Centre provide user-friendly services and tools to the European Commission for effective and efficient planning, programming and implementation of the Research and Innovation Framework Programme and other EU programmes

Main outputs in 2020:

Initiatives linked to regulatory simplification and burden reduction

Output	Indicator			Target
Contribution to the Horizon Europe operating rules	Adoption decision	by	Commission	End 2020
Horizon Europe Model Grant Agreement	Adoption decision	by	Commission	End 2020
Contribution to the establishment Acts and Delegation Instruments for Horizon Europe Executive Agencies (for which DG RTD is Lead Parent DG)	Adoption decision	by	Commission	End 2020

Other important outputs

Output/ Result	Indicator	Target
Memoranda of Understanding for the interaction of Parent DGs with Executive Agencies implementing Horizon Europe (for which DG RTD is Lead Parent DG)	Signature by Parent DGs and Executive Agencies	End 2020 - January 2021
Horizon Europe Dissemination & Exploitation Strategy	Adoption by CIC Steering Board	End 2020
Horizon Europe Implementation Strategy	Regular progress reports to the CIC governance and framework programme stakeholders	Implementation framework in place by end-2020
eGrants IT suite adapted to the next MFF (Horizon Europe and other Commission programmes under	Coverage of European Commission programmes	95% of European Commission direct grants covered by end-2020
direct grant management)	Efficiency and user-friendliness	Continuously high user satisfaction as measured in annual surveys
Funding and Tenders Portal adapted to the next MFF	Coverage of European Commission funding and procurement opportunities	95% of European Commission direct grants covered by end-2020

PART 2. Modernising the administration: main outputs for the year

A. Human resource management

Objective: DG Research and Innovation employs a competent and engaged workforce and contributes to gender equality at all levels of management to effectively deliver on the Commission's priorities and core business

Main outputs in 2020:

Output	Indicator	Target
To continue the R&Innovate process taking into account internal staff surveys and lessons from teleworking experience during COVID 19 confinement	Update the HR Strategic Plan 2019 -2020	By end 2020
To reach the target of first female appointments on middle management positions	2 first female appointments out of the target of 6 established by end of 2022	By end 2020
To improve staff engagement	65% in the 2020 Commission staff survey	By end 2020

B. Sound financial management

Objective: The authorising officer by delegation has reasonable assurance that resources have been used in accordance with the principles of sound financial management and that cost-effective controls are in place which give the necessary guarantees concerning the legality and regularity of underlying transactions

Main outputs in 2020:		
Effective controls: Legal and regular transactions	Risk at payment for H2020 grants	Between 2 % and 5% of relevant expenditure
	Estimated risk at closure for H2020 grants	As close as possible to 2%, but not necessarily lower than 2% of relevant expenditure
	Risk at payment for FP7 grants	Lower than 2% of relevant expenditure
	Estimated risk at closure for FP7 grants	Lower than 2% of relevant expenditure
Efficient controls	H2020 time-to-pay for H2020 grants	100% of payments on time
	Operational budget execution	100% of operational commitment and payment appropriations (C1)
	H2020 Time-to-inform for H2020	100% of grants with a time-to-

	grants	inform within 5 months
	H2020 Time-to-grant for H2020 grants	100% of grants with a time-to- grant within 8 months
	Cumulative implementation rate of FP7 audit results	90% by the end of 2020
	Cumulative implementation rate of FP7 extrapolations	75% by the end of 2020
Economical controls	Overall estimated cost of controls for RTD grant management	Below 4 % of funds managed
	Overall estimated cost of controls for RTD supervision of Executive agencies, Article 185 and 187 bodies and financial instruments managed by EIB/EIF	Below 1 % of funds managed

C. Fraud risk management

Objective: The risk of fraud is minimised through the application of effective anti-fraud measures and the implementation of the Commission Anti-Fraud Strategy (CAFS)⁶ aimed at the prevention, detection and correction⁷ of fraud

Main outputs in 2020:		
Output	Indicator	Target
Fraud-proof implementing system for Horizon Europe	Appropriate provisions in the Horizon Europe model grant agreement	March 2020
Increased level of anti-fraud awareness	Contribution to the revision of the common anti-fraud training material	June 2020
Increased level of staff awareness about the Commission ethics rules and ethical issues, and in particular	Implementation of the actions included in the Anti-Fraud Strategy	100%

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 $^{^6}$ Communication from the Commission "Commission Anti-Fraud Strategy: enhanced action to protect the EU budget', COM(2019) 176 of 29 April 2019 – 'the CAFS Communication' – and the accompanying action plan, SWD(2019) 170 – 'the CAFS Action Plan'.

⁷ Correction of fraud is an umbrella term, which notably refers to the recovery of amounts unduly spent and to administrative sanctions.

the risk of conflicts of interests	of DG Research and Innovation	
Presentation raising the awareness of Ethics obligations in the Induction Day for new comers	% of newcomers having received ethics awareness in the induction days	100%
Enhanced data analysis	Selection of beneficiaries for risk-based audits	Continuous
	Increased number of risk-based audits	Continuous
FAIR committee	Number of meetings	2 by 31 December 2020

D. Digital transformation and information management

Objective: DG Research and Innovation is using innovative, trusted digital solutions for better policy-shaping, information management and administrative processes to forge a truly digitally transformed, user-focused and data-driven Commission

Main outputs in 2020:

Output	Indicator	Target
Staff of DG Research & Innovation is equipped with a laptop	Percentage of staff of DG Research and Allocation equipped with a laptop	95%
Management offices and meeting rooms are equipped with video/web conferencing equipment	Percentage of management offices and meeting rooms equipped with video / web conferencing equipment	50%
New and current staff is being trained to use Microsoft 365 and Teams	Percentage of staff having benefitted from training or coaching in Microsoft M365 and Teams	100% of newcomers and 30% of statutory and non-statutory staff trained
Newcomers in DG Research and Innovation are trained on data protection	Percentage of staff attending awareness raising activities on data protection compliance	100% of newcomers trained
Existing staff of DG Research and Innovation trained on data protection (in particular local specific training for IT intra-muros in collaboration with the IT unit)	Percentage of staff attending awareness raising activities on data protection compliance output	20% of existing staff trained

E. Sound environmental management

Objective: Service DG R&I takes full account of its environmental impact in all its actions and actively promotes measures to reduce the related day-to-day impact of the administration and its work

Main outputs in 2020:

Output	Indicator	Target
Installation of web / video conferencing equipment	Percentage of systems installed	50% by end 2020
Installation of waste-sorting stations in the ORBN building	Percentage of stations installed	100% by end 2020
Phasing-out of remaining circulation of newspapers, periodicals and scientific journals	Percentage of current subscriptions being phased out	25% by end 2020