European Commission

Management Plan 2019

DG RTD

Contents

INTRODUCTION

DG RTD is a leading actor in the area of Research and Innovation (R&I) in Europe: its policies and programmes underpin the R&I landscape in Europe and beyond. DG RTD's objectives, as laid out in its Strategic Plan 2016-2020, fully contribute to all Ten Priorities of President Juncker.

The European social model really depends heavily on the EUs competitiveness and on its productivity, and this requires a lot of attention to helping science, research, innovation results feed into market deployment. DG RTD needs to ensure that the European Commission continues to support European science to remain top-class in worldwide science. Europe is at the top and that is where it needs to stay. This is challenged by demographics, but also by a number of political choices made by our competitors which are putting science and research very high on the agenda.

DG RTD must also ensure that, on top of the framework programme, it can better organise the broader innovation or industrial agenda of the Commission. The DG needs to support all EU Member States in developing their research systems and capacities. And it needs to develop the use of the European structural funds in effectively complementing the framework programme to help all Member States to build up their capacity. It is critically important to help project promoters from research and science link into project promoters in industries, in public or local authorities in Member States, and to ensure effective use of the synergies between these programmes.

This vision drives the priorities set out in this management plan, summarised as follows:

<u>Making Research and Innovation a central part of policymaking at national and EU level</u>

R&I is essential for addressing the societal challenges and in enabling growth and jobs. Public investment in R&I acts as a catalyst to boost private R&I activities and overall economic growth. Public R&I investment is especially important in light of today's rapidly changing and riskier innovation landscape.

The European Union remains far from achieving the Europe 2020 Innovation Union target of 3% of EU GDP invested in R&D (combined public and private investment). This underlines the importance of DG RTD's work with the Member States to improve the levels and quality of public R&I investment through, for example, the European Semester process and through the continuing development of the European Research Area (ERA). Improving country intelligence is a major priority for 2019.

The cross-cutting nature of R&I and its impact on a wide range of EU Policies is evident by the nature of some of the thematic initiatives set out in the Management Plan.

<u>Creating the right framework conditions for science and innovation in Europe to flourish</u>

DG RTD is implementing a 3 O's policy: Open Innovation, Open Science and Open to the World.

Open innovation

While Europe is leading the world in science, it lags behind in some areas of innovation. This is why initiatives under this objective will concentrate on boosting investment and innovation, for example by identifying regulatory obstacles to investment in innovation, and introducing Innovation Deals.

A key development is the European Innovation Council (EIC). Pilot actions began in 2018, and will be stepped up in 2019. The ultimate goal is to boost Europe's performance in breakthrough, market-creating innovation.

Open Science

DG RTD is involved in initiatives aiming to increase the impact of European science and bring together the digital and the physical worlds ('Open Science'). The European Open Science Cloud (EOSC) is an example of such initiatives. Open access and open data are important priorities for 2019.

Open to the World

DG RTD aims to establish the European Union as a leading global voice in the area of R&I ('Open to the world'). The main challenges facing humanity are global in nature, and the research response should similarly be global. The DG plays a central role in a range of international fora, in many areas such as health, global observation, climate change, oceans, and others.

Energy and transport

DG RTD is fully involved in the Commission's efforts to decarbonise the energy and transport sectors and make them more efficient and more integrated. This is reflected in the DGs central role in the Energy Union (SET Plan), the Strategic Transport Research & Innovation Agenda (STRIA), Mission Innovation, the Batteries Alliance, and the implementation of the Communication "A Clean Planet for all A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy" announcing the development of a strategic research and innovation and investement agenda.

Funding Research and Innovation through Framework Programmes

The Commission proposal for Horizon Europe, the next generation Framework Programme for Research and Innovation, was adopted in 2018. Negotiations with the legislative authority are underway.

The intention in 2019 is to move towards a successful conclusion of the negotiations on the three Horizon Europe proposals at first reading, if possible, depending upon the political agreement on the two Horizon Europe Programmes by the European Parliament and Council.

The challenges to achieve this goal are well known and, to a large extent, outside the responsibility of DG RTD and the Commission. Nevertheless, DG RTD will do all that it can to move to rapid adoption of the legislation.

At the same time, DG RTD is beginning with preparations for the implementation of the programme. There are whole range of preparations underway, including legal work (preparation of the detailed contracts and rules), business process and IT development, and review of the mandates of Executive Agencies, preparation of possible Public-Private- and Public-Pubic Partnerships, considering the possibilities for simplification and efficiencies needs at all stages.

The Horizon 2020 Work Programme 2018-2020, with €30bn available for research and innovation, is the largest ever. Its implementation will continue in 2019, as well as efforts to profit from the dissemination and exploitation of project results.

<u>Brexit</u>

The plans/activities of the year will take into account and reflect the needs which are related to the necessary preparations to Brexit, including both legal acts to be adopted (legislation, delegated and implementing acts) and technical-administrative-budgetary measures. Notwithstanding the need to cater for individual specificities among Directorates-General, these actions are being coordinated by the Secretariat-General with a view to ensuring coherence in the design and timing of these measures.

PART 1. MAIN OUTPUTS FOR THE YEAR

1. A New Boost for Jobs, Growth and Investment

1.1: To strengthen Europe's R&I systems and achieve the European Research Area through working with Member States

In 2019, DG RTD will be working on this objective in six main areas: Public Research and Innovation investment, European Semester, the Policy Support Facility, RTD Country Intelligence, the European Research Area and Effective innovation and investment in thematic areas. In all these areas the emphasis will be on working with Member States to improve Europe's Research and Innovation systems.

This is crucial as, although Horizon 2020 is the largest single research and innovation programme in Europe, it still only accounts for around 10-15% of total public investment across the EU.

Public R&I Investment- a catalyst for economic growth

- Measuring and reporting on public investment:

In 2019, DG RTD will continue to monitor the Member States R&D investment towards the achievement of the R&D intensity target of 3% of EU GDP (combined public and private investment).

The existing partnerships with OECD (in the form of a Memorandum of Understanding signed in 2017), the European Investment Bank and other international organisations, such as the World Economic Forum and the World Bank will be reinforced during 2019. An example of this will be the preparation of the next round of the joint European Commission (RTD)-OECD survey on science, technology and innovation policies, and the further development of the interactive database (STIP Compass) and its analytical tools, which allow policy-makers at national and EU level and academics to study policy developments in the domain of research and innovation.

In addition, DG RTD will in 2019 prepare its biennial flagship report "Science, Research and Innovation performance of the EU", which is to be published early 2020. The Report will present Europe's R&I performance and its drivers and create a robust narrative on the links between innovation, productivity and inequality that speaks to an audience of both R&I and Economics and Finance policy-makers and analysts.

- Synergies with the Structural and Other Funds:

DG RTD will contribute to the negotiation of the future cohesion legislative package (Common Provisions Regulation; specific Fund & European Territorial Cooperation/Interreg regulations) and the preparation of future programming documents. This will include participation in meetings of the Structural Actions Working Party and technical meetings on synergies.

Synergy provisions are among the top issues raised by both Member States and the Parliament. DG RTD will therefore work closely with DG REGIO and DG BUDG in order to ensure that the negotiations produce a coherent text on synergies in both the Horizon Europe Regulation/Specific Programme and the cohesion legislative package as well as the individual cohesion operational programmes, in particular for the provisions on cumulative funding, transfer, co-fund and seal of excellence. DG RTD will also continue interaction with relevant services (REGIO, BUDG, COMP) to simplify the operations and fully take into account the new approach as presented in COM(2018) 398 final, which entails that those research projects by small and medium-sized enterprises (SMEs)

awarded the 'Seal of Excellence' label "could be allowed to secure their whole funding from Member States (including from structural funds) without requiring the Commission's prior approval". "Similarly, R&I projects evaluated and selected in line with the rules applicable to Horizon Europe and jointly funded by Horizon Europe and Member States (including from structural funds), could be allowed to be implemented without an additional State aid assessment for the Member States' part of the funding.

Once the text is stable, DG RTD will promote widely the new opportunities emerging from the new regulations.

The Commission has already acted to ensure that State aid rules governing the implementation of aid schemes for seal of excellence holders are more favourable and friendly for users. In this way, the implementation of Seal schemes by national and regional authorities can be further expanded. RTD will continue interaction with relevant services (REGIO, BUDG, COMP) to make sure that the regulations seize the opportunities offered by the new approach to State Aid.

European Semester

DG RTD will continue to contribute actively to the 2019 European Semester cycle, notably through the Country Reports and Country Specific Recommendations (CSR). In the country reports, each country's key R&I policy challenges and investment needs will be identified (i.e. the main bottlenecks impeding the full contribution of research and innovation to growth and country-specific investment needs to boost national/regional innovation ecosystems.) and an assessment of the policy response to these challenges will be provided*.*

Reinforced in-depth dialogue with the Member States will take place around the identified European Semester challenges and policy responses with a view to maximising the ownership of the process by the Member States. This includes a number of country visits and seminars with national administrations, in the capitals and in Brussels. The focus of Country Reports in 2019 will be on the investment needs of Member States to address the socio-economic challenges.

The Commission will release the country reports in February 2019. Secondly, the Council will adopt CSRs, also aiming at addressing R&I issues such as public and private R&D investments, the efficiency of national R&D systems and Member States' innovation capacity. In 2018 13 countries received CSRs related to research and innovation.

Horizon 2020 Policy Support Facility

Services to Member States and countries associated to Horizon 2020 are provided through the Horizon 2020 Policy Support Facility (PSF) in order to support their efforts to design, implement and evaluate reforms of their national research and innovation systems. These services can be comprehensive Peer Reviews, Specific Supports or Mutual Learning Exercises. The Strategic Plan foresaw a rhythm of 10 PSF actions per year, but due to the high interest from Member States and countries associated to Horizon 2020, there will be 12 actions carried out or launched in 2019.

The feedback received from Member States on the various exercises carried out by the Policy Support Facility is very positive, and the Policy Support Facility builds on this feedback during the reference period of this Plan, while at the same time an evaluation of the Horizon 2020 Policy Support Facility is being carried out by an independent expert group and will deliver its recommendations early 2019.

RTD Country Intelligence

In 2019 country intelligence will be strengthened across DG RTD. This will be based on current resources and networking and should ensure a quick and efficient collection of relevant data and information on each Member State in case of a mission or a relevant meeting. This information will also be made available in a Countrypedia.

A network of country intelligence will be established, with the aim to contribute to the preparation and delivery of country visits, notably with coherent briefing material and possibly participation.

European Research Area

In 2019, DG RTD will continue with the implementation of the European Research Infrastructures Consortium (ERIC) Regulation. There is a growing interest in using the ERIC legal instrument for setting up pan-European Research Infrastructures, as demonstrated by the establishment of twenty ERICs in 2018, corresponding to 50% of the European Strategy Forum on Research Infrastructures (ESFRI) landmarks. It is expected that a further nine research infrastructures will undertake the steps to become an ERIC in 2019.

Furthermore, DG RTD will continue contributing to the ERA Progress report with the publication of the report on-line.

- Implementation of the European Strategy Forum on Research Infrastructures (EFSRI roadmap). Assessment Expert Group report.

Following the invitation by the Council in May 2018 to develop with ESFRI a common approach for monitoring the performance of the pan European Research Infrastructures, the Commission will contribute to the activities of the ad-hoc working group that will be established by ESFRI for that purpose. The Commission will also launch an expert group that will assess the effectiveness of the Research Infrastructures funding instruments under EU Framework Programs and will assess the Research Infrastructures progress towards implementation and long-term sustainability. The work of the group is expected to be finalised at the end of 2019.

- Gender

The European Commission's strategy for gender equality in research and innovation will celebrate twenty years of existence in 2019. In light of the revision of the European Research Area priorities, a set of policy actions and events are foreseen throughout 2019 to develop policy recommendations for the ERA – and actions to be undertaken in the last phase of Horizon 2020, and in Horizon Europe.

Activities will target EU and national-level policy-makers, ERA stakeholder organisations and gender equality practitioners, community of innovators and citizens and will include, inter alia: the release of She Figures 2018; the 2019 EU Prize for Women Innovators; awareness-raising videos; infographics; cooperation with the Finnish Presidency of the EU in the second half of 2019 on a Presidency conference, possibly leading to Council conclusions.

The review of the state of play of the implementation of gender equality within the ERA roadmaps and strategies at national level under the ERA progress report will contribute to re-shaping the objectives of gender equality in R&I under the ERA.

Encouraging effective innovation and investment in thematic areas

- The 'Circular Economy package"

To respond to the strategic priority of the EU for a transition to Circular Economy as set by the 'Circular Economy package to boost innovation, jobs and growth', DG RTD will continue to invest in R&I demonstrating the economic and environmental feasibility of the circular economy approach, through dedicated focus areas and/or a joint call for circular industries. For water, important contributions are expected for to the Fitness Check of the EU Water Legislation, the evaluation of the Urban Waste Water Treatment Directive and the evaluation of the impact of the CAP on water.

- Improving Industrial Research and Innovation Infrastructures

Industry remains a key to a successful European economy. The fast, revolutionary industrial transformation requires appropriate infrastructures to test, scale-up and diffuse new technologies. The current European landscape of technology infrastructures is characterised by a mix of local, regional, national and European level private, semi-public or public installations. Rapid, multidisciplinary evolutionary and revolutionary technological developments require appropriate infrastructures to test, scale-up, demonstrate, validate and diffuse new technologies before bringing them to market. High non-recurring costs, duplication and rapid depreciation of technology infrastructures contribute to high-cost of the end product and drives down European competitiveness.

Technology infrastructure is a particular challenge for transport. Large facilities are needed to test the validity of technologies resulting from R&I. This is particularly the case for aviation, rail and waterborne where there is also need to analyse potential sustainable business models and finding schemes.

In 2019 a Staff Working Document (SWD) aims to explore a forward-looking and more efficient European vision to Technology Infrastructures. The main objective is to explore ways towards reducing fragmentation, avoid duplication, facilitate access and support intelligence gathering for common prioritisation towards meeting the needs of industry. Specific objectives for the aviation and somewhat for the railway sector are a cohesive and coordinated approach for the identification and assessment of the needs, gaps and overlaps for strategic aviation research infrastructures in Europe; and to analyse potential sustainable business models and funding schemes for maintenance and improvement of existing and development of new research infrastructures.

- Batteries : End-of-life vehicles Directive (ELV). Contribute to the establishment of the legislation regarding batteries and innovation principle

An evidence-based contribution to the establishment of the legislation regarding batteries is needed. The first target is the revision of the Directive 2000/53/EC on end-of-life vehicles (ELV Directive), adopted in 2000 to minimise the impact of end-of-life vehicles (ELVs) on the environment and to improve the environmental performance of all the economic operators involved in the life cycle of vehicles.

Points for R&I are: challenges following the development of electric vehicles and their batteries, and how these are addressed in the ELV Directive; the performance of the ELV targets; the feasibility to introduce targets per material.

A coherent approach shall be ensured in relation to: i) "Battery Directive", SWD in preparation; ii) Innovation Deal (March 2018) "From e-mobility to recycling: the virtuous

loop of the electric vehicle", which will analyse whether existing EU law hampers the recycling or reuse of propulsion batteries for electric vehicles. In particular it will investigate the existence of possible legislative and regulatory barriers at EU and national level to the use of propulsion batteries in a second-life application possible ways of overcoming these barriers, evaluating their feasibility and if necessary proposing options to implement them.

- Improving Health Security against infectious diseases

DG RTD will work on a Staff Working Document that would give an overview of the threat that infectious diseases continue to pose to human health, describe the existing legal framework in the EU to address infectious threats and focus on elements of **research preparedness and research response**, ranging from funding mechanisms, to data sharing, building research capacity and international collaboration. It will include case studies of the EU research response to past outbreaks (Ebola, Zika and influenza) and summarise lessons learnt.

- Personalised Medicine Progress

The Staff Working Document is in the agenda planning for the first semester of 2019. It will include an EU Research and Innovation framework and roadmap for the development of Personalised Medicine (PM), to establish the EU as a global leader in the domain.

1.2: To establish the right framework conditions to capitalise on the results of European research and innovation by involving all actors in the innovation process ("Open Innovation")

Initiatives under this objective will concentrate on boosting investment and innovation, identifying regulatory obstacles to investment in innovation, other Open Innovation activities.

The 3% target for R&I intensity expected that two-thirds of this target should come from the private sector, and this is some way from being achieved. Open innovation is therefore vital for bridging this gap.

Boosting investment and innovation

- European Innovation Council

The creation of a European Innovation Council (EIC) is a major priority for Commissioner Moedas. An EIC pilot phase will continue to be implemented under the Horizon 2020 work programme for 2018-20 with the objective of boosting Europe's performance in breakthrough, market-creating innovation by introducing blended finance. Preparations for a fully-fledged EIC will continue. DG RTD will continue to provide the secretariat for a renewed High Level Group of Innovators which will provide advice on the design of the EIC.

- European Fund of Funds

The Pan-European Venture Capital Funds-of-Funds Programme is a priority action under the Commission's Capital Markets Union. The six funds-of-funds selected are expected to start investing in venture capital funds in the course of 2018 and be operating at full pace in 2019. This initiative aims to significantly boost levels of investment in new generations of highly innovative European firms and help them achieve their global ambitions. It will do this by increasing the size of venture capital funds in Europe, boosting private investment in venture capital, and encouraging funds to operate on a trans-national basis.

DG RTD also plans in 2019 to revise the InnovFin Delegation Agreement between the EU, EIB and EIF, allowing Horizon 2020 to benefit from the top up from EFSI 2.0 earmarked for the EFSI SME window (debt and equity facilities.) This will be the 8th amendment to the InnovFin Delegation Agreement. This revision will also allow for additional thematic products to be implemented.

Identifying regulatory obstacles to investment in innovation (Innovation Principle and Innovation Deals)

The Commission has been piloting the application of the Innovation Principle since the Commission Work Programme 2017, through the application of the revised 'R&I Tool' in the impact assessments of six legislative and two policy initiatives. The innovation principle is a Treaty-compliant tool to help achieve EU policy objectives (e.g. jobs and growth, meeting climate targets, achieving strategic autonomy, and overall value creation) by ensuring that regulation creates the best possible ecosystem for innovation.

Innovation Deals were first introduced by the Commission Communication 'Closing the loop – An EU action plan for the circular economy' as a pilot approach to help innovators facing regulatory obstacles (e.g. ambiguous legal provisions), by setting up agreements with stakeholders and public authorities.

For 2019, there will be a stronger coordination of the regulatory-related work of DG RTD through the more coherent application of the Innovation Principle in all stages of the policy-making cycle, from horizon scanning in emerging areas where the Framework Programme is providing support, to the application of the R&I Tool of Better Regulation in impact assessments for legislation design or REFIT, and to the launch of new Innovation Deals to identify possible obstacles to innovation in existing legislation.

Bioeconomy

The update on the implementation for the EU Bioeconomy Strategy[1] and action plan was adopted on 12 October 2018. It was a collegial exercise in which DG RTD has collaborated closely with the coleading DGs AGRI, ENV and MARE, and several bioeconomy relevant services such as DGs GROW, JRC and REGIO.

The updated strategy is focussed on tangible actions for Europe's innovative bioeconomy to further deliver on the EU agenda for sustainable growth, to create jobs, to renew industry and to sustain the environment. A set of 14 concrete actions will be launched in 2019 at the latest. DG RTD is in charge of overall coordination of the action plan through the Inter-Service Group on the Bioeconomy. DG RTD will initiate the actions for which it is responsible and will actively contribute to actions led by other services.

A particular action in 2019 will be the set-up, structuring and launch of the Circular Bioeconomy Thematic Investment Platform (CBE-TIP). The CBE-TIP, funded by Horizon 2020 and the EIB, aims to provide access to finance, in the form of debt or equity, to highly innovative circular bioeconomy projects in the demonstration and commercialisation stages in order to address market funding gaps in this sector. An external investment manager for the CBE-TIP is expected to be recruited by Q1 2019 by the EIB and the EC. Financing of projects is expected to start in early 2020.

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[1] C(2018) 673/2 and SWD(2018) 431/2 A sustainable Bioeconomy for Europe – Strengthening the connection between economy, society and the environment

1.3: To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies

Under this objective a major element in 2019 will be the negotiation and preparation of the new Framework Programme for Research and Innovation, together with the accompanying EURATOM programme. However, the implementation of the current programmes remains an important priority; Horizon 2020, with the EIC pilot as a particular priority, EURATOM and the Research Fund for Coal and Steel.

HORIZON EUROPE - A new Framework Programme for Research and Innovation

- Horizon Europe : Legislation

The Commission proposal for Horizon Europe, the next generation Framework Programme for Research and Innovation, was adopted in 2018.

Negotiations with the legislative authority are already well underway and the intention in 2019 is to move towards a successful conclusion of the negotiations on the three Horizon Europe proposals at first reading, if possible (depending upon the political agreement on the three Horizon Europe Programmes by the European Parliament and Council).

The challenges to achieve this goal are well known and outside the responsibility of DG RTD and the Commission. Nevertheless, DG RTD will do all that it can to move to rapid adoption of the legislation.

- Preparing the new Horizon Europe partnerships : Impact assessment

The rationalised approach to partnerships is a key feature of the Horizon Europe Proposal, and has received a lot of attention and scrutiny from stakeholders. Delivery on the proposal's ambition will require careful preparation of the new partnerships, in particular the institutionalised ones, for which impact assessments are required. An unprecedented level of coordination is foreseen for these impact assessments. It will be steered by DG RTD, in order to propose partnerships that are not only well-designed individually, but that also offer a coherent portfolio.

- Horizon Europe governance : the Strategic Plan

2019 will be a crucial year for the development of a strategic plan with all Commission services, in line with the governance model agreed for the implementation of Horizon Europe. This strategic plan will be co-created between all relevant services with a view to maximising impact, synergies between programmes and policies and support to EU policy objectives. The strategic plan, subject to a broad and in-depth consultation of stakeholders and the public at large, is expected to be endorsed by the Commission at the end of 2019 so that it becomes the guidance for Commission services to draft the work programmes for the implementation of Horizon Europe in its first years.

- Horizon Europe : preparation of Missions

Missions are objective-driven R&I funding mechanisms (predominantly implemented through calls for proposals) that focus on having a significant impact both because of and in addition to having substantial involvement of stakeholders and citizens. Importantly, the objectives of missions must be bold, tangible, inspirational, have clear EU-added value and contribute to reaching Union' priorities. A mission should also have broad-reaching societal or economic relevance, and must have a clear direction or target; their objectives need to be measurable, time-bound, be ambitious but in R&I terms realistic. To achieve a mission, research approaches that cross disciplines, sectors and actors will not only be encouraged but will be key to their success.

- Horizon Europe : implementation

At the same time, DG RTD is beginning with preparations for the implementation of the programme. The Horizon Implementation Strategy will be finalised in 2019. This will include a streamlined model grant agreement (MGA), with fewer variants, and a comprehensive review of implementation modalities and options for further simplification. The proposals will be discussed internally, principally through the existing governance structures of the R&I family, and externally before finalisation.

This preparation also includes business process and IT development, staff assessments, review of the mandates of Executive Agencies, preparation of possible Public-Private- and Public-Pubic Partnerships with an analysis of simplification and efficiencies at all stages.

- Horizon Europe Association Agreements with non EU countries

Association is the closest form of cooperation in Science, Technology and Innovation with countries outside the European Union. The Commission proposal for Horizon Europe allows for association of countries of the European Economic Area (EEA), the Enlargement countries and countries of the European Neighbourhood Policy (ENP). It also opens up the Programme for association of other third countries, not necessarily in the geographic proximity to the EU, provided that certain conditions are fulfilled (good STI capacity, commitment to rules-based open market economy and active promotion of policies to improve economic and social well-being of the citizens).

It is estimated that around 20 association agreements to Horizon Europe will be put in place. Negotiations with interested countries may start once Horizon Europe has been adopted and in the course of 2019 association will be discussed, and possibly even finished, with as many as 14 countries, including the Enlargement, EEA countries and those ENP countries that have in place Protocols for their Participation in EU Programmes. For other third countries expressing interest in accession to the programme the Commission may, in the course of 2019 and depending on inter institutional negotiations, recommend to the Council the opening of negotiations.

Current Programmes

- Horizon 2020 - workplan implementation

The work programme for 2018-2020 has a total budget of €30bn. It sets out the political drivers behind the setting of priorities, and the new features of this work programme which are aimed in particular at boosting its impact. These measures include highly integrated activities called focus areas, market creating innovation measures, better dissemination of results and open access to data.

The result is to provide a clear focus: to support EU competitiveness through the delivery of ideas, development of technology and processes, and innovative solutions for society's challenges; creating businesses, building market share and generating employment in the short, medium and long-term.

Helping to reinforce this is the commitment given in this work programme to promote the policy goals of open innovation, open science and open to the world (three O's).

Overall, the final Horizon 2020 work programme has the potential to make a real and sustainable difference to the quality of life in the EU, as well as the EU's position in the world, towards implementation of the Sustainable Development Goals (SDG).

Strategic Programming is a key part of the Horizon Europe proposal. However, this process has already been the design and development of the 2019 and 2020 programmes and calls for proposals. There has been an attempt to draw together the maximum of the available information and intelligence. Boosting impacts including more effective dissemination and exploitation of programme results was the most important guiding thread throughout the planning and development of the work programme.

By incorporating the results of the Interim Evaluation of Horizon 2020, the Commission takes forward many valuable lessons which are reflected in the way this work programme is set up and will be implemented. The interim evaluation showed that Horizon 2020 is a successful, well-performing and attractive programme. However, it also identified several broad areas for further improvement to be addressed in the final work programme, and changes and improvements can be seen in each of the work programme parts.

The work programme supports the Commission's Budget for Results Initiative, aiming to maximise the tangible results on the ground of EU spending (e.g. innovation projects, cross-border infrastructure, and employment) and added value.

The main directions are clear. There are improvements to the open, challenge-led approach of Horizon 2020, which provides flexibility to proposers and helps to focus on solutions and impacts. The evidence shows that programme applicants and participants like the challenge-based approach. The 2018-2020 work programme therefore extends the approach further, with big high impact calls and broader topics, each supporting a balanced portfolio of projects. At the same time the essentially bottom-up parts of the programme will also continue as before, thus offering the space and flexibility which researchers seek.

The programme and call for proposals specifically related to 2019 were published in July 2018. These calls will be implemented in 2019. The work programme will be amended in 2019 to pave the way for the publication of the calls for proposals for 2020.

Increased attention to and support of international participation in Horizon 2020 projects is provided in the 2018-20 work programme with more than 30 flagship initiatives of large scale and scope on topics dedicated to cooperation with international partners in areas of mutual benefit, comprising a total budget of over 1€ billion. In 2019 half of these will enter their implementation phase with special efforts needed to help establish connections and partnerships for concrete joint R&I collaborative projects.

Furthermore, in 2019 DG RTD will continue exploring simplified funding rules in view of the next MFF, notably through an extension of the pilot that started in 2018 to test the practicality and effectiveness of an approach to reimbursement based on 'lump sum funding'.

- Continuation of the European Innovation Council pilot

The EIC pilot will continue in 2019 as a stepping stone towards the full establishment of a European Innovation Council under the Horizon Europe proposal.

- 3 years evaluation REA and ERCEA

The 3 years evaluation for REA and ERCEA will be completed in 2019, with Staff Working Document and actions plans as appropriate.

- EU Battery Alliance: Publication of the cross-cutting call *Building a Low-Carbon, Climate Resilient Future: Next-Generation Batteries* in the WP 2019 (EUR 100 million)

A dedicated cross-cutting call "Building a low carbon, climate resilient future: next-generation batteries" is included in the revised Work Programme 2019 published on July 24, 2018. In 2019, 7 topics with a total budget of €114 M (€70 M transport-related) are published. The topics are covering the development of generation 3b (improved NMC) and generation 4 (solid state) Li-ion technologies, development of materials for non-automotive battery storage, as well as redox flow batteries for stationary energy storage. Modelling and simulation are covered for both – redox flow batteries and for materials & transport. In addition, a support for establishing a network of Li-ion cell pilot lines is included.

The focus remains on next generation batteries for stationary energy storage and towards the hybridisation of stationary energy storage. A topic on battery packs for BEV and HEV will deal with integrating new cell technologies into next generation packs.

Euratom

The Euratom Research and Training Programme will complement Horizon Europe – the Framework Programme for Research and Innovation. The Commission has proposed a Regulation[2]. However, this proposal is not expected to be adopted before the rest of the Horizon Europe package.

The proposal is designed to maximise efficiency in that a number of provisions in Horizon Europe will also be applicable or identical to provisions in the Euratom Programme. These include, amongst others, the Rules of Participation. To increase effectiveness, new provisions in the programme will allow for synergies between Euratom and Horizon Europe and within Euratom itself.

2019 will see the start of implementation of the 2019-2020 work programme for Euratom.

Research Fund for Coal and Steel (RFCS)

Proposals to amend the RFCS legislation may be proposed in the light of the High Level Group Experts report preparing the RFCS 7 years Monitoring and Assessment expected in November/December 2019.

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[2]   COM(2018) 437, 7.6.2018.

2. A Connected Digital Single Market

2.1: To increase impact and excellent science through openness ("Open Science")

In 2019, DG RTD will be working on the Open Science policy and Cloud, the Open Access and Open Data. In all these areas the emphasis will be on working to increase the impact and excellent Science through openness as defined by the Commissioner Moedas.

- *Open Science policy*

Open Science is driven by stakeholders such as Universities, Publishers, Research Libraries and Research Funders who need to become mutually responsive to each other in order to advance open science. Therefore, the Commission has set up the Open Science Policy Platform (OSPP) consisting of 25 European stakeholder organisations to co-design and implement Open Science Policies. OSPP has committed itself to help implementing the Open Science ambitions of Commissioner Moedas concerning Rewards and Incentives, the European Open Science Cloud, Open Access to Publications and Data, the future of scholarly publications, FAIR data, Research integrity and Citizen Science.

The OSPP was established in May 2016 and, by the end of its first mandate, had delivered an integrated advice on Open Science which was conveyed to the May 2018 Competitiveness Council. The OSPP is now working on the basis of a second mandate which will run until the Competitiveness Council of May 2020. By that time, the OSPP will deliver on practical commitments of Stakeholders to implement Open Science Polices and a new European Open Science Agenda with issues to be tackled beyond 2020.

In addition an Open Science Monitor has been launched to track the evolution of open science practices over time (availability of a Commission website which will be updated and completed in a the period January 2018 - December 2019).

Work has begun in an expert group that may lead to a set of indicator frameworks for Open Science which could be adopted by national research funders to incentivise open science and make open science a rewardable practice.

An Open citizen science roadmap will be developed, with a view to arriving at a shared understanding of citizen science, and developing shared actions to strengthen and support it at multiple levels of governance. Follow-up actions are anticipated both in terms of governance and in terms of mainstreaming citizen science in Horizon Europe.

- *Open Science Cloud*

After launching the European Open Science Cloud (EOSC) in 2018, DG RTD will support the EOSC Governing Board, Executive Board and Stakeholder Forum during the first phase of EOSC development in 2018-2020.

It will also support EOSC delivery through promoting a federated model for research infrastructures in Europe, facilitating uptake by national EOSC-relevant initiatives and implementing an action plan making research data findable, accessible, interoperable and reusable (FAIR data).

However, DG RTD will also focus to help in the transition to a community-driven EOSC implementation after 2020, including on aspects such as EOSC rules of participation, new governance framework, and possible financing models.

A topic of EUR 10 million has been included in the Research Infrastructures part of the work programme 2018-2020 of Horizon 2020 to support in 2019 the development of a

common scheme to ensure data development, wide uptake of and compliance with FAIR data principles and practices by national and European research data providers and repositories through the European Open Science Cloud (EOSC) Initiative. A second topic of EUR 10 million is also included in the Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing (NMBP) part of the work programme 2020 to support business to business data re-usability through the development of an industrial platform and harmonised data documentation that ensures interoperability.

The EOSC governance and in particular its newly created executive board will be supported as of 2019 by a coordination structure funded by the Research Infrastructures part of Horizon 2020.

- *Open Access and Open Data*

In 2019, DG RTD will start implementing Open Research Europe, the open access publishing platform for which the Commission launched a call for tenders. The aim is to sign at least one specific contract for the European Commission's open access publishing platform tendering process.

It will also support and monitor the uptake of the Horizon 2020 policy on open access to publications and research data.

In the context of the preparation of Horizon Europe, DG RTD will prepare the policy on open access to publications and research data for Horizon Europe, including the implementation of Plan S. The National Points of Reference will also report on the national follow-up of the Recommendations on access to and preservation of scientific information.

- *Supporting the Commission with high quality, timely and independent scientific advice for its policy-making activities Scientific Advice Mechanism*

The Scientific Advice Mechanism (SAM) Group of Chief Scientific Advisors continues to work closely with the Science Advice for Policy by European Academies consortium (SAPEA) to deliver high quality, independent and interdisciplinary scientific advice to the College of European Commissioners.

Three scientific opinions will provide the Commission with high quality, timely and independent scientific advice for its policy-making activities:

• Scientific Opinion - Making sense of science under conditions of complexity and uncertainty: Publication by the Group of Chief Scientific Advisors

• Scientific Opinion - Transforming the future of ageing : Publication by the Group of Chief Scientific Advisors

• Scientific Opinion - Micro-plastic pollution : Publication by the Group of Chief Scientific Advisors

2.2: Embedding digital into the grand societal challenges

Work goes on throughout the Work Programme to embed digital into the grand societal challenges. In 2019 there are two particular initiatives going beyond normal business – in relation to the digital transformation of Health and Care, and on a European health research and innovation cloud.

Digital transformation of Health and Care (DIGICARE)

The Commission Communication on the State of play of the Commission's Digital Single Market strategy (COM(2017) 228 final), adopted on 10 May 2017, introduces the digitalisation of health and care as an important element of this mid-term review. The Communication on "**Digital Transformation of Health and Care in the Digital Single Market**" was published on 25 April 2018. The three lead DGs, RTD, CNECT and SANTE, have jointly explored possibilities for collaboration during the implementation phase. Further DGs, including JRC, ECFIN, GROW, REGIO, etc. will be involved as needed.

Preparatory and kick off meetings were held in 2018, implementation of the transformation will begin in earnest in 2019. This includes collaboration between 18 Member states to reach 1 million of sequenced genomes by 2022.

The large-scale pilot COMPARE is already delivering a data mining infrastructure for the rapid detection, characterisation and tracing of infectious diseases, and it will be complemented by other use cases through the 2019 work programme. A further RTD pilot focuses on the investment and the synthesis of a strategic portfolio of ongoing projects from Horizon 2020 and the Innovative Medicines Initiative to platforms for the use of real-world data by different stakeholders and for different use cases in the healthcare system.

In this context, DG RTD is also making progress toward setting up a *European health research and innovation cloud (HRIC).* Health research data in Europe are collected by a multitude of organisations and stored across different ICT systems and physical locations. Digicare aims at providing conditions for the building of a secure, flexible and decentralized digital health infrastructure to enable data sharing and analysis for health research across the EU in compliance with data protection legislation and preserving the full trust of patients and research participants. This digital health infrastructure could be implemented through a European Health Research and Innovation Cloud (HRIC). HRIC can contribute to strengthening European competitiveness and to reinforcing European healthcare systems.

3. A Resilient Energy Union with a Forward-Looking Climate Change Policy

3.1: To implement the Research, Innovation and Competitiveness dimension of the Energy Union, together with a forward-looking climate-change policy

DG RTD is heavily involved in all the strands of the Energy Union and of Energy and Transport policy, as research and innovation are vital to the development of a low-carbon economy. In 2019 work will particularly focus on the Strategic Energy Technology Plan (SET Plan) and the Strategic Transport Research and Innovation Agenda, Mission Innovation (clean energy innovation) and the Intergovernmental Panel on Climate Change.

Energy Union Integrated Strategy in Research, Innovation and Competitiveness - Strategic Energy Technology (SET) Plan and Strategic Transport Research & Innovation Agenda (STRIA)

- State of the Energy Union Report

DG RTD will coordinate the input on the research and innovation and competitiveness dimension of the 2019 State of the Energy Union Report.

- SET plan development

Together with DG ENER and the JRC, DG RTD will adapt the SET Plan partnership between a number of countries (currently 32) and stakeholders (industry and research) to Horizon Europe. In addition, the three services will support the design and content of the research, innovation and competitiveness dimension of the National Climate and Energy Plans to be developed as required by the proposed Energy Union Governance Regulation[3].

o Launch of the Joint Investment Vehicle with Breakthrough Energy

Breakthrough Energy Europe, a joint investment vehicle between the EC and Breakthrough Energy[4], is expected to be launched in the major energy-related challenges where efforts are essential to combat climate change: electricity, transportation, agriculture, manufacturing, and buildings. This pilot project will have a total initial equity commitment of EUR 100 million.

o Launch of the Expert Group on Ethics for connected and automated driving, progress report, 3 International Cooperation Flagships addressing global challenges in aviation, automated driving and urban mobility.

In its 2018 Communication "On the road to automated mobility: An EU strategy for mobility of the future", the European Commission has announced the creation of a dedicated EU group of experts to address specific ethical issues raised by automated mobility. The main tasks of the group of experts will be to analyse state-of-the-art research related to ethical questions of automated mobility as well as analyse the impact of relevant ongoing R&I projects at international, European and national level.

By working in liaison with the European Group on Ethics in Science and New Technologies and the European Artificial Intelligence Alliance, the group of experts is expected to start discussing and defining ethical guidelines for the design, development and deployment of innovative, connected and automated driving systems and services in Europe. The group of experts will be set up according to the provisions of the Horizon 2020 Work Programme 2019, SC4, "Other Actions: external expertise" and is scheduled to start in Q1-Q2 2019. In total, at least four meetings are anticipated and a draft final report is expected to be completed by the end of 2019.

o Contribution to the Energy Union strategy: Follow-up and monitoring of the implementation of the Strategic Transport Research and Innovation Agenda (STRIA):

In 2019 DG RTD will be involved in an update of the roadmaps on connected and automated transport, urban mobility and infrastructure. It will also support the International Transport Forum (ITF) Decarbonisation Transport project (DTEU), and will launch the "Cleanest Engine of the Future" Prize.

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[3] *Proposal for a Regulation of the European Parliament and of the Council on the Governance of the Energy Union, amending Directive 94/22/EC, Directive 98/70/EC, Directive 2009/31/EC, Regulation (EC) No 663/2009, Regulation (EC) No 715/2009, Directive 2009/73/EC, Council Directive 2009/119/EC, Directive 2010/31/EU, Directive 2012/27/EU, Directive 2013/30/EU and Council Directive (EU) 2015/652 and repealing Regulation (EU) No 525/2013* (COM(2016) 759, 23.3.2017).

- Accelerating Clean Energy Innovation

In 2019 a report on the state of play of the implementation of the 20 proposed actions in the Accelerating Clean Energy Innovation (ACEI) Communication[5] will be prepared by DG RTD.

- Leadership in Renewables

A Project For Policy report on 'Leadership in Renewables' will prepare for the future EU R&I policy in this sector echoing the EU vision for a Clean Planet by 2050[6].

Mission Innovation (include work on national climate and energy plans)

Mission Innovation (MI) is a global initiative on clean energy innovation, launched at the United Nations Climate Change Conference 2015 in Paris (COP 21). The aim is to reinvigorate and accelerate public and private global clean energy innovation, in particular, through the doubling of spending in this area by the governments of the participating countries. The European Commission contributes to the eight MI clean energy Innovation Challenges and co-leads three of them. DG RTD co-leads two of the three Innovation Challenges co-lead by the EC (Solar fuels and Hydrogen), coordinates the whole input of the Commission to the initiative and provides strategic guidance through the Steering Committee and operational support to the MI Secretariat.

Commissioner Moedas is expected to attend the Fourth MI ministerial meeting which will be an opportunity to communicate on concrete deliverables such as the launch of new joint transnational research and innovation projects between the EC and MI countries, the setting-up of the Breakthrough Energy Europe investment vehicle (see previous section) with the expected presence of Bill Gates and the announcement of the selected Mission Innovation Champions following the call for applications managed by the European Commission.

Intergovernmental Panel on Climate Change (IPCC) and Sustainable Europe

To make the EU economy greener and more sustainable, certain systemic transformations are required. Their realisation is conditioned by a strong investment into R&I that will be pursued in 2019 throughout the whole Horizon 2020 programme and in particular the Societal Challenge 'Climate Action, Environment, Resource Efficiency and Raw Materials'.

Activities will continue to support the contribution of the European Union as a Special Observer at the Intergovernmental Panel on Climate Change (IPCC). DG RTD is representing the Commission at the IPCC, notably at the 25th session of the Conference of the Parties (COP 25) to the UNFCCC due to take place from 11-22 November 2019. Significant contributions to two IPCC reports are foreseen in 2019, namely the Special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems and the Special Report on the Ocean and Cryosphere in a Changing Climate. At European level, RTD will continue supporting the EU Adaptation Strategy and participate to the European Climate Change Adaptation conference to be held on 28 to 31 May 2019 in Lisbon.

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[5] COM(2016) 763, 30.11.2016.

[6] (Name of Communication to be published soon).

The other big challenge next to climate change is the biodiversity loss. Here too, activities will continue to support the Intergovernmental Science-Policy Platform for Biodiversity and Ecosystem Services (IPBES), where the EU became enhanced observer, as well as the UN Convention on Biological Diversity (UN CBD). Preparing the post-2020 global biodiversity framework started at the Convention on Biological Diversity (CBD - COP14) held in Sharm El-Sheikh, Egypt on 17-29 November 2018 where RTD participated. Further investigating work will continue in 2019, also informing the drafting of the strategic planning for Horizon Europe.

Finally, a Strategic Research and Innovation Agenda for innovating cities will be set up, with a view to link the multiple existing initiatives, harness new ones and boost place-based innovation.

4. A Stronger Global Actor

4.1: To translate Europe's strengths in science and technology into a leading global voice ("Open to the World")

The international dimension of Horizon 2020 has been reinforced as part of priorities set for the last part of the programme covering commitments in 2018 to 2020, and 2019 will be a crucial year for ensuring the best implementation of the international cooperation flagship initiatives, be it through participation in Horizon 2020 projects, through coordinated calls, or through contributions to global multilateral initiatives.

For example, two flagship initiatives on Research Infrastructures targeting the cooperation between the EU and the Latin American and Caribbean (LAC) countries as well as Russia will be launched in 2019. The EU-LAC cooperation on Research Infrastructures has led to the establishment of a dedicated working group of the EU-LAC Senior Official Meeting and the identification of a series of study visits of Research Infrastructures located in Europe and LAC as well as policy workshops on topics of mutual interests to be organised in 2019. The EU-Russia cooperation on Research Infrastructures will be built on the recommendations of the successful CREMLIN project and will provide substantial support in 2019 (EUR 25 million) for the development of joint technologies in the domains of high-energy particle physics, accelerators, lasers and material and analytical facilities.

RTD will be heavily involved in a range of different global multilateral initiatives in 2019. It will continue chairing/contributing to the GEO (Group on Earth Observation) 2019 Ministerial Summit in Canberra (Australia) for the Implementation the Global Earth Observation System of Systems GEOSS.

Under the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) work will continue to devise new R&I approaches to improve water availability and sustainable agriculture production with contributions from Participating States and Horizon 2020.

In 2019, DG RTD will also continue to participate in and lead several international multilateral initiatives in the area of health: the International Rare Diseases Research Consortium (IRDIRC), the International Human Epigenome Consortium (IHEC – the Deputy Chair is from RTD), the Global Alliance for Chronic Diseases (GACD – RTD holds the Chair of the Management Committee), The International consortium for Personalised Medicine (ICPermed), Global Research Collaboration for Infectious Disease Preparedness

(GLOPID-R), the International Traumatic Brain Injury Research consortium (InTBIR). The latest of these multilateral initiatives is the Coalition for Epidemic Preparedness Innovations (CEPI). It is involved in the development of new ones such as the International Microbiome Initiative, the Initiative for the coordination of Brain research, the Health aspects of the International Initiative on Global Health Security (with DG DEVCO) and The Human Cell Atlas.

Following the presentation of a vision paper for research and innovation in the Black Sea at the European Maritime Day 2018 by the Commission and all the Black Sea Coastal States, work is now focusing on the development of a Strategic Research and Innovation Agenda for the Black Sea. Its official launch is foreseen on 8-9 May 2019 in Bucharest (Romanian Presidency Event).

Following the signatures of the EU-US-CA Galway and EU-SA-BR Belém Statements[7], the implementation of the All Atlantic Ocean Research Alliance will continue in 2019. These political agreements were supported by over 150 M€ of investments in 2014-2019. The outputs from this investment will now be subject to analysis and harvesting, including at a major international all Atlantic Ocean event in July 2019 in Brussels.

Work will continue in 2019 on strengthening international ocean research and data, one of the focus areas of the 2016 Joint Communication on international ocean governance, for safe, secure, clean and sustainably managed ocean. This communication and related actions form part of the EU's response to the UN 2030 Agenda and more concretely Sustainable Development Goal number 14 "Life below water". 2019 will also see reinforced cooperation with the AIR Center initiative as well as with the UN Decade of Ocean Science for Suitable Development (2021-2030).

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[7] C(2013) 2784 final; C(2017) 3551 final

PART 2. MAIN ORGANISATIONAL MANAGEMENT OUTPUTS FOR THE YEAR

A. Human resource management

In 2018, the senior management of DG RTD has started extensive consultations with staff within the framework of the "R&Innovate process", whose aim is to reflect on:

• the future for the DG,

• how to make DG RTD a 21st century, innovative public administration and

• preparing DG RTD for the new Research & Innovation programme "Horizon Europe" and the new European Commission.

The results of the consultations will be disseminated to staff and will be analysed and translated into a variety of actions. The follow up of the R&Innovate process will be the main activity in 2019 as it will shape the working environment in DG RTD, with the aim to increase staff engagement and boost innovation and co-creation. It will also bring to a new organisational structure of DG RTD, fit for a new Research & Innovation programme in a new European and global political context. An AWAY DAY of DG RTD will be organised in early 2019 to take stock of the progress of the R&Innovate process at large, including any result and follow-up of 2018 Staff Survey.

A comprehensive HR Strategy will be developed by mid-2019 in line with the results of the R&Innovate process and 2018 Staff Survey and will cover a wide range of HR and organisational matters from working methods, learning and development, talent management to Fit@work and wellbeing actions.

As part of its future structure and of its talent management actions, DG RTD will continue to encourage talented female colleagues to apply for middle management posts in order to reach the quantitative target of 8 first female appointments to middle management positions by November 2019, with 4 achieved so far. Moreover, DG RTD will set up a local coaching capacity entailing mapping of coaching accredited staff and peer coaches in the DG for offering coaching to individuals and teams.

With regard to internal working methods, it is foreseen to set up innovation labs on selected topics mainly stemming out of the policy priorities presented in Part 1.

At the same time, as part of its wellbeing programme, DG RTD has created in 2018 a new wellbeing room in ORBN, which has been put at the disposal of staff during the European Week of Sport. A sports program has been launched and will be enriched with diverse activities in order to promote a healthy workforce in a health workplace.

Internal communication will support via a variety of means the HR initiatives to ensure that staff is timely and properly informed, such as regular HR news in the internal newsletter RTD Insights, creation of web pages for topics specific to DG RTD (e.g. R&Innovate), creation of discussion forums (e.g. new R&Innovate RTD Community), videos presenting key messages from senior managers or relevant HR events (e.g. Career Day, R&Innovate, workshops), induction days for newcomers and Blue Book trainees with the Director-General twice per year as well as announcements/news on DG RTD intranet and emails to staff.

B. Financial Management: Internal control and Risk management

Objective 1: Effective and reliable internal control system giving the necessary guarantees concerning the legality and the regularity of the underlying transactions

In 2019, the major part of DG RTD's expenditure will be – as in 2018 – related to FP7 and Horizon 2020 grants, complemented by payments to the other implementing bodies such as Executive Agencies, Joint Undertakings, Public-Public-Partnerships and [EIB](#)/[EIF](#). Ex-ante controls are rigorously implemented for each transaction (commitments and payments).

In the first part of 2018, DG RTD's internal control framework has been revised and validated. The new indicators, based on the 17 new principles of the Internal Control framework, will be used for all relevant reports from now on (Director's report, AAR, etc.).

Regarding grants, the internal control system of DG RTD is designed to maintain error rates within an acceptable range. The range has been set as 2-5% on a representative basis throughout the period of the programme, with a residual error rate as close as possible to 2%. This assurance comes mainly from error rates calculated from around 500 ex-post audits per year. The vast majority of the audits that make up the first Representative Sample of H2020, together with some from the second representative sample, will be finalised by the end of 2018. Together with the audit implementation measures (see objective 2 below), they all have an important 'cleaning' effect on the budget, as well as preventive functions (by the learning and deterrence effects).

Their impact is complemented by the beneficiaries' efforts to submit 'clean' cost claims and by the certifying auditors' work. The Commission services make continuous efforts on training and informing them about the rules (Coordinators' Day; Online Manual available on the [Participant Portal (now Funding and Tenders Portal)](#); communication campaign events with enlarged scope to cover monitoring and dissemination).

Apart from the results of these control efforts, expressed in terms of Error Rate, the control system of DG RTD must also meet other legal requirements of the Financial Regulation. Time-to-Grant and Time-to-Pay are key performance indicators, which contribute to the regularity of operations, and to ensuring better and more efficient support for researchers.

Objective 2: Effective and reliable internal control system in line with sound financial management

DG RTD's internal control framework, reflecting the Commission's new Internal Control Framework, was adopted in 2018. DG RTD's Annual Activity Report for 2018 will report on the implementation of the new framework according to the new logic of 17 "internal control principles".

Actions taken and further planned in DG RTD, especially those prepared and coordinated by the Common Support Centre (CSC) contribute to the economy, effectiveness and efficiency of operations under Horizon 2020 programme in all implementing services.

For Horizon 2020 grant management, the goal in 2019 is to complete the design and documentation of processes for audits and the harmonised implementation of audit findings, including their implementation in automated workflows in the common grant management IT system suite (SyGMa-Compass with full integration with ABAC and ARES). In addition, grant management processes, documentation and IT systems will

be adapted to cover the new pilot actions under the 2018-20 H2020 Work Programme (EIC pilot, lump sum project funding pilot).

As mentioned in the launch of the Horizon 2020 Programme, it is expected that there will be a decreased cost of operations, a reduction in administrative burden and a reduction of the risk of clerical and administrative errors in the payments throughout the whole period of the Programme implementation.

The costs of supervision of 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 and the methodology to calculate the costs and present it in the Annual Activity Report will be adapted to the recent guidelines of the central services.

Objective 3: Minimisation of the risk of fraud through application of effective anti-fraud measures, integrated in all activities of the DG, based on the DG's anti-fraud strategy (AFS) aimed at the prevention, detection and reparation of fraud

DG RTD shares with the other implementing services of the Research Framework programmes the main sectorial fraud risk, which is related to fraudulent cost claims in research and innovation grant agreements. As for other business processes in grant management, DG RTD coordinates the anti-fraud strategy and actions that are established and implemented in common by all the involved services.

The anti-fraud strategy for the Research family (RAFS) was updated in 2015. This covered expenditure on FP7/Horizon 2020 grants, where the fraud risk for the DG is concentrated. The action plan for the RAFS was nearly fully implemented by the end of 2017.

DG RTD is in the process of updating its own anti-fraud strategy for other expenditure types. Also, for the research family, an updated action plan is being established. It is based on the risk assessment of fraud risks in the research family which was performed in early 2018. It will be adapted if necessary following the adoption of the Commission Anti-fraud Strategy.

The Fraud and Irregularity Committee for Research (FAIR) is the main platform of coordination between the Research and Innovation family members in the field of anti-fraud. Its action is complemented by the local anti-fraud correspondents working meetings and a common anti-fraud training and common tools (guidance, IT developments) – as detailed in the RAFS action plan.

The main fraud prevention measure lies in raising the level of fraud awareness amongst a target population (new staff members involved in direct grant management). The Anti-Fraud training course is in place since 2011 and was updated in 2015.

However, the number of newcomers in DG RTD has decreased significantly due to the general staff cuts. Also, there are special workshops for Project and Financial Officers in RTD covering a number of the areas covered by anti-fraud training, especially the use of the Reinforced Monitoring process, EDES and the Risk Management suite. Therefore, it has been decided to terminate the Anti-Fraud trainings given by DG RTD. Instead, RTD staff will be directed to similar trainings offered by other bodies in the research family

One of the main outputs of the fraud detection work consists in files referred to OLAF. Their number is regularly monitored and reported in the Annual Activity Report (AAR), as well as the number of cases relevant to DG RTD that are initiated directly by OLAF. All

cases of suspected fraud are reported to OLAF, but there is no target as the objective is not to maximise the number of cases.

C. Better Regulation

The main planned outputs linked to the Better Regulation objective in the Strategic Plan are listed in Part 1/Annex 1 under the relevant specific objective in the tables or in the interinstitutional studies database.

In addition, DG RTD is at the centre of two initiatives with direct relevance to better Regulation:

- The innovation principle (see above under objective 1.2) - a Treaty-compliant tool to help achieve EU policy objectives (e.g. jobs and growth, meeting climate targets, achieving strategic autonomy, and overall value creation) by ensuring that regulation creates the best possible ecosystem for innovation. The principle should be integrated into new Regulatory proposal.
- The Scientific Advice Mechanism (SAM - see above under section 2.1) – the SAM provides the College with evidence based scientific analyses relevant to important pieces of upcoming legislation.

D. Information management aspects

Knowledge Management and Collaboration

Knowledge management activities of the DG are carried out under the governance of an RTD KM Steering Committee and under the governance of the corporate Information management Steering Board. The work in support of the collaboration on Horizon Europe will continue and be extended. This work started in 2018 with the collection of Position Papers, and evolved to a collaboration space open to all Commission services, complemented by a series of working spaces. The regular trainings on document collaboration will be maintained. The provision of Intranet coverage for the policies and activities of the DG will continue. An element of specific attention is a review of the documentation of procedures. The application for Mission Reports (second release), will be promoted for use by the entire DG, and the automatic registration of mission reports in ARES will be delivered. An attempted will be made to expand the number of external data providers (currently Elsevier and Scopus) from which data can be published straight to the RTD Intranet. Attention will be paid to the coherence and completeness of the "knowledge sources" section of Intranet, including providing visibility for the activities of the JRC.

RTD Library

Recent years have seen the emergence of the physical library as an interactive space and knowledge centre, conducive to small workshops and discussions (Knowledge talks, coffee over Horizon, and so forth). During 2019, there will be a focus on updating the collection of paper books, covering the areas of interest to DG RTD. Activities on maintaining and extending subscriptions to e-books, e-journals and data-sources will continue, going hand in hand with the provision of relevant trainings.

Document management – eDomec

The official transition to "ARES e-Sign" was made on October 1, 2018. The primary objective of that exercise was to eliminate the unnecessary circulation of paper dossiers. It represents the effort of DG RTD to abandon paper circulation and hand-written signature and adopt eSIGN and e-signatory. Training sessions were organised, as well as coaching to the Directors was offered. A collaboration site was established with lots of information and learning material. Presentations to units were also offered. The DMO and the RTD ARES Helpdesk provided support during the transition period and will continue to pay special attention on the 'eOffice' implementation in the future. Work remains to be done, and will be done in 2019 with a special focus to support units in the rationalisation and simplification of ARES approval workflows. This work will go hand in hand with general procedural simplifications. In early 2019, the transition of DG RTD to the Unified Collaboration and Communication (UCC) will be completed.

DG RTD has accumulated an important amount of registered but unfiled documents. A meeting of the network of DMA (Document Management Assistants) took place on 22/11/2018 to pay special attention to this point. The DMAs will shortly receive the full list of such documents for filing. The objective is to finish filing by the end of January 2019, so that DG RTD can close the annual 2018 files.

E. External communication activities

During the course of 2019 there will be four principal focus areas for external communication:

- Highlighting the impact of EU funded R&I on the citizen especially in the run-up to the European Parliament elections. The reach potential of the corporate communication campaigns, #InvestEU and #EUProtects, will continue to be exploited through the provision of relevant content. And a complementary awareness campaign placing greater emphasis on the use of social media, the linguistic adaptation of messaging, and enhanced collaboration with the Commission will be implemented.
- Supporting the preparations for the launch of the European Innovation Council (EIC) under Horizon Europe via a communication campaign focussing in the first instance on the launch of the EIC pilot 2.0.
- A progressive ramping up of communication on Horizon Europe in concert with the state of negotiations with the co-legislators[8], and subject to progress, in addition to the above, communication actions will also focus on the co-development of the missions and the role that the citizen could play.
- The launch of an annual R&I policy forum to reach out to stakeholders and civil society during the course of a multi-day event to facilitate the co-design of the R&I policy agenda[9].

External communication will also complement the stakeholder and peer-to-peer communication in support of the policy priorities outlined in Part 1 where a clear public-friendly narrative can be developed.

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[8] This shall link up with and fall under the umbrella of corporate communication oon the MFF package.

[9] Possible format could follow the European Development Days format or a more geographically distributed series of events similar to the Green Week events.

Examples include:

- Highlighting the impact of EU support for industrial R&I on jobs and growth in the run up to, and during, the 3rd EU Industry Days (Brussels, 5-6 February).

- Launch of the circular Bioeconomy Investment Platform (€100 million fund). (Brussels February 2019)

- A joint EC-European parliament conference (Brussels, 21 March) on Innovating Cities and urban development.

- The European Conference on Connected Automated Driving (Brussels, 2-3 April).

- The impact of EU R&I support in the areas of combatting rare and infectious diseases (emphasising how support for international cooperation is essential) and personalised medicine.

- The biennial European Climate Change Adaptation Conference (Lisbon, 28-31 May).

- Launch of the Horizon 2020 WP June 2019. Bridging measures to Horizon Europe.

- In the context of the Energy Union, communication actions will support the Decarbonisation Transport Initiative, the 4th Mission innovation Ministerial in (Vancouver, 26-29 May), and the SET Plan Conference (Finnish Presidency event, Helsinki, 14-15 November) to highlight progress towards the clean energy revolution.

- European Open Science Cloud communication campaign (follow-up to the launch in November 2018) aiming to increase outreach to potential users and explain the initiative to media

- How EU funded R&I is playing a role towards safe, secure, clean and managed oceans in the context of the international Atlantic Oceans event (Brussels, June).

- The celebration of the 20th anniversary of the Commission policy in support of women in science and research.

The award ceremonies of the Women Innovator Prize (planned for May 2019), the iCapital Prize (November 2019) and the launch of the 'Cleanest Engine of the Future Prize' for example will also present excellent communication opportunities. A new prize, Horizon Impact Award will be awarded during the R&I days in September. And as part of the Open to the World agenda a separate media campaign is being implemented to reach out beyond the EU to highlight the benefits of international research cooperation. Synergies will be developed with the EU-African partnership campaign.

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

2019 will see a centralisation of many public procurement (PP) functions in a central point, where expertise in PP procedures can be assured. Operational staff will be required to set down their objectives in a PP, the central cell will then undertake the necessary administrative procedures to ensure the publication, assessment and completion of the contracting stages. The overall aim is efficiency in PP operations while maintaining a high level of financial control.

The central cell has been reinforced by one FTE. It is estimated that the savings in operational services will be in the range of 4-8 FTE (depending on the number and type of PP operations undertaken in 2019).

ANNEX 1. TABLES

Part 1 - Main outputs of the year

A New Boost for Jobs, Growth and Investment

Relevant general objective(s): A New Boost for Jobs, Growth and Investment		
Specific objective: 1.1: To strengthen Europe's R&I systems and achieve the European Research Area through working with Member States		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
End-of-life vehicles Directive (ELV)	Contributing to the establishment of the legislation regarding batteries and innovation principle	Q4 2019
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Important items from work programmes/financing decisions/operational programmes *For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the __Draft Budget for 2019.__*		
Output	Indicator	Target
ERA Progress report	On-line publication of the report	2019
Implementation of EFSRI roadmap	Preparatory phases for new ESFRI projects in roadmap 2018	6
Assessment of the implementation and long-term sustainability of ESFRI projects	Assessment Expert Group report	Dec 2019
Policy feedback on Gender equality plans and the implementation of gender equality at national level (GENDERACTION)	Policy review and Workshop for policy-makers on the state of implementation of gender equality at national level (GENDERACTION).	First half of 2019
20 years of Gender equality in research and innovation (set of EC-led actions and policy recommendations starting with She Figures publication in March, EU prize for women innovators award, Infographic and video-campaign,	Awareness raising campaign : number of events and number of participants Infographic on 20 years of Gender in R&I	100

Finnish Presidency event end of 2019, leading to Council conclusions)		
Gender knowledge and awareness raising within DG RTD family DGs and externally	Trainings for management and WP scribes (and participation) Training for evaluators on unconscious bias (in line with DG's recommendation on this)	4 trainings in-house Work with evaluators throughout the year

Other important outputs		
Output	Indicator	Target
Commission Staff Working document on infectious diseases- 'Improving Health Security in the EU – a one health approach to counteracting the threat from infectious diseases	SWD published	October 2019
Personalised Medicine -Commission Staff Working Document on progress in the development and implementation of Personalised Medicine	SWD published	1st half 2019
SWD on European Strategy for Technology Infrastructures	publication	First trimester 2019
R&I policy paper for EU's Strategic Agenda 2019-2024	Policy paper by DG RTD	April 2019
Briefing for new Commission(er) and feeding into next Union's strategic agenda; developing a transformative R&I vision in which the European Research Area will be re-energised	Briefing paper	June/July 2019
Implementation of the ERIC decision	Number of ERIC established	24 by the end of 2019

Specific objective: 1.2: To establish the right framework conditions to capitalise on the results of European research and innovation by involving all actors in the innovation process ("Open Innovation")		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Important items from work programmes/financing decisions/operational programmes *For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the **Draft Budget for 2019.***		
Output	Indicator	Target
The set-up, structuring and launch of the Circular Bioeconomy Thematic Investment Platform (CBE-TIP)	Investment manager of the CBE-TIP appointed Structuring of the CBE-TIP Platform starts financing projects	Q1 2019 Q1-Q4 2019 Q1 2020
Report on impact of mergers on innovation in selected sectors – in cooperation with DG COMP	Publication of report	June 2019
Report on review by experts / study of methods for evaluation of patents and recommendations – in cooperation with DG GROW, CNECT and COMP.	Publication of report	June 2019
Revision of the InnovFin Delegation Agreement	Signature of the 8th amendment to the InnovFin Delegation Agreement between the EU, EIB and EIF	Q1 2019
Other important outputs		
Output	Indicator	Target
Overall coordination of Action Plan implementation: Through the Inter-Service Group on the Bioeconomy, ensuring that the four co-leading services (DGs RTD, AGRI, ENV, MARE) and the associate services (DG GROW, JRC) will effectively launch all	Organization of ISG meetings Launching of actions	At least 2 ISG meetings, and all 14 actions launched by end 2019

14 actions for which they are responsible.		

Specific objective: 1.3: To ensure an effective and efficient implementation of Horizon 2020 and other RTD programmes and maximise synergies		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
Successful conclusion of the negotiations on the three Horizon Europe proposals at first reading, if possible	Political agreement on the three Horizon Europe Programmes by the EP and Council	Q2
Horizon Europe Association Agreements with non EU countries	Commission Decision on the approval and signature of the Association Agreement (for countries with Protocols on their Participation in EU Programmes)	4Q 2019
Horizon Europe Association Agreements with non EU countries	Commission Recommendation for Council Decisions authorising opening of negotiations (for countries without Protocols)	2Q 2019
RFCS monitoring and assessment report 7 Years	Preparation, with possible Communication and proposal to revise RFCS legislation.	2019
Euratom Research & Training Programme (2021-2025)	Adoption of the Regulation by the Council	June 2019
Contributing to negotiation of future cohesion legislative package (CPR, specific funds, ETC/Interreg) and implementation of programming	- Participation in meetings of Structural Actions Working Party and technical meetings on synergies - Contribution to analysis of EP/CoR amendments - Provision of informal and formal input to future programming process, incl. in context of 2019 Semester	- Ongoing - Final adoption of legislative package - Completion of 2019 Semester/draft programming documents - Input to the 27 input papers prepared by REGIO by mid 2019
Sharing excellence in Horizon Europe	A stable text on Sharing excellence part in Horizon Europe after the inter-institutional negotiations reflecting main EC interests for widening participation and sharing excellence	End of April 2019
Contribution to the revised regulation GBER – STATE AID	Successfully have seal-friendly provisions included in the adopted new GBER	End 2019
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Preparation of draft	Delivery of draft document	Q2/3 2019

Strategic Plan		
Important items from work programmes/financing decisions/operational programmes *For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the __Draft Budget for 2019.__*		
Output	Indicator	Target
Develop an approach to accelerate progress towards batteries electro-chemistry and production in Europe	EU Battery Alliance: Publication of the cross-cutting call *Building a Low-Carbon, Climate Resilient Future: Next-Generation Batteries* in the WP 2019 (EUR 100 million) Contribution to long-term battery R&I actions (with DG CNECT)	End 2019
Coordination and adoption of Horizon 2020 work programme packages: revision of the "main" work programme 2019; Adoption of the main work programme for 2020, including bridging elements; ERC work programme for 2020	Three adoption decisions by the College.	2019 Q1; Q2/3; Q2/Q3 respectively
Engaging with international partner countries on research and innovation cooperation in selected strategic areas (Horizon 2020 International Cooperation Flagship Initiatives)	Engaging with international partner countries on research and innovation cooperation in selected strategic areas (Horizon 2020 International Cooperation Flagship Initiatives) 4 International Cooperation Flagships under SC4 addressing global challenges in aviation, automated driving, logistics and urban mobility	End 2019
Publication of the cross-cutting call *"Building a Low-Carbon, Climate Resilient Future: Next-Generation Batteries"* in the WP 2019 (EUR 100 M);	Contribution to long-term battery R&I actions (with DG CNECT)	End 2019
Other important outputs		
Output	Indicator	Target

A Connected Digital Single Market

Relevant general objective(s): A Connected Digital Single Market		
Specific objective: 2.1: To increase impact and excellent science through openness ("Open Science")		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Important items from work programmes/financing decisions/operational programmes *For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the __Draft Budget for 2019.__*		
Output	Indicator	Target
Start implementing the open access publishing platform for which the Commission launched a call for tenders published through WP on dissemination (section 18).	Signature of at least one specific contract for the European Commission's open access publishing platform tendering process	End of first half of 2019
Other important outputs		
Output	Indicator	Target
OSPP 1. Adoption of a new Open Science Agenda 2. Open Science Monitor 3. Declaration on new indicators and reward system 4. Practical Commitments for Implementation	1. Not applicable 2. Not applicable 3. Declaration signed by major EU stakeholders 4. Stakeholder meetings organised by OSPP members	1. Early 2019 2. End of 2019 3. During the RO PCY 4. During the next 18 months
OS Roadmap	Not applicable	Ready for Compet Council of May 2020
Implementation of Plan S on open access to scholarly publications in Horizon 2020 and Horizon Europe	Implementation of Plan S	Early 2019
Support to the EOSC	Chairing and Secretariat support to the	From Q1 2019

Governance structure and the EOSC implementation	EOSC Working Group of the Strategic Configuration of the H2020 Programme Committee	
	Secretariat support to the EOSC Executive Board (up to 8 meetings a year) Draft EOSC strategic plan and annual work plans Engagement strategy	From Q1 2019 Q2 2019 (tbc) (Q4 2019 (tbc)
	Establishment of a FAIR Data Working Group to support and advise the EOSC Executive Board Establishment of an annual FAIR data implementation Work Plan	Q2 2019 (tbc) Q4 2019
	Establishment of a Working Group to support and advise the EOSC Executive Board on possible legal structures and funding schemes for the Post-2020 implementation of the EOSC Interim version of possible options	Q1 2019 (tbc) Q4 2019
	Establishment of a Working Group to support and advise the EOSC Executive Board on EOSC rules of participation Initial rules of participation	Q1 2019 (tbc) Q4 2019
Scientific Opinion - Making sense of science under conditions of complexity and uncertainty	Publication by the Group of Chief Scientific Advisors	June 2019
Scientific Opinion - *Transforming the future of ageing*	Publication by the Group of Chief Scientific Advisors	April 2019
Scientific Opinion - Micro-plastic pollution	Publication by the Group of Chief Scientific Advisors	April 2019

Specific objective: 2.2: Embedding digital into the grand societal challenges

Main outputs in 2019:

Delivery on legislative proposals pending with the legislator

Output	Indicator	Target

All new initiatives / significant evaluations from the Commission Work Programme

Output	Indicator	Target

Important items from work programmes/financing decisions/operational

programmes		
*For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the **Draft Budget for 2019.***		
Output	Indicator	Target
Implementation of follow-up actions to the Digitalisation of Health and CARe communication, including actions to implement the health research Cloud under EOSC, and EU actions contributing to the 1 million-genome initiative	Launching of the European Joint Programme Cofund on Rare Diseases (EJP RD) Strategic research agenda for the future of health systems research & Innovation	01/01/2019 January 2019
Other important outputs		
Output	Indicator	Target

A Resilient Energy Union with a Forward-Looking Climate Change Policy

Relevant general objective(s): A Resilient Energy Union with a Forward-Looking Climate Change Policy		
Specific objective: 3.1: To implement the Research, Innovation and Competitiveness dimension of the Energy Union, together with a forward-looking climate-change policy		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Contribute to the Fourth report on the State of the Energy Union (ENER and CLIMA in the lead)	Adoption of the Communication	April 2019
Report on Accelerating Clean Energy Innovation	Publication of report	April 2019

Important items from work programmes/financing decisions/operational programmes _For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the **Draft Budget for 2019.**_		
Output	Indicator	Target
Other important outputs		
Output	Indicator	Target
Amendment of EC-EIB Delegation Agreement	Amendment adopted	May 2019
Joint Investment Vehicle with Breakthrough Energy	Launch of Vehicle	May 2019
Follow-up and monitoring of the implementation of the Strategic Transport Research and Innovation Agenda (STRIA)	Update of the roadmaps on connected and automated transport, urban mobility and infrastructure	Along 2019
	International Transport Forum (ITF): _"Support to the ITF Decarbonisation Transport project"_ (DTEU)	Along 2019
	Cleanest Engine of the Future Prize	Q3 2019

A Stronger Global Actor

Relevant general objective(s): A Stronger Global Actor		
Specific objective: 4.1: To translate Europe's strengths in science and technology into a leading global voice ("Open to the World")		
Main outputs in 2019:		
Delivery on legislative proposals pending with the legislator		
Output	Indicator	Target
All new initiatives / significant evaluations from the Commission Work Programme		
Output	Indicator	Target
Flagship initiatives on Research Infrastructures targeting the cooperation between the EU and the Latin American and Caribbean (LAC) countries as well as Russia	- policy workshops on topics of mutual interests to be organised	2019

Important items from work programmes/financing decisions/operational programmes		
*For a complete listing of expenditure-related outputs please refer to the Programme Statements published together with the **Draft Budget for 2019.***		
Output	Indicator	Target
Other important outputs		
Output	Indicator	Target
Implement the *All Atlantic Ocean Alliance (Galway and Belem Statements)* by increasing the number of research teams working on the Atlantic Ocean to 1000 by 2020; and by pooling together ongoing large scale initiatives at European, national or international level, including the UN Ocean Decade of Science or the AIR Centre initiative. This is also supporting the update of the EU Atlantic Strategy and its Action Plan (DG MARE in the lead).	Number of research teams working on the Atlantic Ocean	1000 or more
Implementation of Programme-level cooperation with other international funding agencies, both regarding existing consortia (ICPermed, IRDIRC, GACD, GLOPID-R, IHEC, IntBIR) and developing ones (International microbiomed initiative, Initiative for the coordination of Brain research, and Health aspects of the international Initiative on Global health security (possible Commission	Agreement with DG DEVCO and DG SANTE on a Commission strategy/roadmap for Global Health (Security) Report: overview of brain research in Europe	October 2019 September 2019

communication with DEVCO CdF, and The Human Cell Atlas)		

Part 2. Main organisational management outputs for the year

A. Human resource management

Objective: The DG deploys effectively its resources in support of the delivery of the Commission priorities and core business, has a competent and engaged workforce, which is driven by an effective and gender-balanced management and which can deploy its full potential within supportive and healthy working conditions.

Main outputs in 2019:

Output	Indicator	Target
To follow up on the results of staff consultations harvested within the framework of R&Innovate process and 2018 Staff Survey	HR Strategy and its action plan New organisation chart of DG RTD Away Day	By Mid-2019
To improve staff engagement	Response rate as measured by 2018 staff survey	*Increase of the response rate as measured by 2016 staff survey to reach 60%*
Increase the collaboration with Executive Agencies and other Directorates-General	Number of staff participating in job shadowing schemes with Executive Agencies and other Directorates-General by end of 2019	At least 10 staff members participating
To reach the target of first female appointments on middle management positions	8 appointments	By November 2019
Action plan as follow-up of 2018 Staff Survey to be consistent with the results of R&Innovate process	Approval of Action plan by Director-General	By end of Q2 2019

B. Financial management: Internal control and Risk management

Objective 1: Effective and reliable internal control system giving the necessary guarantees concerning <u>the legality and the regularity</u> of the underlying transactions.		
Main outputs in 2019:		
Output	Indicator	Target
Ex ante controls	Number of transactions (each transaction executed will be taken into account)	No clear target can be set but all transactions will be considered in the calculation
Ex post audit plan for grants	Implementation of the CAS Audit Plan 2018 (990 audited participations)	95% of audited participations closed by the end 2019
Implementation of FP7 audits results	Cumulative implementation rate of FP7 audit results	80% by the end 2019
Implementation of FP7 extrapolations	Cumulative implementation rate of FP7 extrapolations	70% by the end 2019
Residual error rate (DG RTD)	Cumulative results for FP7 (legacy) Cumulative results for H2020	Under 2 % Between 2 and 5 %

Objective 2: Effective and reliable internal control system in line with sound financial management.		
Main outputs in 2019:		
Output	Indicator	Target
Training on business processes	Number of participants	8000 by the end 2019
Enhancement and review of the H2020 common ex-ante controls on interim and final payments	Revision of the common 'Guidance for H2020 ex-ante controls on interim and final payments' and the common baseline checks and controls before payments. This will take into account the most recurrent financial errors in H2020 and recent improvements in IT support.	February 2019
Harmonised implementation of audit results	1. Further IT enhancements to support the processing of audit implementations and recoveries. All adjustments and extensions are recorded in the common IT tools from end-2018 already (both on-going and closed projects).	1. Q2 2019 2. January 2019

	2. Feature for bulking workflows for global handling of recoveries.	
	Total value of transactions	Not relevant
	Time To Pay (for DG RTD)	95% compliant by the end 2019
	Time to inform (average TTI)	95% compliant by the end 2019
	Time To Grant (for DG RTD)	95% compliant by the end 2019
Conclusion on the Cost-effectiveness of controls	Conclusion reached in the AAR on the Cost-effectiveness of controls	yes

Objective 3: Minimisation of the risk of fraud through application of effective anti-fraud measures, integrated in all activities of the DG, based on the DG's anti-fraud strategy (AFS) aimed at the prevention, detection and reparation of fraud.		
Main outputs in 2019:		
Output	Indicator	Target
Put in place an updated Common Anti Fraud Strategy for the Research family(RAFS) with a new action plan	An updated RAFS is adopted by the CSC Governance	April 2019
Implementation of the updated Common Anti Fraud action plan	% of implementation of the actions planned for 2019	75 % by December 2019
Cases DG RTD referred to OLAF	Number of cases	No target (all relevant cases will be transmitted to OLAF)
Cases relevant to DG RTD coming from other sources	Number of cases	No target (does not depend on DG RTD)
FAIR Committee	Number of meetings	2 by 31/12/2019

C. Better Regulation [only for DGs managing regulatory acquis]

D. Information management aspects

Objective: Information and knowledge in your DG is shared and reusable by other DGs. Important documents are registered, filed and retrievable.		
Main outputs in 2019:		
Output	Indicator	Target
Library book review completed	The policy areas of the DG are covered by up-to-date review books (Completeness of topical coverage and quality)	100% of policy areas
Implementation of the Unified Collaboration and Communication (UCC)	UCC successfully introduced	Y/N
Simplification of eDomec workflows and processes	Reduction of workflow types and documentation complexity	Y/N
Policy / activity collaboration spaces to support effective policy development and efficient administrative work	Number of spaces provided for All policies and activities identified as per the 2016 – 2020 RTD Strategic Plan covered.	100% of policy and activities
Standardised reporting and access to external data-providers, business intelligence and automation	Amount of data provided and user-satisfaction with the value of this action	4 useful external data-services, 4 administrative processes automated

E. External communication activities

Objective: Citizens perceive that the EU is working to improve their lives and engage with the EU. They feel that their concerns are taken into consideration in European decision making and they know about their rights in the EU.		
Main outputs in 2019:		
Output	Indicator	Target
i) Infographics, videos aimed and success stories at a non-technical readership	Potential audience reach	18M
ii) Futuris multimedia broadcasts of EU funded R&I	Number of broadcasts Audience Reach	1,700 5.9M

activities		

Annual communication spending:	
Baseline (2018)	Estimated commitments (2019)
5.9 MEURO	6.9 million euros