

Brussels, 16 July 2020 (OR. en)

9278/20

RECH 248 COMPET 324 IND 100 MI 240 EDUC 282 TELECOM 115 ENER 237 ENV 425 REGIO 174 AGRI 212 TRANS 317 SAN 247 ATO 38

## **COVER NOTE**

Subject:	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 2019
No. Cion doc.:	COM(2020) 316 final
To:	Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union
date of receipt:	15 July 2020
From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director

Delegations will find attached document COM(2020) 316 final.

Encl.: COM(2020) 316 final

9278/20 MG/lv

EN



Brussels, 15.7.2020 COM(2020) 316 final

# 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 2019

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

EU research and technological development activities and monitoring of Horizon 2020 in 2019

## 1. Background

This report was prepared under Article 190 TFEU and Article 7 of the Euratom Treaty, Article 31 of the Horizon 2020 Framework Programme, and Article 21 of the Euratom Programme complementing Horizon 2020. It provides a concise, non-exhaustive overview of key measures taken **in 2019**. Since 2017, the report refers to the <u>Horizon 2020 Dashboard</u> for further detailed monitoring data.

#### 2. Political context

In June 2019, the European Council adopted <u>A new strategic agenda for the EU 2019-2024</u>, setting out priority areas to steer the European Council's work and guide other EU institutions' work programmes.

Research and innovation (R&I) play a key role in the six <u>political guidelines</u> of the von Der Leyen Commission, as an evidence base for policy decisions and implementation, and as a means to achieve the goals. In particular, the '<u>European Green Deal'</u> (Commission communication adopted December 2019) aims to make Europe the world's first climate-neutral continent by 2050. The priorities '<u>A Europe fit for the digital age</u>' and '<u>An economy that works for people</u>' have strong implications for disruptive research and breakthrough innovation and the European Innovation Council (EIC) in particular. R&I will also be important for '<u>Promoting our European way of life'</u>, '<u>A stronger Europe</u> in the world' and 'A new push for European democracy'.

#### 3. R&I policy framework

#### 3.1 Horizon Europe

In March/April 2019, Parliament and the Council reached political agreement on important aspects of the draft legislation on the Horizon Europe Framework Programme/Rules for participation and dissemination and the Specific Programme (both under the TFEU), confirming the new features introduced in the Commission proposals. On this basis, Commission launched strategic planning for Horizon Europe's first Strategic Plan.

## Strategic planning

Complementing intensive internal co-creation, the Commission commenced a broad and inclusive co-design exercise with Parliament, the Member States, stakeholders and the public. This included events such as the first **European Research and Innovation Days** in September 2019 ('R&I Days 2019') and resulted in the 'Orientations towards the first Strategic Plan for Horizon Europe'. This document covers the results of the co-design phase and includes possible impacts to be targeted in the first Strategic Plan. At the same time, a comprehensive co-design exercise, including a web-based survey (see <u>final report</u>), served to prepare a **Horizon Europe Implementation Strategy**. This strategy

provides a consistent framework for all implementation aspects. It is designed for further simplification and will enable the programme's objectives and novelties from the start.

## **Missions**

One of Horizon Europe's new main features is the introduction of <u>missions</u>. Parliament and the Council agreed on **five areas for possible missions**. Five **mission boards** corresponding to the five areas were set up in 2019 following a call for interest. The boards unite experts in R&I, policy-making, civil society and practitioner organisations. The chairs of the boards were announced in July, and the boards started work on advice for specific missions in September. A foresight exercise was launched in each area to support the mission boards' work. Each mission area has an **assembly** gathering a larger number of high-level experts and providing additional ideas, knowledge and expertise.

## European partnerships

As part of Horizon Europe's strategic planning, the Commission identified 49 candidates for European partnerships in a co-design exercise in the first half of 2019 (see Annex 7 to the 'Orientations'). Of these, 13 have been identified as candidates for institutionalised European partnerships under Articles 185 and 187 TFEU (Parliament and the Council agreed on eight areas for possible partnerships). The candidates are undergoing *ex ante* impact assessment.

In the second half of 2019, the Commission started work with potential partners and stakeholders to ensure candidate co-programmed and co-funded European partnerships comply with Horizon Europe's new ambition and criteria.

## Synergies with other programmes

During 2019, Parliament and the Council each formally expressed broad support for the approach and content of Annex IV 'Synergies with other programmes' to the Commission proposal on the Horizon Europe Framework Programme/Rules for participation and dissemination<sup>1</sup>. The goal is to harness synergies between Horizon Europe and each of the other programmes over the 2021-2027 period, by creating sequential synergies and simpler and more effective rules for complementary and combined funding.

## 3.2 Policy developments

#### Planet

In 2019, climate remained at the top of the European agenda. Special reports of the Intergovernmental Panel on Climate Change (IPCC) on 'Climate Change & Land' and 'Ocean & Cryosphere' highlighted the urgency of the climate issue. The biodiversity agenda gained momentum with the launch of the Global Assessment on Biodiversity led by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The Commission presented its 'European Green Deal', which aims to accelerate progress towards the 2030 goals and to make Europe the world's first climate-neutral continent by 2050. Key policy measures accompanying the Green Deal range from cutting emissions to investing in cutting-edge R&I, preserving Europe's natural environment and supporting radical behavioural change. Global and European biodiversity strategies are under development, as stated in the Green Deal. The Commission was active in the negotiation and adoption of several IPCC reports and the IPBES Global Assessment on Biodiversity and Ecosystem Services.

<sup>&</sup>lt;sup>1</sup> Interinstitutional negotiations will take place in 2020 on this point.

Work continued to implement the 20 policy measures in the Communication on 'Accelerating clean energy innovation'. These contribute through R&I to achieving the objectives of Energy Union.

Horizon 2020 funding for the Atlantic Ocean increased to almost EUR 200 million, as new projects worth over EUR 30 million were launched in 2019.

The Commission launched a <u>BlueMED R&I pilot</u> on a plastic-free healthy Mediterranean, a <u>Black Sea Strategic Research and Innovation Agenda</u>, and a <u>Strategic Transport Research and Innovation Agenda</u> governance group.

## **People**

In 2019, the European Commission celebrated **20 years of EU policy on gender equality in R&I**. In this context, actions and events were organised throughout 2019 to develop policy recommendations for the European Research Area (ERA). These addressed EU and national-level policymakers, ERA stakeholder organisations and gender equality practitioners, community of innovators and citizens. Results included the release of <u>She Figures 2018</u> in March 2019, the 2019 EU Prize for Women Innovators in May, and new projects to implement gender equality plans and analyse gender gaps and bias in grant allocation.

The Marie Skłodowska-Curie Actions (MSCA) are a best practice example in terms of supporting women in research and promoting gender equality. The MSCA include work-life balance provisions that attract in particular women and thus contribute to the very high participation rate of female researchers in the MSCA (41% of all supported fellows).

The Commission published two policy papers in 2019: the <u>Democracy policy review</u>, presenting research results on e.g. electoral trends, political inequalities and polarisation, and the <u>Review on Citizenship</u>, presenting research findings on developments in and future prospects for EU citizenship.

#### **Prosperity**

The 2019 'EU Industrial R&D Investment Scoreboard' highlights the main changes in companies' R&D and economic indicators over the past year and their performance over the past 10 years. It also includes patent-based analyses to further chart the R&D efficiency of the health business sector and the scoreboard companies' activity in the field of environmental technology.

As part of the development of the **Open Innovation test-bed concept** making it easier for SMEs and innovators to bringing new products to market, a <u>staff working document on technology infrastructures</u> was published in May 2019. The concept was promoted through the 'Boosting Innovation Tour', involving dissemination events in four Widening countries (Slovenia, Estonia, Romania and Czechia).

In a major step towards making Europe a top supercomputing region, the **European High-Performance Computing Joint Undertaking** (<u>EuroHPC</u>) selected eight sites for supercomputing centres. These centres will support development of major applications in areas like personalised medicine, drug and material design, bioengineering, weather forecasting and climate change.

The Commission is facilitating and enhancing cooperation on **artificial intelligence (AI)** across the EU to boost its competitiveness and ensure trust based on EU values. Following its AI for Europe strategy, the <u>High-Level Expert Group on AI</u> presented <u>Ethics guidelines for trustworthy AI</u> in April 2019. The Commission also announced a pilot to refine the assessment list helping organisations implement these guidelines.

The high-level strategy group on industrial technologies published its <u>policy approach to key enabling</u> <u>technologies (KETs)</u>, validating the six KETs identified in 2009 and suggesting inclusion of two new KETs: AI; and digital security and connectivity.

#### International cooperation

EU international cooperation in R&I continued to be key in keeping EU's influential position as a global leader in the field and for the EU to remain competitive. In 2019, work continued to boost cooperation with strategic partners and regions, in line with EU's interest and based on mutual benefit. In this context, the Commission started in-depth analysis to revamp its R&I international cooperation strategy to better reflect the geopolitical environment and help deliver on its political priorities. This analysis ran in parallel to several initiatives and events organised with third countries and regions.

Important meetings were organised with Horizon 2020-associated countries, such as the Ministerial Meeting of the Western Balkans Steering Platform on R&I, the Annual Conference on R&I and the Eastern Partnership R&I Panel. An EIT hub was launched in Tel Aviv as a bridge between European and Israeli innovators. The preparation of the process to associate third countries to Horizon Europe was carried out through the development of key elements of the future association agreement.

Following the 4th EU-China High Level Innovation Cooperation Dialogue, the Commission started developing a joint roadmap for R&I cooperation. This should be finalised in time the next dialogue in 2020.

On cooperation with Africa, the 'Africa-Europe Innovation Partnership' was launched, aiming to match innovation hubs, accelerators and incubators from the EU and the African Union. The initiative is strongly welcomed by the innovation communities, evidenced by the numerous mostly formal partnerships between EU and African incubators and technology hubs agreed under the partnership. Open science

In 2019, the Commission set up formal governance of the <u>European Open Science Cloud</u> (EOSC) to steer the initial (2019-2020) phase of implementation.

2019 saw adoption of: (i) the <u>Directive on open data and the re-use of public sector information</u>, which was broadened to include research data; and (ii) the <u>Directive on copyright and related rights in the Digital Single Market</u>, laying down research-friendly rules on text and data mining.

The **Open Science Policy Platform** focused in 2019 on the rewards and incentives system, indicators for open science and citizen science. It published a <u>report</u> recommending open experimental pilots and a greater focus on making research assessment more qualitative.

#### 3.3 Partnership with Member States

In February 2019, the Commission published the <u>ERA progress report 2018</u>, which assesses the current state of the ERA and progress on ERA implementation in 2016-2018. In June 2019, Member States and the Commission worked in an ad hoc group launched by the European Research Area and Innovation Committee to advise on the future and relaunch of ERA. The groups' final report was adopted in December 2019 as a Council working document.

In autumn 2019, the Commission started work with universities, academics and Member States to develop the research and innovation dimension of a shared vision on the future of universities, complementing the on-going work on the education dimension. This will feed into the Commission Communication on a revitalised ERA and strengthen the links with the European Education Area (see chapter 7).

As part of the **European Semester** economic policy cycle, the Commission contributed to the 2019 country reports on each Member State. All EU Member States received in 2019, for the first time, a

<u>Country Specific Recommendation (CSR)</u> that calls for focusing investment on R&I<sup>2</sup>. Several Member States also received CSRs that call for specific policy reforms to boost the quality and efficiency of their national R&I systems. The **Annual Sustainable Growth Survey** package, issued in December 2019, highlighted R&I's role as a key enabler and driver of the EU's transformation into a sustainable economy.

The **Policy Support Facility** assisted multiple Member States, e.g. with peer reviews of the Estonian and Danish R&I systems, specific support for Cyprus, Latvia and Malta, and mutual learning exercises on research integrity and international cooperation<sup>3</sup>. The ongoing **Forward project** is part of the **new EU strategy for the outermost regions**.

The Group of **Chief Scientific Advisors** provided scientific advice on the <u>risks from micro plastic</u> <u>pollution</u>, and on best <u>practice in the provision of scientific advice</u>. The impact of the advisors' work is detailed in the <u>Report on the work of Group of Chief Scientific Advisors 2015-2019</u>.

## 4. Horizon 2020 implementation

Implementation of Horizon 2020 was on schedule, with updates to the 2018-2020 work programme adopted in March, July and October 2019, and the adoption of the European Research Council 2020 work programme in July.

#### 4.1 Response to calls for proposals and other actions under the work programmes

By end-2019<sup>4</sup>, 815<sup>5</sup> Horizon 2020 call deadlines had passed, with 226,139 eligible proposals submitted, requesting a total EU financial contribution of EUR 358.1 billion. Of those proposals, 27,251 were selected for funding, bringing the overall success rate of eligible proposals in the first 6 years to 12.05%. By end-December, 27,124 grant agreements had been signed, with a budget allocation of EUR 49.54 billion in EU funding.

In 2014-2019, participants in Member States received 90.9% of funding, with the rest going to associated countries (8.4%) and other non-EU countries (0.7%). While the participation share of associated countries (7.6%) is in line with the funding received, that of non-associated third countries is significantly higher (4.0%), indicating an interest in international openness, decoupled from funding.

Higher education organisations remain are the largest recipient of funding (39.4%), while 24.9% of EU funding under the 'Industrial leadership' and 'Societal challenges' priorities goes to SMEs.

## 4.2 Horizon 2020 - selected features

#### Research infrastructures

The 2019 research infrastructures (RI) calls supported 51 grants worth EUR 299.2 million. These will support integrating activities for advanced communities, foster development of new world-class RIs, provide individual support to European Strategy Forum on Research Infrastructures (**ESFRI**) and help identify the next generation of RIs needed in Europe. Support also went towards improving the EOSC portal, creating a network of RI industrial liaison officers, and developing international cooperation.

#### European Innovation Council pilot

<sup>&</sup>lt;sup>2</sup> Country Reports and CSR in 2019 had an emphasis on investment as they were intended to provide specific guidance for the programming of EU funds for the next multiannual financial framework.

<sup>&</sup>lt;sup>3</sup> For a full overview see <a href="https://rio.jrc.ec.europa.eu/en/policy-support-facility">https://rio.jrc.ec.europa.eu/en/policy-support-facility</a>

<sup>&</sup>lt;sup>4</sup> Situation as of 5 March 2020 (taken from Horizon 2020 Dashboard).

<sup>&</sup>lt;sup>5</sup> H2020-Adhoc-2014-20 and EURATOM-Adhoc-2014-20 continuous calls counted only once.

The enhanced European Innovation Council (EIC) pilot was launched as a continuation of the first pilot, bringing a fully-fledged EIC closer to reality. The EIC pilot has already made a case for public funding successfully attracting other investors. So far, every euro of EIC pilot support for a start-up or SME has triggered follow-on investments of EUR 2.4. The EIC Pathfinder pilot has fully integrated the FET-Open and FET-Proactive schemes with the first targeted calls for funding game-changing technological research launched in March 2019. The EIC Accelerator pilot started providing blended finance in parallel to grant-only options, and a portfolio of business acceleration services to support EIC beneficiaries is already in place.

The introduction of blended finance and equity investments to support transformative innovation is a major novelty in EU funding of R&I and part of the EIC's unique value proposition. An EIC Fund, to be set up as a separate private-law legal entity, will manage equity investments, with the European Investment Bank providing key administration services.

A major novelty during the pilot phase was the recruitment of EIC programme managers, who will contribute to identifying trends in breakthrough innovation and managing a project portfolio funded by the EIC Pathfinder pilot. An EIC pilot Advisory Board composed of 22 experts was set up to assist the Commission.

## Enhancing international cooperation

To reverse the falling trend of international participation during the first years of Horizon 2020, the 2018-2020 work programme included more than 30 'international cooperation flagships' with an EU budget close to EUR 2 billion. These had a clear positive impact on international participation, with average international participation in collaborative projects up from 2.4% in 2014-2017 to 3.3% in 2018 and 3,1% in the first half of 2019. Third-country contributions to Horizon 2020 projects also rose significantly: third-country participants increased their average financial contribution from EUR 60 million/year to EUR 83 million in 2018 and EUR 130 million in the first third of 2019. Overall, third countries have contributed a budget close to EUR 500 million to Horizon 2020 projects. The MSCA have an outstanding international dimension and continue to account for over half of all third-country participations in Horizon 2020.

The International Forum to Advance First Responder Innovation (IFAFRI), currently chaired by the Commission, completed through the IFAFRI Capability Gaps Committee a list of 10 priority capability gaps in 2019. The IFAFRI Industry Day in October and the Annual Forum in November were main events, in which new EU-funded projects were displayed and main guidelines for a Research and Development Agenda for first responders were set up.

#### European Research Council (ERC)

Scientific highlights of the European Research Council (ERC) in 2019 included the first-ever image of a cosmic black hole. ERC-funded researchers played a key role in the large-scale 'Event Horizon Telescope' international research collaboration leading to this result. In 2019, the seventh Nobel Prize since 2007 went to an ERC grantee. To widen participation in ERC competitions, two new visiting fellowship programmes were launched in Serbia and Romania.

## Widening participation

Financial support to Widening countries rose to 5.6% in 2019. Overall, Widening countries' participation is in line with their national R&I investment. **63 grants** were signed to implement 'spreading excellence and widening participation' projects, amounting to EUR 269 million. Of these, 143 will help to establish new centres of excellence or modernise existing ones in Bulgaria, Czechia, Cyprus, Estonia, Latvia, Poland and Portugal, with the help of outstanding research institutions from other countries as advanced partners.

Under a new Horizon 2020 pilot, 2019 saw the launch of the first 'Widening Fellowships', modelled on the MSCA individual fellowships. This first call was very successful and led to a 27% rise in applications for widening countries and a 70% rise in the number of funded fellowships in these countries, with 33 Widening fellowships funded in addition to 55 MSCA individual fellowships.

To make MSCA more inclusive, financial support for **MSCA fellows with special needs** was launched in 2019, leading to 23 researchers obtaining funding to overcome obstacles to mobility encountered due to disability.

#### Planet

The Horizon 2020 Framework Programme set the expected budget shares for climate action and sustainable development over the programme's duration at 35% and 60% respectively. By end-2019, spending had reached at least 29.4% for the former and 65.6% for the latter. Additional efforts are ongoing, in particular through the dedicated focus areas.

## People

As part of the implementation of the Communication on 'Digital Transformation of Health and Care in the Digital Single Market', the Cofund on Rare Diseases European joint programme started in January 2019. This flagship pilot bringing together over 130 institutions from 35 countries (including 27 Member States) will optimise knowledge flow on rare diseases, aiming for rapid translation of research results into clinical settings.

In January 2019, the EU invested EUR 50 million in novel testing and screening methods for endocrine disruptors. The eight new Horizon 2020 projects launched in this context form the **European Cluster to Improve Identification of Endocrine Disruptors (EURION)**. It will collaborate with JRC to promote validation of new methods developed.

In October 2019, the Commission announced EUR 6 million for the first large-scale clinical trial for a new Ebola vaccine in the Democratic Republic of Congo through the Coalition for Epidemic Preparedness Innovations.

The **European Human Exposome Network** was also set up. This initiative, the largest of its kind on Exposome, studies how diet, lifestyle and environment affect health. It contributes directly to the European Green Deal.

#### **Prosperity**

The <u>analysis</u> of technology trends based on Horizon 2020 projects in relation to industrial symbiosis confirms that **industrial symbiosis** has significant potential to contribute to European efforts towards CO<sub>2</sub> neutrality and a **circular industry** in Europe. An <u>analysis of technology trends in relation to industrial robotics</u> concludes that Europe is the leader in industrial collaborative robots, though it might be overtaken by other global regions by 2025, and that collaborative robotics has the potential to improve both the economy and society while still embracing European values.

#### 4.3 Non-nuclear direct actions by the Joint Research Centre

In addition to its support for policy development and monitoring, JRC continued to expand its **knowledge management activities**, launching a new competence centre on behavioural insight. The centre provides tools to apply behavioural evidence in policymaking, by identifying behaviours to be analysed, collecting relevant evidence, testing alternative policy action and ultimately informing policy decisions. JRC now operates 13 knowledge and competence centres.

JRC also organised the second European Commission Knowledge Week, with more than 100 events and over 3,000 participants.

Seven <u>flagship reports</u><sup>6</sup> were published in 2019, providing interdisciplinary analyses with anticipatory insights. Extensive work has been done on fairness, resilience and cybersecurity, with reports to be published in 2020.

## Other key achievements:

- JRC launched a new European Platform on Rare Disease Registration to support knowledge sharing for better diagnosis and treatment;
- an **interactive online platform for the Atlas of Migration** was launched in December, providing information on 60 different indicators on demography, migration, asylum, integration and development;
- JRC supported the set-up of AI Watch, which monitors the development, uptake and impact of AI for Europe;
- JRC developed a **RHOMOLO-EIB Computable General Equilibrium** model, which runs policy simulations to assess the macroeconomic effects of operations.
- more than 1,100 publications related to policy and almost 700 scientific peer reviewed publications; around 40% of JRC's peer-reviewed articles were published in the top 10% mostcited journals.

## 4.4 European Institute of Innovation and Technology

The total EIT financial contribution to implementing Knowledge and Innovation Communities (KICs) 2019 business plans was EUR 470 million.

The EIT innovation model is working and delivering real impact on some of Europe's greatest societal challenges. In 2019, the EIT community grew to a trusted network of around 1,650 partners, with 51 co-location centres/hubs in 16 Member States, making it one of Europe's largest networked innovation communities. Since its establishment, the EIT supported over 1,250 start-ups and scale-ups, created more than 6,100 high-skilled jobs and brought over 600 new products and services to market.

## 5. Implementation of the Euratom Programme complementing Horizon 2020

#### 5.1 Indirect actions

By end-2019, four calls had been concluded, with 192 eligible proposals submitted, requesting a total Euratom financial contribution of EUR 725.70 million. Of these, 62 were selected for funding, with a Euratom contribution of EUR 271.29 million, bringing the overall success rate of eligible full proposals since 2014 to 32,12.

A fifth call concluded at the end of 2019 (closing date 25 September). 62 proposals under the call were eligible, requesting a total Euratom financial contribution of EUR 265.33 million. After evaluation, 31 proposals were recommended for funding with a contribution of EUR 133.19 million. The grants should be awarded and signed in 2020 if all necessary verifications are passed successfully.

<sup>&</sup>lt;sup>6</sup> The reports focused on demographic scenarios for the EU; the future of cities and road transport; the changing nature of work and skills in the digital age; the pros and cons of blockchain technology; human's political nature; and China's innovation and research landscape.

## 5.2 Nuclear direct actions implemented by JRC

Direct actions implemented by JRC in 2019 covered research and training on the areas selected by the programme's specific objectives:

- improving nuclear safety;
- improving nuclear safeguards non-proliferation and security;
- increasing excellence on basic science knowledge as well as standards and reference materials;
- fostering knowledge management, education and advanced training;
- providing scientific and technical support to EU-related policies.

In 2019, JRC scientists published 99 articles in peer-reviewed periodicals and 37 articles in monographs or other periodicals; JRC also released 15 science-for-policy documents and 102 technical reports, together with reference methods and measurements, technical systems and scientific databases. Lastly, JRC organised 25 training courses for professionals and students from Member States and the Commission and opened access to its nuclear research infrastructure.

## 6. Dissemination, exploitation and communication

The Horizon 2020 model grant agreement's open access provisions ensure full availability of nearly 75,000 publications generated through Horizon 2020 projects. In 2019, 88% of articles published in peer reviewed journals was in Open Access, making Horizon 2020's open access policy one of the most successful globally.

The progressive creation of an integrated exploitation support ecosystem is taking shape: a **Horizon Results Platform** that allows beneficiaries to publicise their research results and identify needs for further exploiting the results launched during the R&I Days 2019. A tender was finalised for new **dissemination and exploitation booster** services to provide targeted services to beneficiaries based on their needs. A first edition of the **Horizon impact Awards** recognising and celebrating outstanding Horizon 2020 or FP7 projects with demonstrated social value took place during the R&I Days 2019. In addition, steps continue in implementing the **data strategy** to link and increase the interoperability of framework programme data with external datasets such as publications or patents, as well as national and regional R&I data under a new initiative, the **European R&I Data Hub**. Progress was also made on **IRIS**, a datamining tool, and in the **tracking of research results** to better track and trace FP results and impact over time.

To improve results dissemination, the **Horizon Dashboard** providing key information and indicators on funded projects continued to improve and cover new political focus areas like EIC and Seal of Excellence. For the first time, it provides consolidated figures on results, notably intellectual property rights and scientific publications from FP7 and H2020. CORDIS continued to produce the regular Research\*eu magazine and thematic Results Packs, complemented by outreach through events and social media. Moreover, EuroSciVoc, a new multilingual taxonomy of fields of science was launched that will allow the semi-automatic classification of projects and serve as a reference vocabulary for open science.

The MSCA European Researchers' Night (NIGHT) has become the largest research communication and promotion event in Europe. In 2019, the NIGHT was implemented on 27 September 2019 in more than 400 cities and attracted 1.65 million visitors, through 55 projects funded by the MSCA involving 35,000 researchers.

#### 7. Outlook

Interinstitutional negotiations on Horizon Europe (TFEU and Euratom) will end in 2020, subject to the conclusion of overall negotiations on the EU's 2021-2027 budget. Horizon Europe's first Strategic Plan will be finalised, paving the way for the first work programmes. This will ensure consistency with the new political priorities, particularly climate change and the digital transformation. Special measures in the context of the Corona pandemic (COVID-19) will also be taken.

Substantial effort will go into devising a policy to better promote R&I in Europe to support the UN Sustainable Development Goals and deliver on the EU's strategic objectives. This involves in particular designing an overarching framework for investing EU resources, driving reforms and improving regulatory framework conditions.

The Commission will present a Communication on Horizon Europe missions and a Communication on the future of EU research and innovation policy and the ERA by mid-2020. ERA will also be a key priority during the Croatian and German Council presidencies in 2020.

With the aim of contributing to the <u>Future of Europe</u> conference, the **second R&I Days** will be held in September 2020, with stakeholder engagement continuing to be a prominent part of the Horizon Europe strategic planning process and the preparation of Horizon Europe work programmes.'