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**REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND
THE COUNCIL**

**Annual Report on Research and Technological Development Activities of the European
Union and Monitoring of Horizon 2020 in 2017**

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1. BACKGROUND TO THE ANNUAL REPORT ON RTD ACTIVITIES

The Annual Report on the European Union's (EU) Research and Technological Development Activities, and on the dissemination of results, is prepared pursuant to Article 190 of the Treaty on the Functioning of the European Union (TFEU) and Article 7 of the Euratom Treaty. The purpose of this report is to provide a concise and non-exhaustive overview of key measures undertaken in the reporting year.

Following a call from the Council on 30 May 2017 to the Commission to streamline its reporting strategy, detailed monitoring data in relation to Horizon 2020 is publicly available at the new Horizon 2020 Dashboard.¹

2. THE BROADER POLITICAL CONTEXT IN 2017

While in 2017 the EU faced considerable political challenges, it also made substantial progress in the Commission's 10 priorities that President Juncker set out at the beginning of his mandate. Research and Innovation continued to play a key role in the implementation of the Agenda for Jobs, Growth, Fairness and Democratic Change.

Europe's economy continued to gather momentum. Employment and investment returned to pre-financial crisis levels. The Commission's €15 billion **Investment Plan for Europe**, with the **European Fund for Strategic Investments (EFSI)**, brought further results. By December 2017 EFSI was expected to trigger €256.1 billion in investments. The Horizon 2020 Framework Programme contributed to these positive developments. Every Euro invested under Horizon 2020 brings an estimated GDP increase of 6 to 8.5 euros (€400 to EUR 600 billion by 2030)².

The EU has also made significant progress in establishing a **connected digital single market**. The Commission put forward new rules to protect intellectual property, cultural diversity and personal data to facilitate the fight against terrorist propaganda and radicalisation online. The European Commission contributed to this political priority by allocating €3 billion for 2016 and 2017 for activities related to information and communication technologies across all parts of Horizon 2020. More than €6 billion is earmarked for digital R&I in the programme's last phase (2018-20), of which €1.7 billion have been allocated to the Digitisation Focus Area.

Geopolitical events have kept **energy and climate** at the top of the agenda in 2017. The European Commission continued the implementation of the EU's energy and climate commitments as a follow-up to the 2015 Paris Agreement on Climate Change as well in relation to Sustainable Development Goals. The third Report on the State of the Energy Union presented in November 2017 demonstrated that Europe's transition to a low-carbon society is becoming the new reality. These developments have been well reflected in Horizon 2020 Work

¹ <http://ec.europa.eu/research/participants/portal/desktop/en/projectresults/index.html>.

² [Horizon 2020 Interim Evaluation, published 29 May 2017](#)

Programme 2018-2020 which largely invests in climate action and sustainability research e.g. by spending an extra €3.3 billion on a focus area low-carbon, climate resilient future.

3. POLICY FRAMEWORK

The reporting year was marked by a successful start of the last phase of Horizon 2020 (2018-2020) as well as by first actions towards the design of the next Framework Programme for Research and Innovation, to start in 2021.

On 29 May 2017, the Commission published the **Interim Evaluation of Horizon 2020**, required by Article 32 of the regulation establishing Horizon 2020. The findings of the Interim Evaluation proved that Horizon 2020 is a highly attractive programme that enables unique collaborations and partnerships and that is on track to contribute to jobs and growth. However, it also calls for a maximised impact through mission-orientation and citizen involvement.

The Interim Evaluation provided the evidence-base for the report and forward-looking recommendations of the independent High Level Group on maximising the impact of EU R&I programmes, chaired by Pascal Lamy (**Lamy High Level Group**). The High Level Group report published on 3rd July 2017 formulates a vision for future EU research and innovation and draws up strategic recommendations on maximizing the impact of EU's future investment in this area. The report has gained notable attention at high political levels, beyond the research and innovation community, and outside Europe and has become a reference point for discussion with stakeholders. Both, the Interim Evaluation and the Lamy report, call for “an evolution, not a revolution”, that will set a new level of ambition for the EU's global leadership in science and innovation.

The development of appropriate framework conditions for research and innovation was very much driven by the **3 O's agenda of Commissioner Moedas**: Open Innovation, Open Science, Open to the World.

Open Innovation

With a view to helping generate and scale up more breakthrough, market-creating innovations, and thereby achieving greater impact from Horizon 2020, the European Commission launched the first phase of a **European Innovation Council (EIC)** under the 2018-20 Work Programme. The first phase has a budget of €2.7 billion and brings together several innovation support schemes: the SME Instrument, the Fast Track to Innovation (FTI), Future and Emerging Technologies (FET) Open, and Horizon Prizes. An independent High Level expert group of innovators has assisted the European Commission helping co-design the shape of a fully-fledged EIC and has produced a full set of recommendations in a report published on 24 January 2018 entitled **Europe is back: Accelerating breakthrough innovation**³.

As part of the **Open Innovation agenda**, the Commission Work Programme was screened for innovation-relevant legislative initiatives, in line with the **Innovation Principle**.

In 2017, the Commission continued the implementation of the pilot phase of the **Innovation Deals (ID)**, introduced in the context of the Circular Economy package, with the first ID on "Sustainable wastewater treatment combining anaerobic membrane technology (AnMBR) and water reuse" and "From E-Mobility to recycling: The virtuous loop of electric vehicle: Reuse

³ https://ec.europa.eu/info/sites/info/files/eic_hlg_bz_web.pdf

of batteries from electric cars for stationary energy storage systems" was adopted on 21 November 2017.

Open Science

In 2017, the European Commission launched different components of the **European Science Cloud (EOSC)** initiative to capitalise on the data revolution. The science cloud will provide European science, industry and public authorities with world-class digital infrastructure that brings state-of-the-art computing and data storage capacity to the fingertips of any scientist and engineer in the European Union.

The Open Science Policy Platform (OSPP) delivered its first reports on 'Altmetrics' in March 2017 and 'Open education and skills, Rewards and incentives' in July 2017. In September 2017 the Commission published a Staff Working Document on Long-Term **Sustainability of Europe's Research Infrastructures**⁴ calling upon Member States to continue to invest in these facilities which are essential for enabling our scientists to extend the frontiers of knowledge.

Open to the World

During 2017, EU international cooperation in R&I has made a significant contribution to the Commission priority on '**Europe as a stronger Global Actor**' and has been crucial for delivering on the 'Open to the World' R&I policy priority. A range of Joint S&T Cooperation Committees and Regional Policy Dialogues have been held to extend opportunities for cooperation. Activities also included strengthening the EU's role in global multilateral initiatives and **involvement of international partner countries in joint programmes**, a Ministerial Conference of Strengthening Euro-Mediterranean Cooperation through R&I, contributions to the Our Ocean Conference in Malta, the extension of the **Atlantic Ocean Research Alliance** through the 'Belém Statement' to countries bordering the South Atlantic, particularly Brazil and South Africa, and the support to **Mission Innovation**. Another event was EU-AU High Level Policy Dialogue. The EU also took the final steps for its participation in PRIMA (Research and Innovation in the Mediterranean Area), an initiative under Art. 185 TFEU, which was adopted by the European Parliament and the Council of the EU in July 2017. The budget of the initiative is at present € 494 million (of which €274 million from Participating States and €220 million from the EU).

Other Policy Measures

As part of the 2017 **European Semester**, the Commission released the Country Reports with substantial and pertinent R&I content on 22 February 2017. A set of country-specific recommendations⁵ addressing R&I issues adopted in the context of the European Semester of economic policy coordination.

The Scientific Advice Mechanism High Level Group (SAM HLG) released several publications in 2017. A scientific opinion on "Cybersecurity in the European Digital Single Market" was published in March 2017 and formed part of the evidence base for the September 2017 joint EC and High Representative Communication on "Resilience, deterrence and defence: building strong cybersecurity for the EU" which presented measures to further strengthen the EU's cybersecurity structures and capabilities. The SAM HLG Explanatory Note on New Techniques in Agricultural Biotechnology was published in April 2017. The SAM HLG scientific opinion on Food from the Oceans was published in November 2017.

⁴ https://ec.europa.eu/research/infrastructures/pdf/swd-infrastructures_323-2017.pdf

⁵ https://ec.europa.eu/info/publications/2017-european-semester-country-reports_en

The **European Research Council (ERC)** celebrated its 10th anniversary in 2017. In scope of this event, over 160 different celebrations took place around the world. Research institutions, universities, national governments, science museums, EU Delegations and other actors contributed to marking this milestone.

This year also marked the 20th anniversary of the **Marie Skłodowska-Curie Actions (MSCA)** which has funded more than 100 000 researchers and which in 2017 supported the mobility, training and career development of around 9000 top-class researchers. Up to 14 MSCA-funded doctoral candidates supported the significant detection of gravitational waves that led to the 2017 Nobel Prize in Physics while three laureates who were previously involved as scientists in charge of eight MSCA projects were awarded the 2017 Nobel Prize in Chemistry.

In September 2017, the Commission together with the High Representative of the Union for Foreign Affairs and Security Policy issued a **joint communication on Cybersecurity** for the EU to make the EU better placed to face cyber threats. The **Digitising European Industry** initiative successfully continued its activities.

The Commission joined the International Forum to Advance First Responder Innovation⁶ in 2017 with the objective to ensure coherence and complementarities of EU security research in the field of First Responders with the global efforts in the same domain, a Forum that the Commission is currently chairing. The Forum has 14 members, including a number of MS and international partners.

In October 2017, the Commission together with the European members of the intergovernmental Group on Earth Observations (GEO)⁷ has launched the **EuroGEOSS initiative**⁸. EuroGEOSS is bringing together the Copernicus programme and the Horizon 2020 R&I efforts in the domain of Earth Observation (EO) to support the development of downstream services and products.

In November 2017, the Commission presented its review of the 2012 **European Bioeconomy Strategy and Action Plan**, documented as a Staff Working Document. Work was started for a revision of the strategy and its action plan, expected to be adopted in 2018.

Foresight activities are carried out to specifically support the development of proposals for the Framework Programme and its biannual work programmes. In 2017 foresight activities focussed on supporting the reflection towards the Framework Programme for Research and Innovation (FP9). Key milestones for the year included the publication of three reports: The publication of the Expert Group on Strategic Foresight in EU Policy and two reports from the BOHEMIA project⁹ which aim to support the preparation of the Commission's Proposals for future EU R&I policies.

Also looking towards the post 2020 Framework Programme, a **High-Level Strategy Group on industrial technologies**¹⁰ was set up to review the policy approach to Key Enabling Technologies. The report is planned for April 2018.

⁶ Commission Decision C(2017)2564/F1

⁷ <http://www.earthobservations.org/>

⁸ <http://ec.europa.eu/research/eurogeoss>

⁹ <https://publications.europa.eu/en/publication-detail/-/publication/b2d78a84-3aae-11e7-a08e-01aa75ed71a1/language-en-https://publications.europa.eu/en/publication-detail/-/publication/d1ea6c83-e538-11e7-9749-01aa75ed71a1/language-en/format-PDF/source-60761593>

¹⁰ <http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3540>

4. IMPLEMENTATION OF HORIZON 2020

4.1 Response to calls

In September 2017 Commissions launched the new [Horizon 2020 Dashboard](#), providing monitoring data on projects and proposals on an interactive way, some of which are summarized hereafter.

By the end of 2017¹¹, **457** Horizon 2020 calls were concluded, with **151 067** eligible proposals submitted, requesting a total EU financial contribution of **€32** billion. Of these, **18 059** proposals were retained for funding, bringing the overall success rate of eligible full proposals in the first four years to **12%**. A total of **16 514** grant agreements were signed by the end of December 2017, with a budget allocation of **€29.8 billion** in EU funding.

In the years 2014-2017, participants from Member States received 92% of funding with the rest going to those from Associated and Third Countries. United States, China, Canada, Australia and South Africa accounted for more than 50% of the overall Third Country participation. 12.0 % of all grant agreements include one or more partners from third countries, and €44 million per year is invested by third-country participants in Horizon 2020 projects.

Universities remain in first place in terms of funding received, whereas the private sector has slightly overtaken them in terms of participation. The share of **private sector participation** in the calls since the beginning of the programme and until the end of the reporting year amounts to 34.4%. **SMEs** account for 24,5% share of H2020 participations with the total amount of **€4.9 billion** in EU funding.

4.2 Key features in Horizon 2020

The launch of the Work Programme for 2018 – 2020 on 27 October 2017 started the last phase of Horizon 2020, with total funding during this period including that of the ERC, of more than €30 billion.

Four **Focus Areas** cut across thematic boundaries and bring together contributions from various programme parts to pursue a common objective and create sustained impact. They have a total budget of over € 7 billion: (i) Building a low-carbon, climate resilient future, (ii) Connecting economic and environmental gains – the Circular Economy, (iii) Digitising and transforming European industry and services, and (iv) Boosting the effectiveness of the Security Union. The Work Programme will also contribute to the political priority of tackling migration challenges by allocating over €200 million for migration-related research in the next three years (calls in Societal Challenges 2,3,5,5,6,7).

SME Instrument

There were over 50.000 applications to the SME Instrument across the first four years of operation of Horizon 2020, with an increase from year to year (15.395 in 2017). The average success rate of full proposals in the SME instrument in the first four years was 6.9% (5.6% in 2017). By the end of 2017, 24.94% (€4.32 billion) of the total combined budgets for Horizon 2020's specific objective Leadership in Enabling and Industrial Technologies (LEIT) and Societal Challenges (over the first four years of implementation) had been allocated to SMEs,

¹¹ This information is related to the H2020 proposals and projects emanating from 2014-2017 calls, situation as of 09/02/2018

meaning that the 20% budget target that was set by EU Council and Parliament at the outset of the programme was surpassed by almost 25% or 5 percent points.

Enhancing international cooperation

Increased support of international participation in Horizon 2020 projects has been provided with the launch of the 2018-20 Work Programme, with notably over **30 flagship initiatives** of large scale and scope on topics dedicated to international cooperation in areas of mutual benefit, comprising a total budget of over €1 billion. **Synergies with EU external policies** have been intensified. For instance, in May 2017 the SESAME synchrotron started operating in Jordan, with major EU contributions to its construction.

The Commission has remained proactive in ensuring good **framework conditions for international R&I cooperation**. It has continued to increase the scope of Horizon 2020 co-funding mechanisms, e.g. the 2017 EU-China Innovation Cooperation Dialogue agreed to renew the Chinese mechanism for 2018-20. In addition to activities under MSCA, which account for half of all third-country participations in Horizon 2020, ERC Implementing Arrangements have been signed with funding bodies in ten countries around the world. The year 2017 also saw the launch of the first nodes of a **European Network of R&I Centres and Hubs** in USA, China and Brazil. There was e.g. cooperation with India on water challenges and with African countries on food security and renewable energies.

Widening Participation

Alongside the Policy Support Facility (PSF) and the Seal of excellence, 11 projects received funding under the second phase of the Teaming instrument to create Centres of Excellence to help improve research performance and increase investment in countries with lower research excellence rankings. The projects received between 10 and 15 million Euro each, amounting to almost €155 million in total. In 2017, a Teaming phase one call was also launched with almost €14 million of EU financial contribution, resulting in 30 funded projects. Support continued to be provided for COST (European Cooperation in Science and Technology). A pilot action in the Work Programme 2018-20 will fund more than 100 researchers of any nationality to undertake an MSCA-inspired fellowship in a widening country.

In 2017, The Seal of Excellence was used in 19 national schemes in 11 countries (CY (4), CZ (2), ES (1), HU (1), SI (2), SE (2), NO (1), PL (2), EL (1), UK (1) and soon SK (2)) and in 10 regional schemes in 4 countries.(IT (6), ES (3), FR (1), CZ (1))

Social Science and the Humanities

In 2017 the social sciences and humanities (SSH) continued to be integrated across Horizon 2020 activities. 114 topics across the Industrial Leadership and Societal Challenges pillars explicitly required contributions from SSH. Societal Challenge 6 ‘Inclusive, innovative and reflective societies’ (SC6) remained the hub for challenge-based socioeconomic and cultural R&I in areas such as inequalities, growth and inclusion and international relations. With the refugee crisis still unfolding, a research agenda on migration delivered a solid evidence base in support of migration policies and innovative solutions for the integration of migrants.

Gender

Gender equality has been specifically assessed in the frame of Horizon 2020 Interim Evaluation Expert Group Report¹². The positive trends in women participation in Horizon 2020 continued and targets were met: over the first three years of Horizon 2020, the share of contracts signed with women experts participating in evaluation panels was 41% and 55.2 % of the members of advisory groups were women. An infographic¹³ was produced to present the main trends and actions implemented for gender equality in Horizon 2020.

Climate Action and Sustainable Development

The Horizon 2020 Regulation sets out spending targets of 35% to **climate action** and 60% to **sustainable development** to be achieved over the whole duration of the programme. The monitoring of the Horizon 2020 expenditure shows that until 2017 the target for sustainable development was well on track, while the target for climate action was not yet met. The expenditure tracked until 2017 are close to 30% for climate action and 69% for sustainable development (in 2017 vs. 65% in Interim Evaluation of Horizon 2020). Additional efforts by the whole of the Commission are on-going to ensure that the climate action mainstreaming target will be met by the end of Horizon 2020.

Synergies with other programmes

In July 2017, the Communication 'Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth' was adopted, emphasising the importance of **synergies and complementarities between EU policies** and instruments as a key to make the most of the growth potential of EU regions and Member States. There are overall R&I and regional development planning frameworks which include down-stream and up-stream actions to H2020 and facilitates transnational cooperation along related smart specialisation priorities. S3 are crucial for synergies. There is as well an Innovation Radar tool to attract investors.¹⁴

The implementation of the **Seal of Excellence** progressed well in 2017 and an increasing number of regional/national schemes to financially support 'Seal' SME Instrument proposals has been put in place, including through ESIF. During the year, the Seal was extended to cover Teaming actions under the Widening part of Horizon 2020 and Marie Skłodowska-Curie Actions while preparatory work for extending it to the Proof of Concept proposals of the ERC progressed. In January 2017, the European Commission issued the 'Explanatory Note' on the application of **State Aid Rules** with the purpose to explain in simple terms how to conceive public support schemes in a way that 'Seal' proposals are funded at the highest possible funding intensity. A few months later, in June, the Seal projects were exempted from the notification requirement. A new major activity with a focus on synergies was also kick-started under the Horizon 2020 Policy Support Facility: the **Mutual Learning Exercise on Widening** participation and ensuring synergies between the EU research and innovation programmes and Cohesion Policy.

¹²https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/interim_evaluation_gender_long_final.pdf#view=fit&pagemode=none

¹³ https://ec.europa.eu/research/swafs/images/infographics/gender_gap_ri_2017-w920.jpg

¹⁴See in particular the compilation of good practices and examples for synergies: <http://s3platform.jrc.ec.europa.eu/stairway-to-excellence> and <https://ec.europa.eu/digital-single-market/en/innovation-radar>

5. EURATOM

According to the Programme Statement of the Euratom Programme, progress has been made in terms of the specific objectives of the Programme. Most notably, in the area of nuclear safety, 23 new projects (joint research and/or coordinated actions) likely to lead to a demonstrable improvement in nuclear safety practice in Europe were signed in 2017. Moreover, 10 new projects were signed in 2017 contributing to the development of safe long-term solutions for the management of ultimate nuclear waste. The **Euratom 2018 Work Programme** was adopted with actions proposed addressing research challenges important for nuclear safety, waste management and radiation protection. In addition, the Euratom WP 2018 places emphasis on research for decommissioning of nuclear installations as well as the promotion of training etc.¹⁵¹⁶¹⁷¹⁸

Since the **Euratom Treaty** only allows for a 5-year research programme, the Commission adopted a proposal for a Council Regulation establishing the Euratom Research and Training Programme 2019-2020. This proposal has the same objectives and the list of activities as in the current Euratom programme 2014-2018. **The proposal for extension** of the Euratom programme was accompanied by a report from the Commission to the Council and the Parliament on the Interim Evaluation of the Euratom Research and Training Programme 2014-2018. The accompanying Commission Staff Working Documents provide a detailed evaluation of direct and indirect actions of the programme.

6. JOINT RESEARCH CENTRE (JRC)

In addition to being part of the EURATOM programme, the JRC in 2017 continued to provide scientific support to key policy initiatives such as digital single market, energy union, circular economy, taxation, agriculture, social pillar, migration, and security. It has also responded to emerging issues, such as dual food quality.

The JRC has made progress implementing its **Strategy 2030** adopted in 2016. In 2017, the JRC has further strengthened its knowledge management capacity for policy-making with the launch of a Knowledge Centre (KC) for bio-economy and a Competence Centre (CC) on modelling. A total of four KCs and four CCs bring together experts, competences, tools, skills, data and knowledge across the Commission.

Furthermore, the JRC has contributed to **Better Regulation** by supporting the Commission with methodologies for quantification and data planning. It has strengthened its support to the **European Semester**, through country knowledge-sharing platforms and tax modelling. Together with other Commission DGs, the JRC has developed a conceptual framework for resilience that can be used in EU policy-making. Close collaboration with the Commission's **Scientific Advice Mechanism (SAM)** continued throughout 2017. JRC supported regional innovation by expanding the thematic scope of the "Stairway to Excellence" and adding new tools to the "Smart Specialisation Platform"

¹⁵ COM 2017 (698) final Proposal for a COUNCIL REGULATION on the Research and Training Programme of the European Atomic Energy Community (2019-2020).

¹⁶ COM(2017) 697 final Report from the Commission on the Interim evaluation of the Euratom Research and Training Programme 2014-2018

¹⁷ SWD(2017) 426 final Interim evaluation of direct actions of the Euratom research & training programme 2014-2018

¹⁸ SWD(2017) 427 final Interim evaluation of indirect actions of the Euratom research & training programme 2014-2018

In 2017, the JRC launched a call for interest providing open access to several of its world-class **research infrastructures**. Other new initiatives in 2017 include setting up a Centre for Advanced Studies. The JRC also concluded arrangements with European counterparts in Estonia, Slovenia, France, Denmark, Poland, Finland, as well as with regional entities and international partners. Relations with African countries were put in the spotlight with the publication of a report "Science for the AU-EU Partnership: building knowledge for sustainable development", prepared in the context of the 2017 AU-EU Summit. A wide range of events throughout Europe helped to build closer links between citizens, the scientific community and EU policy makers. Such events include "Science meets Parliaments" and "Science meets Regions", organized together with EP Science & Technology Options Assessment (STOA) Panel and the Committee of Regions, respectively.

7. EIT

In 2017, the EIT continued to implement its Strategic Innovation Agenda (SIA). It remains the single EU instrument fully integrating education, research and business in its Knowledge and Innovation Communities (KICs) in order to tackle climate, digital, health, energy, food and raw materials challenges. Both the Mid-term Evaluation of the EIT and the EIT Impact Study confirmed that the unique innovation model of the EIT delivers results and impact. A token of these results can be seen in the 18 entrepreneurs from the EIT Community recognised by Forbes in their 2017 Europe 30 under 30 list. This included disruptive innovations ranging from zero-emission electric planes to ground-breaking energy storage solution based on graphene. Total grant allocation was EUR 320 million. The EIT Regional Innovation Scheme, EIT's widening scheme, is now supporting activities in 18 countries. The EIT managed the set-up of EIT Food, ensuring its evolution to a stable KIC delivering activities across the entire food value chain in 5 newly opened Co-location Centres in Europe.

8. DISSEMINATION, EXPLOITATION AND COMMUNICATION

Two framework contracts to assist project consortia in their dissemination and exploitation activities were implemented: the 'Common Exploitation Booster' that throughout 2017 has provided targeted support for 195 projects and the 'Common Dissemination Booster' that will support 272 projects, started in Q3 2017.

The Commission services implemented additional measures to allow tracking the research results after the completion of the projects in order to have a more comprehensive view.

For external stakeholders, **CORDIS**, the European Commission's primary public repository and portal to disseminate information on all EU-funded research projects, has been supported with € million. CORDIS has continued being the main tool to provide user-friendly access to projects data and results through faster and broader visibility of projects' outputs and improved search functions.

Since 2017, the new **H2020 Dashboard** facilitates use a wide range of data on Horizon 2020 projects and proposals in order to demonstrate the impact of the programme and to support evidence-based policy-making. It is complementary to the existing reporting facilities offering a unified, transparent, user-friendly, online, single access-point to Horizon 2020 implementation and results data for both external and internal users.

As of 2017, **open access** has become the default rule in the work programmes, with the possibility for opting out under specific conditions. Based on the signed grant agreements in

2017, by the end of 2017, around 63% of publications were open access ones. For all projects participating in H2020, by the end of 2017, 74.85% of all publications were open access ones.

9. OUTLOOK

The year 2018 will be marked by the preparation of the next **Framework Programme for Research and Innovation (FP9)** to start in 2021. The results of the Horizon 2020 Interim Evaluation, the recommendations of the report of the High Level Group, the results from ongoing foresight exercises and the economic rationale for public R&I funding and its impact, and the impact assessment itself, will be building blocks that pave the way for the successor Framework Programme. The last three years of Horizon 2020 will be already testing some of the solutions designed to address lessons learned. There will be a new approach for blue growth topics.

The need to maintain the positive narrative on science and innovation will be a policy challenge to be further addressed in the course of 2018.

A **mission-driven approach** will be designed to create a powerful and measurable impact, with a transformative potential for science, technology, industry and society. The Commission will engage actively with stakeholders during the course of 2018, to further develop this and other key concepts for the new programme.