



# 2019

# Annual Activity Report

**DG for  
Communications  
Networks,  
Content and  
Technology**

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## THE DG IN BRIEF

***DG CONNECT conceives and implements the policies required to create a Digital Single Market for more growth and jobs, where citizens, businesses, and public administrations can seamlessly and fairly access and provide digital goods, content and services.***

***We foster a modern, secure, open, and pluralistic society building on our values such as democracy, freedom of expression and tolerance and Europe's cultural diversity, creativity and respect of creators' rights.***

***We help drive the digital transformation of European industry and public services through the use of innovative digital technology and support for the development of digital skills.***

***We strive to develop a long-term vision investing in potential technology breakthroughs and flagships, which can improve peoples' lives and to increase the competitiveness of the European economy at large and its key sectors.***

***We live our values as a creative, responsible and result-oriented European Union public service. We work on the best available evidence, and we cooperate closely with our stakeholders, our international partners and other EU institutions. We seek value for the taxpayer's money in all we do.<sup>1</sup>***

The impact of policy work in DG CONNECT is measured, planned and monitored by aligning it to the Commission priorities and Work Programme and by ensuring compliance with the Better Regulation principles.

Under the auspices of the College of Commissioners, the DG works with other Commission services to implement actions defined in the Digital Single Market Strategy. In this context we deliver major policy and legislative initiatives in light of dynamic technological and market developments. This involves evaluating, reviewing, and consolidating existing legislation and proposing new rules. Close relations with the Commission's institutional partners and the Member States facilitate agreement by the co-legislators and implementation of European policies. DG CONNECT works together with various Commission departments.

DG CONNECT ensures that its priorities and the international dimension of policy work are reflected in the relations with international partners. This implies establishing Commission positions on a bilateral level with countries and regions outside the Union, and in multilateral and international fora. DG CONNECT ensures close cooperation with the European External Action Service and other DGs on international aspects of digital policies. In particular, the EU has taken the lead in developing a human centric rule based approach to the global digital economy and has inspired a large number of countries setting new rules aligned to the Digital Single Market, including in Japan, Africa, Latin-America and in the European neighbourhood. DG CONNECT maintains ICT dialogues with a number of key countries around the world. During 2019, dialogues took place with a number of partners including Brazil, Canada, China, India, Japan and Taiwan. The

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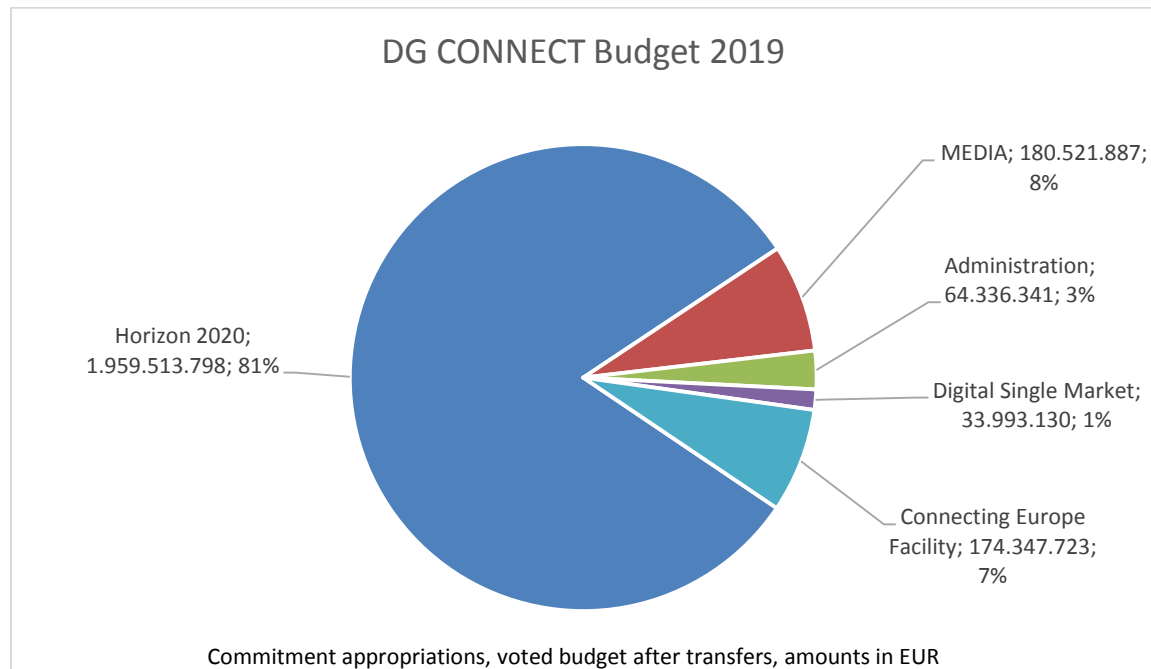
<sup>1</sup> DG CONNECT's mission statement applicable in 2019.

EU has also been successful in getting its voice heard in fora such as G7/20 and the OECD. EU's external relations are now taking into account the digital transformation.

As part of its overall remit, DG CONNECT implements EU research policy and supports the development of the European Research Area through the Research Framework Programme Horizon 2020 (2014-2020). The new Research Framework Programme, Horizon Europe, was subject to a political agreement in early 2019 but its budget has not been fixed yet by the legislator.

DG CONNECT supervises and governs four executive agencies: the Research Executive Agency (REA), the Innovation and Networks Executive Agency (INEA), the Executive Agency for Small and Medium-sized Enterprises (EASME) and the Education, Audiovisual and Culture Executive Agency (EACEA). It also is in charge of the Electronic Components and Systems for European Leadership (ECSEL) Joint Undertaking and the new European High Performance Computing (EuroHPC) Joint Undertaking. DG CONNECT holds responsibility for the Active and Assisted Living (AAL) Joint Programme, the European Union Agency for Cybersecurity (ENISA) and the Body of European Regulators for Electronic Communications (BEREC/BEREC Office). The DG acts as the designated service under a delegation agreement with the European Investment Bank (EIB) in the context of the CEF Financial Instruments and under a delegation agreement with the European Investment Fund (EIF) for the Cultural and Creative Sectors Guarantee Facility.

The DG carries out an integrated, digital-first communication strategy, shaping views on complex issues and sharing the knowledge within the DG and using the full panoply of tools to present them to the various external audiences in an open manner that encourages engagement, including communication to non-experts.



## SUMMARY

This Annual Activity Report is a management report of the Director-General of DG CONNECT to the College of Commissioners. Annual Activity Reports are the main instrument of management accountability within the Commission and constitute the basis on which the College takes political responsibility for the

decisions it takes as well as for the coordinating, executive and management functions it exercises, as laid down in the Treaties<sup>2</sup>.

## **a) Key results and progress towards the achievement of the Commission's general objectives and DG's specific objectives (executive summary of section 1)**

### **1) General Objective 'A Connected Digital Single Market'**

A completed [Digital Single Market](#) can help Europe hold its position as a world leader in the digital economy. Since the launch of the EU's strategy in 2015, 30 different legislative proposals have been put forward. The only two remaining proposals, which cover online privacy, and the Cybersecurity Competence Centre are expected to be agreed in 2020.

#### ***Digital goods and services are available to consumers and businesses across Europe***

Two major regulations directly benefitting European consumers became fully applicable in late 2018, namely the **Regulation on cross-border portability of online content services**, which allows Europeans to travel and enjoy online content services across borders and the **Regulation to put an end to unjustified geo-blocking** obliging companies to remove such discrimination, improving access to information and offering wider choice. Compliance of all but one Member State was achieved at the end of 2019.

The **Directive on Copyright in the Digital Single Market** and the **Directive on online TV and radio programmes** were adopted on 17 April 2019 and have to be transposed by 7 June 2021. Music streaming services, video-on-demand platforms, news aggregators and user-uploaded-content platforms have become the main gateways to access creative works and press articles. The new rules aim to improve access to online copyrighted material across borders, to set new rights and responsibilities for online platforms hosting copyrighted works, to encourage online press and journalism, and to make it easier to use copyrighted material for education and research purposes.

The new .eu top-level domain Regulation was adopted on 19 March 2019 and will enter into application in October 2022. DG CONNECT achieved significant progress in the preparation of the delegated and implementing acts.

#### ***Electronic communications networks and services, digital content and innovative services benefit from favourable conditions and compete on a level playing field***

Securing network and information systems is essential to keep the online economy running and to ensure prosperity. The **European Cybersecurity Act** entered into force on 27 June 2019 setting the new mandate for the EU Agency for Cybersecurity (ENISA), having more powers to assist Member States in effectively responding to cyber-attacks with a greater role in cooperation and coordination at EU level. The new **European cybersecurity certification**

<sup>2</sup> Article 17(1) of the Treaty on European Union.

**framework** allows establishing multiple tailored schemes specifying product/service/processes categories, evaluation criteria and security requirements, as well as assurance levels. The Commission has encouraged providers, users and representatives of national cybersecurity certification authorities to explore options for the development of a **single European cloud certification scheme**. The Digital Single Market cloud stakeholder group on cloud certification presented its recommendations in June 2019, based on which ENISA is currently developing a cybersecurity certification scheme for cloud infrastructures and services. These efforts are complemented by financing from the Connecting Europe Facility for deployment of cybersecurity solutions.

The 2018 Commission proposal on a **European Cybersecurity Competence Network and Centre**, to help the EU retain and develop the cybersecurity technological and industrial capacities, was subject to intense negotiations. Once adopted, it should help the EU and Member States take a proactive, longer-term and strategic perspective to cybersecurity industrial policy beyond research and development.

Back in June 2017, **roaming surcharges for all travellers in the EU came to an end**. Based on a thorough evaluation, DG CONNECT prepared the Commission's 2019 review report of the roaming market, which confirms the success of the "Roam-like-at-home" reform, the overall good functioning of the roaming market under the new rules and massive benefits for end users. The reform met its objective to unleash the previously untapped roaming demand, with a tenfold increase in the use of mobile data while travelling in the EU compared to the year before roam-like-at-home, while the volume of phone calls made while roaming was almost three times higher.

Based on an in-depth evaluation, the Commission report on the implementation of the Regulation on open internet access concluded that it protects end-users' rights and promotes open access to an innovative internet. Consequently, the Commission did not propose any amendment to the Regulation.

***The digital economy can develop to its full potential underpinned by initiatives enabling full growth of digital and data technologies***

In the EU, the public sector is one of the most data-intensive sectors. The **Directive on open data and the re-use of public sector information** (the 'Open Data Directive') was adopted on 20 June 2019, replacing the Public Sector Information Directive. The new rules will stimulate the publishing of dynamic data and the uptake of application programme interfaces; limit the exceptions currently allowing public bodies to charge more than the marginal costs of dissemination for the re-use of their data; cover data held by public undertakings and research data resulting from public funding; and allow the Commission to adopt a list of high-value datasets to be provided free of charge.

The 2018 **Regulation on a framework for the free flow of non-personal data in the EU** applies since 28 May 2019; Member States have until May 2021 to repeal or justify any existing data localisation restrictions. The guidance on the Regulation adopted in 2019 aims to help users - especially small and medium-sized enterprises - understand the interaction with the General Data Protection Regulation. Launched in October 2019, a **Support Centre for Data Sharing** develops and disseminates tools and technical expertise and provides practical support for data sharing through a dedicated website.

The first-ever rules on **fairness in platform-to-business relations** entered

into force in July 2019, aiming at creating a fair, transparent and predictable business environment for businesses and traders when using online platforms. The new Regulation will create a more predictable and transparent trading environment online, and offer new possibilities for resolving disputes and complaints. Small businesses will in particular benefit from a ban on certain unfair practices and greater transparency in online platforms.

Fifth Generation (5G) digital cellular networks will form the future backbone of our societies and economies, including in many critical sectors such as energy, transport, banking, and health, highlighting the need to address any vulnerabilities with regard to security and trust. In March 2019, the Commission recommended a set of operational steps and measures to ensure a high level of **cybersecurity of 5G networks** across the EU. Between March and June, EU countries carried out extensive risk assessments of their 5G network infrastructure, and toughened up their rules to improve the security of public networks. Following the publication of a joint EU risk assessment, the NIS cooperation group endorsed in January 2020 a toolbox of mitigating measures to address security risks related to the rollout of 5G. Along the toolbox, the Commission adopted a Communication, endorsing the toolbox and calling on the Member States to take key measures by 30 April 2020, and identifying relevant EU instruments, which can be mobilised to this end.

The **High-Performance Computing Joint Undertaking** has initiated an unprecedented investment in European advanced digital infrastructures. It selected three sites which will host high-range capacity supercomputers and ranking among world's top 5 (Barcelona, Spain; Kajaani, Finland; Bologna, Italy) and five sites hosting a medium-to-high range capacity supercomputer in Bulgaria, Czechia, Luxemburg, Portugal and Slovenia. The EU and the consortia of participating countries will jointly finance the purchase and installation with a budget of EUR 840 million.

Most importantly, to use the full potential of digital technology, Europeans need **digital skills**. The Digital Opportunity Traineeships initiative proved to be particularly successful, with already more than 7200 registered traineeships, involving major European universities, tech companies and organisations. 4.2 million participants took part in the more than 72 000 activities of the 2019 edition of Code Week.

On 5 April 2019, during the Digital Day, 26 Member States signed a **declaration to encourage women** to play an active and prominent role in the digital and technology sectors.

***All Europeans enjoy effective world-class connectivity through future-proof and ubiquitous digital networks and service infrastructures as underlying basis for the digital society and data economy***

As part of the next long-term EU budget 2021-27, the Commission proposed to renew the **Connecting Europe Facility**, with EUR 3 billion to support state-of-the-art digital infrastructure, focussing on key strategic projects with high impact, such as 5G cross-border corridors along major transport paths, 5G and Gigabit connectivity to critical socio-economic drivers in the education and health sectors; and backbone networks of strategic importance. Political agreement could be achieved on the legal text, but the budget still needs to be decided by the legislator.

In 2019, the Commission launched the second and third WiFi4EU calls, with a

budget for respectively 3400 and 1780 vouchers, each of them being worth EUR 15 000. In total, 7.980 municipalities profit from the scheme, which finances the installation of free public Wi-Fi networks.

***A modern, open and pluralistic society building on Europe's cultural diversity, creativity and respect of creators' rights and its values in particular democracy, freedom of expression and tolerance***

The 2018 Communication on **Tackling online disinformation: a European Approach** and the **Action Plan against Disinformation** comprise actions to be taken by the social media operators and advertising industry, and the creation of a fact checkers network in Europe and increased media literacy activity. The **Code of Practice, a voluntary self-regulatory measure** was signed by the major social media networks and advertising industry representatives. Between January and May 2019, DG CONNECT carried out a targeted monitoring of the implementation of the commitments, with timely focus on the integrity of the European Parliament elections, based on monthly reporting by the three platforms signatory to the Code. Additionally, CEF supports the deployment of a core service platform for the **European Digital Media Observatory** for fact-checkers and academic researchers and collaboration with media organisations and media literacy practitioners.

Launched at the 2019 Digital Day, a **Declaration of cooperation on advancing digitisation of cultural heritage** was signed by 26 European countries.

## **2) General Objective 'A New Boost for Jobs, Growth and Investment'**

In early 2019, a partial political agreement was achieved on the Commission proposal to create the first ever **Digital Europe Programme** (2021-2027) to support the digital transformation of Europe's societies and economies, boosting investments in areas of strategic importance such as high performance computing, artificial intelligence, cybersecurity and advanced digital skills and establishing additional capacities in these areas. The budget of EUR 9.2 billion proposed by the Commission, is subject to ongoing discussions between the legislators. Partial political agreement was also reached on the Commission proposal for **Horizon Europe**, the ambitious research and innovation programme that will succeed Horizon 2020. The budget of EUR 100 billion proposed by the Commission, is subject to ongoing discussions between the legislators.

***Europe maintains its position as a world leader in the digital economy, where European companies can grow globally, drawing on strong digital entrepreneurship and performing start-ups and where industry and public services master the digital transformation***

The 2016 **Communication on 'Europe's next leaders: the Start-up and Scale-up Initiative'** has been implemented through a reinforced Start-up Europe initiative, which has taken a leading role in coordinating policies and programmes relevant for growing digital start-ups. Key actions in 2019 include targeted ecosystem building with start-up hubs in Central and Eastern Europe, launch of a specific equity fund for growing start-ups in the artificial intelligence and blockchain deep tech areas.

In line with its 2018 Communication on enabling the digital transformation of health and care in the Digital Single Market, the Commission adopted a



**Recommendation on a European Electronic Health Record exchange format** on 6 February 2019. The Recommendation was taken up in the guidelines of the eHealth network of Member States representatives and complemented by 21 new Horizon 2020 projects.

***Europe's research finds investment opportunities for potential technology breakthroughs and flagships, in particular through the Horizon 2020 programme and using Private-Public Partnerships***

Contractual Public-Private Partnerships (cPPPs) play a strategic role and are of key importance in the support to ICT. Seven PPPs are now supported through the Horizon 2020 ICT part of Leadership in Enabling and Industrial Technologies: **5G, Photonics, Robotics, Big Data, Factories of the Future, High Performance Computing and Cybersecurity**. In addition, DG CONNECT continues financing the **Electronic Components and Systems for European Leadership (ECSEL)** Joint Undertaking.

**Future and Emerging Technologies (FET) Flagships** are ambitious, highly-risky, long term and large scale research and innovation initiatives pursuing grand interdisciplinary scientific and technological challenges. DG CONNECT's oversees the Graphene Flagship, the Human Brain Project Flagship, the Quantum Technologies Flagship and the new large scale research initiative named Battery 2030+.

## b) Key Performance Indicators (KPIs)

This subsection shows the five KPIs most relevant for DG CONNECT as set out in the Strategic Plan 2016-2020, i.e. the indicators which measure the most critical aspects of its performance and gives useful insights into its most significant achievements. The fifth KPI is control related, reflecting sound financial management.

<b>KPI 1: Increased portability of online content service</b>	
Target 2017	Latest known results
100% paid for subscriptions for online content services portable across borders 1 year after the adoption of the Regulation on portability (start of application in 2018).	The goal has been achieved overall, services adopted the portability rules and the Regulation works well in practice. The results of the Eurobarometer survey carried out in February/March 2019 confirm this: <ul style="list-style-type: none"> <li>49% of EU citizens who have a subscription to an online content service and have travelled in the EU benefited from the portability rules.</li> <li>58% declared that it worked well.</li> </ul>
<b>KPI 2: Deployment of network infrastructure promoting a Gigabit society</b>	
Interim milestone (2020)	Target and Latest know results
a) 100% coverage at 30 Mbps (EU citizens, DAE target <sup>3</sup> ) b) 50% take-up at 100 Mbps (households, DAE target)	<p><u>Target (2025)</u></p> <p>a) 100% coverage of households with 100 Mbps, upgradable to symmetric Gigabit speeds<sup>5</sup></p> <p>c) All socio-economic drivers to have symmetric Gigabit connectivity.</p> <p><u>Latest known results (DESI 2019)</u></p> <p>a) The total fixed fast broadband coverage is 83% of households.</p> <p>b) 20% of European households</p> <p>c) Data not yet available.</p>

<sup>3</sup> The Digital Agenda for Europe (DAE) defined actions to contribute to the EU's economic growth and spread the benefits of the digital era to all sections of society. One of its priority areas is to develop faster internet access.

<b>KPI 3: Leveraging private investment through Private Public Partnerships</b>																			
Interim Milestone (2017)	Latest known results																		
Additional private funding matching at least EU funding (i.e. EUR 1.3 billion). <u>Target (2020)</u> Private investment at least 3 times the total EU funding for the contractual private public partnerships (cPPP).	Almost all cPPPs clearly exceed the 2020 leverage target of 3: a) 5G cPPP: leverage factor of 7; b) Cyber: leverage factor above 3; c) Big Data Value cPPP: leverage factor of 7.8; d) Factories of the Future cPPP: leverage factor rate of around 5; e) High Performance Computing cPPP: leverage factor close to 5; f) Photonics cPPP: leverage factor estimated to 4; g) Robotics cPPP SPARC: leverage factor of 3.6.																		
<b>KPI 4: Patent applications and patents awarded as a result of H2020 grants for Future and Emerging Technologies (FET) and Leadership in Enabling and Industrial Technologies (LEIT)</b>																			
Target defined in the Horizon 2020 Specific Programme	Latest known results (CORDA, closed projects)																		
Target at the end of H2020: a) LEIT ICT: 3 patent applications per EUR 10 million funding b) FET: 1 patent application per EUR 10 million funding	a) LEIT ICT: 222 patents applications (= 1.30 per EUR 10 million funding), of which 64 patents awarded. b) FET: 45 patent applications (= 1.25 per EUR 10 million funding), of which 25 patents awarded.																		
<b>KPI 5: H2020 and FP7 ex-post control residual error rate</b>																			
<table border="1"> <thead> <tr> <th></th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td>— FP7</td> <td>2,58%</td> <td>2,86%</td> <td>2,96%</td> <td>3,15%</td> <td>3,19%</td> </tr> <tr> <td>— H2020</td> <td></td> <td></td> <td>1,42%</td> <td>2,39%</td> <td>2,36%</td> </tr> </tbody> </table>		2015	2016	2017	2018	2019	— FP7	2,58%	2,86%	2,96%	3,15%	3,19%	— H2020			1,42%	2,39%	2,36%	<p><b>Horizon 2020:</b> At this stage of the programme lifecycle, cost claims totalling EUR 16 billion of requested funding had been received by the end of 2019. The residual error rate for DG CONNECT is 2.36% as per 31 December 2019.</p> <p><b>FP7 (2007-13):</b> The residual error rate of the Seventh Research Framework Programme at the end of 2019 amounts to 3.19% and is above the 2% materiality threshold.</p>
	2015	2016	2017	2018	2019														
— FP7	2,58%	2,86%	2,96%	3,15%	3,19%														
— H2020			1,42%	2,39%	2,36%														

## c) Key conclusions on Financial management and Internal control (executive summary of section 2.1)

In accordance with the governance arrangements of the European Commission, DG CONNECT conducts its operations in compliance with the applicable laws and regulations, working in an open and transparent manner and meeting the expected high level of professional and ethical standards.

To ensure the achievement of policy and management objectives, the Commission has adopted a set of internal control principles, based on international good practice. The financial regulation requires that the organisational structure and the internal control systems used to implement the budget be set up in accordance with these principles. DG CONNECT has assessed its internal control systems during the reporting year and has concluded that it is effective and the components and principles are present and functioning as intended. Please refer to AAR section 2.1.3 for further details.

In addition, DG CONNECT has systematically examined the available control results and indicators, including those for supervising entities to which it has entrusted budget implementation tasks, as well as the observations and recommendations issued by the internal auditor and the European Court of Auditors. These elements have been assessed to determine their impact on management's assurance about the achievement of the control objectives. Please refer to Section 2.1 for further details.

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director- General, in his capacity as Authorising Officer by Delegation has signed the Declaration of Assurance.

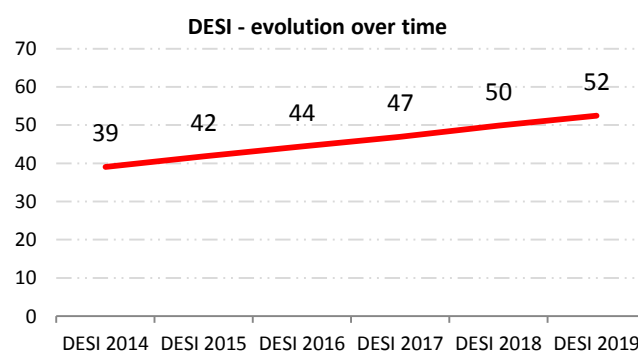
## d) Provision of information to the Commissioners

In the context of the regular meetings during the year between the DG and the Commissioner on management matters, the main elements of this report and assurance declaration have been brought to the attention of Commissioner Mariya Gabriel, responsible for Digital Economy and Society until 30 November 2019 and Commissioner Thierry Breton, responsible for Internal Market as of 1 December 2019.

# 1. KEY RESULTS AND PROGRESS TOWARDS THE ACHIEVEMENT OF THE COMMISSION'S GENERAL OBJECTIVES AND DG'S SPECIFIC OBJECTIVES

**Relevant general objective:  
A Connected Digital Single Market**

The impact indicator for the Connected Digital Single Market is the aggregate score in the Digital Economy and Society Index (DESI). As digital technologies are changing very quickly, the methodology to calculate the index is reviewed every year. In its 2016-20 Strategic Plan, DG CONNECT defined as a target that all 28 EU Member States should reach a DESI score of 0.6 by 2020 with the 2014 baseline indicating 13 Member States above this target value. Following change of methodology, to obtain the same baseline, the target value corresponds to a score of 40. Between 2015 and 2019, the score has increased from 42 to 52, with 25 EU countries being already above the target in 2019.



The DESI is also the main analytical tool providing evidence for the contributions of DG CONNECT into the European Semester exercise in which the DG advocates for higher levels of digitisation and related investments in EU countries.

**Specific objective 1.1:**  
**Digital goods and services are available to consumers and businesses across Europe.**

Related to spending programme: CEF, Creative Europe MEDIA

The **Directive on Copyright in the DSM and the Directive on online TV**

**and radio programmes** were adopted by the co-legislators on 17 April and entered into force on 6 June 2019. Their adoption constitutes a significant achievement delivering on the Digital Single Market Strategy. The directives will adapt the copyright rules to the digital world and will bring about various benefits to creators, users, service providers and consumers. DG CONNECT will be monitoring their implementation by Member States, which need to transpose the Directives by 7 June 2021.

DG CONNECT closely monitored the implementation of the **Geo-blocking Regulation** (EU) 302/2018 in the Member States and by traders, following its start of application on 3 December 2018. This included collaboration with competent authorities but also bi- and multilateral contacts with Member States to ensure the adoption of necessary implementation measures, which were still missing for a majority of Member States during spring 2019. Finally, 6 letters of formal notice had to be sent in July 2019, which ensured almost complete compliance by beginning of 2020, with the exception of one Member State. In parallel, DG CONNECT launched several analytical exercises to gather information and data for the first short-term report on the Regulation.



The new .eu top-level domain Regulation (EU) No 2019/517 entered into force on 18 April 2019 and will enter into application in October 2022. DG CONNECT achieved significant progress in the preparation of the required delegated and implementing acts, namely a delegated act on the eligibility and selection criteria and procedure for designation of the Registry, an implementing act on the principles to be included in the contract between the .eu Registry and the Commission, and one containing the lists of reserved and/or blocked .eu domain names by Member States.

In the wider context of internet governance policy, DG CONNECT has contributed to the preparation of the multistakeholder dialogue in the Internet Governance Forum 2019, in the European Dialogue on Internet Governance as well as in the Internet Corporation for Assigned Names and Numbers (ICANN).

**Creative Europe MEDIA** addresses the major industrial challenges of the European audiovisual sector, especially market fragmentation and global competition. It complements the support of Member States focused on production with actions targeting upstream (training) and downstream (distribution, promotion) stages of the value chain, mainly aimed at increasing the circulation of audiovisual works in Europe in countries other than their country of production. In 2019, MEDIA contributed to providing viewers from all Member States access to audiovisual works from other Member States by supporting pan-European distribution of 20 outstanding European films; more than 250 film distributors; more than 1000 cinemas; 75 festivals (attended by 3.5 million people); and 38 video-on-demand services featuring European films. MEDIA continued to support the development of the Directory of European Films, which is an online tool providing data on the availability of European films on video-on-demand services in Member States. By the end of 2019, data on 37 000 titles was uploaded by key video-on-demand services including Amazon Prime and Netflix.

Negotiations on the Commission **proposal for Creative Europe MEDIA (2021-2027)** made progress. The proposal builds on the achievements to date in safeguarding cultural diversity as well as strengthening competitiveness of the audiovisual sector and aims to stimulate creation of quality content that can better travel within and beyond Europe. Creative Europe will also include a cross-

sectoral part reinforcing journalistic freedom, diversity and pluralism of journalistic content, and media literacy.

<b>Specific objective 1.2:</b> <b>Electronic communications networks and services, digital content and innovative services benefit from favourable conditions and compete on a level playing field.</b>	Related to spending programme(s): Horizon 2020
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Securing network and information systems in the EU is essential to keep the online economy running and to ensure prosperity. As part of the 2017 Commission cybersecurity package, the **European Cybersecurity Act** entered into force on 27 June 2019, setting the new mandate of the EU Agency for Cybersecurity (ENISA), and establishing the European cybersecurity certification framework. ENISA has now more powers to assist Member States in effectively responding to cyber-attacks with a greater role in cooperation and coordination at EU level. The new certification framework offers the possibility to establish multiple tailored schemes specifying product/service/ processes categories, evaluation criteria and security requirements, as well as assurance levels.



**Fifth Generation (5G) networks** will form the future backbone of our societies and economies, including in many critical sectors such as energy, transport, banking, and health, highlighting the need to address any vulnerabilities with regard to security and trust. In March 2019, the Commission recommended a set of operational steps and measures to ensure a high level of **cybersecurity of 5G networks across the EU**. In particular, it recommended to Member States to complete an EU-wide risk assessment by October 2019 and to identify a set of possible mitigating measures, by

December 2019. Member States have identified risks and vulnerabilities at national level and published a joint EU risk assessment. On 29 January 2020, the NIS cooperation group endorsed a toolbox of mitigating measures to address security risks related to the rollout of 5G. Through the toolbox, the Member States are committing to move forward in a joint manner based on an objective assessment of identified risks and proportionate mitigating measures. Along the toolbox, the Commission adopted a Communication on 29 January 2020. In it, the Commission endorsed the toolbox and calls on the Member States to take key measures by 30 April 2020 and identifies relevant EU instruments, which can be mobilised in support of implementing the toolbox.

**Directive (EU) 2016/1148 concerning measures for a high common level of security of network and information systems across the Union (“NIS Directive”)** aims at improving the resilience of the EU against cybersecurity risks, notably by ensuring the continuity of services allowing the Union's economy and society to function properly. It introduces concrete measures building cyber-security capabilities across the EU and mitigating growing threats to network and information systems used to provide essential services in key sectors. By the end of 2019, all Member States had communicated full transposition of the Directive. The process of identification of operators of essential services in Member States is almost completed. As part of the review of the NIS Directive,

*“The cybersecurity dimension is essential to prevent our information space from one day self-destructing.”*  
Thierry Breton

the Commission published on 28 October 2019 a report assessing the consistency of the approaches taken by Member States in the identification of operators of essential services. DG CONNECT has also been carrying out country visits collecting on-the-spot information from national authorities, operators of essential services and digital service providers, on the level of transposition and implementation and aiming to evaluate the effects of the Directive. The NIS Cooperation Group established new work streams, adopted a number of deliverables and agreed on its strategic priorities for the next two years.

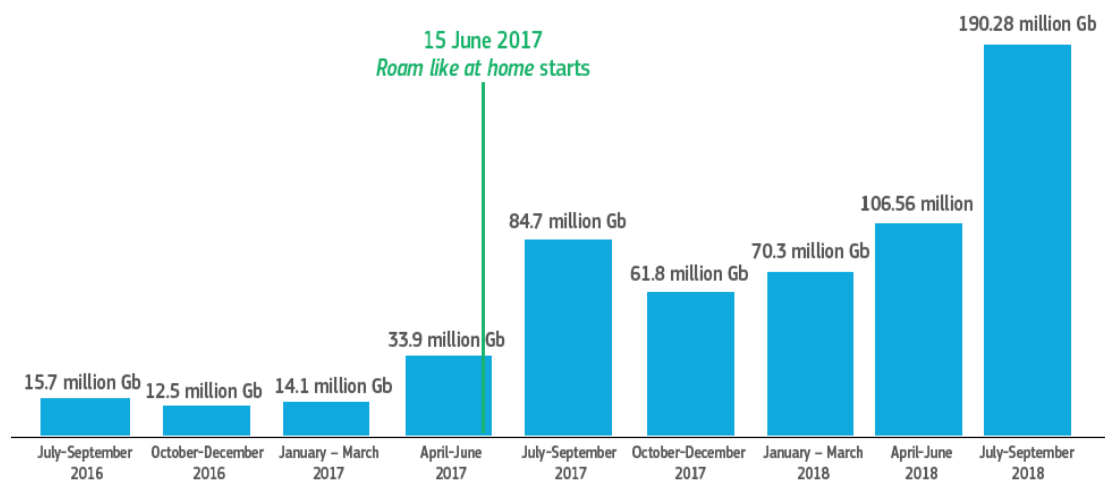
The 2018 Commission **proposal on establishing a European Cybersecurity Competence Network and Centre** was subjects to intense technical negotiations and is a priority of the 2020 Croatian Council Presidency. It should help the EU and Member States take a proactive, longer-term and strategic perspective to cybersecurity industrial policy going beyond research and development only. It will allow relevant research and industrial communities as well as public authorities to gain access to key capacities such as testing and experimentation facilities. The proposal also aims at creating a Network of National Coordination Centres and a Cybersecurity Competence Community to ensure better cooperation and synergies among the existing experts and specialist structures in the Member States. This goes hand-in-hand with the key objective to increase the competitiveness of the EU cybersecurity industry and to turn cybersecurity into a competitive advantage for other European industries.



The proposal also aims at creating a Network of National Coordination Centres and a Cybersecurity Competence Community to ensure better cooperation and synergies among the existing experts and specialist structures in the Member States. This goes hand-in-hand with the key objective to increase the competitiveness of the EU cybersecurity industry and to turn cybersecurity into a competitive advantage for other European industries.

Based on an in-depth evaluation, the **Commission report on the implementation of the Regulation on open internet access** concluded that the Regulation protects end-users' rights and promotes open access to an innovative internet. The Commission did not propose any amendment to the Regulation but will continue to monitor the openness of access to the internet with the evolution of services and technologies. The Regulation, which sets out principles that internet service providers must apply, is fit to apply also to future technologies, like 5G. However, the BEREC open internet access guidelines that show how these principles are implemented in practice, should be updated in the light of the latest developments in technology and business models and provide examples.

### EU DATA ROAMING CONSUMPTION INCREASED 5 TIMES SINCE 15 JUNE 2017



Based on a thorough evaluation, DG CONNECT prepared a Commission report

on the **review of the rules on roaming fair use policy and the sustainability derogation** laid down in the 2016 Commission Implementing Regulation (EU) 2016/2286, which evidences that the rules on fair use policy and the sustainability derogation have adequately worked as safeguards to avoid distortions on domestic markets, as foreseen in the Roaming Regulation. In the same vein, the first full review of the roaming market showed that the 'roam-like-at-home' reform has been successful and met its objective to unleash the previously untapped roaming demand: the use of mobile data while travelling in the EU has increased tenfold compared to the year before roam-like-at-home, while the volume of phone calls made while roaming was almost three times higher. At wholesale level, the sharp reduction in price caps has contributed to a further reduction in wholesale roaming prices, which in turn makes end of the roaming charges sustainable for almost all roaming providers. The report concludes that the competition dynamics in the roaming market are not likely to change in the near future, which means that the current retail and wholesale regulation is still necessary. The current rules for roaming should continue to apply in the coming years to ensure that citizens can benefit from roaming at no additional cost within the EU. The Roaming Regulation is currently in force until June 2022.

Following the adoption of the **European Electronic Communications Code**, DG CONNECT put in place an implementation and outreach strategy to ensure correct transposition and implementation. The DG assists Member States' authorities, answering requests for legal interpretation, and proactively raising with them potential issues to prevent incorrect transposition. The **Implementing Regulation (EU) 2019/2243 on a contract summary template** was the first legal act that the Commission was required to adopt under the new Code, which will become applicable in all Member States as of 21 December 2020. Providers of telephone, messaging or internet services will then have to present all potential customers with a contract summary, which will include clear and simple information about their contracts before they are concluded, making it easier for consumers to understand and compare their electronic communications service contracts. This is another step in helping Europeans enjoy all the opportunities of the internal market.

DG CONNECT worked closely with national regulatory authorities and BEREC to further harmonise the **internal market in telecoms networks and services**. The DG assessed 96 regulatory measures notified under Article 7 of the Electronic Communications Framework Directive. On 6 November 2019, the Commission adopted its **Notice C(2019)7858 on the Calculation of Weighted Average Cost of Capital**, which will contribute to a more harmonised approach to regulation of access to telecoms networks.

A new **regulation on fairness and transparency for business users of online intermediation services** entered into force in June 2019. This single market-instrument aims to ensure the fair and transparent treatment of business users by online platforms, giving them more effective options for redress when they face problems, creating a predictable and innovation-friendly regulatory environment for online platforms within the EU. The Observatory on the Online Platform Economy continued its analysis of trends, opportunities and issues in the EU's online platform economy, which will feed possible future action on platforms.

ONLINE PLATFORMS DRIVE **INNOVATION AND GROWTH** IN THE DIGITAL ECONOMY:



The President of the Commission has announced in her political guidelines that she will “present a new **Digital Services Act**” to upgrade the foundational framework for digital services in 2020. In 2019, the DG CONNECT (unit F2) has started to carry out preparatory work, including fact-finding and evidence gathering, as well as internal coordination and information processes.

The **ePrivacy Regulation** proposed by the Commission in 2017 aims at modernising the current rules under the ePrivacy Directive and to adjust it to the General Data Protection Regulation, which it complements. The objective is to offer individuals and businesses a high level of privacy and confidentiality protection while fostering innovation and technology development. The proposal also seeks to create a level playing field for all electronic communications services, both traditional telecommunications companies and so-called Over-the-top electronic communications services, OTTs (like WhatsApp or Skype). The European Parliament has adopted its position in October 2017, the work in the Council continues. In 2019, the Commission supported the Council Presidencies to reach a general approach. Although the Finnish Presidency has made significant progress, their attempt at working towards a general approach at the Telecoms Council of December 2019 did not enjoy sufficient support by Member States. A progress report was adopted instead.



<p><b>Specific objective 1.3:</b>  <b>The digital economy can develop to its full potential underpinned by initiatives enabling full growth of digital and data technologies.</b></p>	<p>Related to spending programme(s):                  Horizon 2020, CEF</p>
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In the EU, the public sector is one of the most data-intensive sectors. The re-use of the public sector data can contribute, for example, to the growth of the European economy, the development of artificial intelligence and to overcoming societal challenges. The Directive on open data and the re-use of public sector information was adopted in June 2019, and entered into force on 16 July 2019, replacing the Public Sector Information Directive. The new rules will

- stimulate the publishing of dynamic data and the uptake of application programme interfaces;
- limit the exceptions currently allowing public bodies to charge more than the marginal costs of dissemination for the re-use of their data;
- cover data held by public undertakings and research data resulting from public funding; and
- allow the Commission to adopt a list of high-value datasets to be provided free of charge.



Some public bodies strike complex data deals with private companies, which can potentially lead to public sector information being 'locked in'. Safeguards are therefore put in place. More real-time data, available via Application Programming Interfaces, can allow companies, especially startups, to develop innovative products and services, e.g. mobility apps. Publicly-funded research data is also being brought into the scope of the directive: Member States are required to develop policies for open access to publicly funded research data while harmonised rules on re-use will be applied to all publicly-funded research data which is made accessible via repositories.



The **Support Centre for Data Sharing** is a new initiative to further support the development of the Digital Single Market, with the objective to facilitate data sharing, i.e. transactions in which data held by public sector or private sector are made available to other organisations (public or private) for use and re-use. The Centre was launched in October 2019, and takes the form of a web site and develops and disseminates tools and technical expertise; and provides practical support for data sharing.

The **guidance on the free flow of non-personal data regulation** published on 29 May 2019 aims to help users - especially small and medium-sized enterprises - understand the interaction between the Free Flow of Non-Personal Data Regulation, which applies since 28 May 2019, and the 2016 General Data Protection Regulation. The guidance particularly addresses: (i) the concepts of non-personal data and personal data; (ii) the principles of free movement of data and the prohibition of data localisation requirements under both Regulations; and (iii) the notion of data portability under the Free Flow of Non-Personal Data Regulation. It also covers self-regulatory requirements set out in the two Regulations.

Immediately after Commissioner Breton had taken office, DG CONNECT started preparing the **European data strategy**, which was adopted on 20 February 2020 to make sure the EU becomes a role model and a leader for a society empowered by data. For this, it aims at setting up a true European data space, a single market for data, to unlock unused data, allowing it to flow freely within the European Union and across sectors for the benefit of businesses, researchers and public administrations. Citizens, businesses and organisations should be empowered to make better decisions based on insights gleaned from non-personal data. That data should be available to all, whether public or private, start-up or giant.

The **Commission report on "the broader implications for, potential gaps in and orientations for, the liability and safety frameworks for AI, Internet of Things and robotics"** was adopted together with the White Paper on Artificial Intelligence on 19 February 2020.

In line with the Communication on Artificial Intelligence for Europe, the Commission aims to facilitate the access of users to latest AI technology. The **AI-on-demand platform**, which started in 2019, aims to provide a single access point for all users to relevant AI resources in the EU, including knowledge, data

repositories, computing power, tools and algorithms. It will offer services and provide support to potential users of the technology. The Digital Innovation Hubs in robotics provide a sustainable ecosystem of robotics stakeholders covering the entire value network to facilitate and accelerate a broad uptake and integration of robotic technologies, and supporting the digitisation of industry through robotics. Networks of robotics Digital Innovation Hubs are funded in four priority areas: healthcare, infrastructure inspection and maintenance, agri-food and agile production.

As a contribution to the Commission's AI strategy, the High-Level Expert Group on Artificial Intelligence published its **Ethics Guidelines for Trustworthy AI** in April 2019 and **Policy and Investment Recommendations for Trustworthy AI** in June 2019. Subsequently a dedicated piloting process was set up for organisations to test and give feedback on the assessment list that helps operationalise the key requirements for trustworthy AI included in the Ethics Guidelines. On the basis of this feedback, the High-Level Expert Group will revise the assessment list in 2020.

In 2019, the European Commission helped the **blockchain** industry to set up an international multi stakeholder platform for blockchain technologies which brings together private entities and public authorities worldwide. This International Association for Trusted Blockchain Applications (**INATBA**) has its registered seat in Belgium and was globally launched in April with more than 100 founding members. The Commission is member of INATBA's governmental advisory board and works with INATBA's members to achieve an open global governance for blockchain and open standards. The European Commission also supported the Member States in the **European Blockchain Partnership** for deploying a European Blockchain Services Infrastructure (EBSI / EU Chain), which will allow public authorities in the EU to exchange data across borders in a trusted environment.

In 2019/20, Horizon 2020 dedicates EUR 150 million to **Digital Innovation Hubs**. EUR 16 million were especially earmarked for "widening" towards industrial regions that are underrepresented in these projects. Since 2016, EUR 331 million EU funding have been invested in Digital Innovation Hubs projects, resulting in a support to more than 2000 start-ups, SMEs and mid-caps to test digital innovations in collaboration with more than 200 Hubs networked across the EU. 13 Member States included Digital Innovation Hubs in their national digitalisation strategies, and more are preparing to do so. Support actions to coach more than 60 potential Hubs in regions with slower adoption of digital technologies, with focus on Central and Eastern Europe, have been implemented.

Monitoring of national initiatives on digitising industry in 2019 (data points of 2018) show that all Member States have implemented strategies or action plans to support the digitisation of industry. Their main focus has been on raising awareness, highlighting opportunities, improving the competitiveness of industry and supporting the development of skills in the workforce. The **Digitising European Industry Stakeholder Forum**, a yearly gathering of about 600 policy makers, academia and industry on the initiative to digitalise the European economy took place in November 2019 and had specific emphasis on artificial intelligence and Digital Innovation Hubs.

In addition to substantial funding from Horizon 2020, the European Fund for Strategic Investments was launched to support all businesses, notably SMEs, to invest, among others, in their digitalisation. The last implementation report shows

that 18% or EUR 2.2 billion investments approved by the SME window by the Fund were dedicated to digital in the broad sense, up from previous years. To reinforce access to finance for SME, the Commission and the European Investment Fund launched in October 2019 the Digitalisation Pilot under the Loan Guarantee Facility of the EU programme for the Competitiveness of Enterprises and SMEs, which provides the opportunity for banks and other financial intermediaries to offer guaranteed loans specifically for the purpose of digital transformation of SMEs.

The **High Performance Computing Joint Undertaking** has initiated an unprecedented investment in European advanced digital infrastructures. In 2019, it selected eight sites: Three of them will host high-range capacity supercomputers, performing more than one hundred million of billions of operations per second and ranking among world's top 5: Kajaani (Finland), Bologna (Italy) and Barcelona (Spain). Five sites will host a medium-to-high-range capacity supercomputer, each performing a few millions of billions of operations per second and ranking among world top 50: Sofia (Bulgaria), Ostrava (Czech Republic), Bissen (Luxembourg), Minho (Portugal) and Maribor (Slovenia). The supercomputers will be installed as of mid-2020 and will operate until at least end of 2025 for research and innovation activities. The EU and the consortia of 19 participating countries will jointly finance the purchase and installation with a total budget of EUR 840 million. Thus the EuroHPC JU has secured the mobilisation of public commitments of around EUR 1.1 billion from the EU and 20 of the 31 countries participating in the EuroHPC JU taking part in the consortia supporting the supercomputers' hosting sites. This wide commitment ensures a wide geographical coverage across Europe of key first-hand know-how in critical HPC systems.

#### HPC BENEFITS



The EuroHPC JU has also contributed to the **EU digital sovereignty** in critical technologies by supporting bold and ambitious actions to increase the European capability to produce competitive technology. EuroHPC launched a call for R&I actions for EUR 190 million (EU and national funding) that supports the development of essential technologies for exascale systems, industry-oriented HPC application platforms, and industrial software codes; innovation activities for manufacturing and engineering SMEs; and the establishment of HPC competence centres in the participating states and the coordination of their activities at European level.

The **EuroQCI initiative** started in 2019 as part of the **cybersecurity shield** that Europe will put in place to thwart the increasingly complex cyberattacks targeting our critical infrastructure and key digital assets. The goal is to deploy within the next 10 years, a fully certified secure end-to-end quantum communication infrastructure (QCI) for key distribution used in encryption technologies that would link critical data and communication assets all over the EU. By now, 24 Member States have signed the EuroQCI Declaration. In addition, 24 CEOs from the European industry signed a white paper expressing strong support to EuroQCI.

Implementation of **European Open Science Cloud (EOSC)** has been consolidated by the selection of five new projects on prototyping new innovative services with a budget of EUR 28.8 million and a supplementary project on enhancing the EOSC portal worth EUR 2 million. The preparation of the EOSC future governance with the EOSC Governance and Executive Boards has been executed jointly with DG Research and Innovation. In the field of connectivity,



the increase of long-term backbone capacity of GEANT started with a new project of EUR 50.5 million and the Research and Education Networking with a new project of EUR 77.5 million. The preparatory work for the Mission Earth initiative has started with the stakeholders and client DGs.

The **Digital Opportunity Traineeship** pilot initiative has proved particularly successful and exceeded its target 1 year in advance. In October 2019, there were already more than 7200 registered Digital Opportunity Traineeships, involving major European Universities, tech companies and organisations. Approximately 15% of the traineeships took place at Universities and research institutes, with the remaining 85% in companies or NGOs. DG CONNECT has actively promoted the pilot, which will continue. 4.2 million participants took part in the more than 72 000 activities of the **2019 edition of Code Week**.

*“ Our work is focused on raising awareness of the problem and possible solutions, which means combating digital gender stereotypes, working across sectors, and engaging people from all sectors. Let’s allow girls and women to choose all their roles freely without bias, prejudice, pay gaps, stereotyping and other barriers. ”*

Roberto Viola

Women are starkly underrepresented in the digital economy, resulting in a digital gender gap. In line with the 2018 Women in Digital Strategy, numerous DG CONNECT actions tackle specific aspects of the problem in digital skills, research and innovation, digital entrepreneurship and hardware manufacturing. On 5 April 2019, during the Digital Day, 26 Member States have signed the **Women in Digital Declaration** to encourage women to play an active and prominent role in the digital and technology sectors. They will work closely with the public and private sectors and civil society to achieve equality in tech.

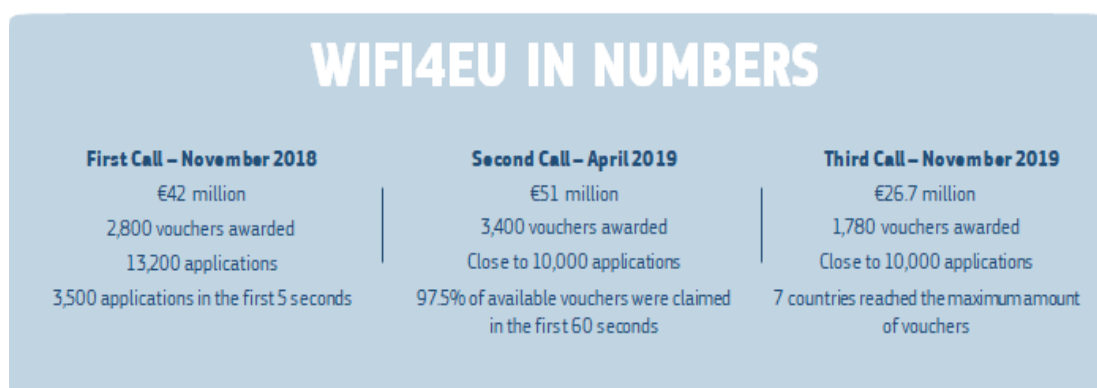
**Specific objective 1.4:**  
**All Europeans enjoy effective world-class connectivity through future-proof and ubiquitous digital networks and service infrastructures as underlying basis for the digital society and data economy.**

Related to spending programmes: CEF/EFSI/ESIF

The overall objective of the **Connecting Europe Facility**<sup>4</sup> is to pursue economic growth and contribute to the completion and functioning of the internal market in

<sup>4</sup> More details on the Facility and the CEF Work Programme and related EU added value are available in the CEF Programme Statement of the Draft General Budget of the European Union for the Financial Year 2021.

support of the competitiveness of the European economy. In the telecommunications sector it aims at pursuing real improvements in daily life for citizens, businesses (including SMEs) and administrations through the deployment of solid trans-European interoperable infrastructures based on mature technical and organisational solutions. CEF Telecom equally aims at promoting the deployment and modernisation of the connectivity networks that underpin these internet services by fostering the efficient flow of private and public investments and supporting local wireless connectivity in centres of public life. Actions to be supported are selected according to their implementation needs, political priority, and considering the goal of an ultimate sustainability of the programme. Under the Work Programme 2019-2020 two sets of calls for generic services allocated EUR 40 million for deployment of digital services.



In 2019, the Commission launched the second and third WiFi4EU calls, with a budget for respectively 3400 and 1780 vouchers. Each voucher is worth EUR 15.000 and is allocated as a fixed amount (lump sum), in order to reduce the administrative burden for the municipalities. With the voucher, the municipalities across the EU can finance the installation of free public Wi-Fi hotspots in the local communities. In both calls, the participation was massive, with around 10.000 municipality applications to receive a voucher. Seven countries are reaching almost full coverage, with more than 80% of their municipalities having been awarded a voucher. The networks are deployed in public spaces, including schools and hospitals, helping increase the availability for high speed connectivity everywhere, supporting local public services, improving the access to e-commerce, supporting the economic activity of local SMEs, and –in particular in small villages– reducing the digital divide.

The **update of the Guide on Very High-Speed Broadband is progressing** in a context in which both the policy and regulatory aspects and the mapping of broadband context are changing: the multi-annual financial framework will indicate the financing priorities for CEF2, ERDF and EAFRD, while BEREC is due to adopt guidelines on geographic surveys in March 2020 with a second phase in December 2020. The work involved consultation with relevant public and private stakeholders including the Broadband Competence Officers Network. Work on the **rural broadband project framework in the form of a handbook** progressed; it aims at the development of a mapping methodology based on the work of BEREC on geographic surveys with a view to facilitate mapping broadband action by public authorities in charge of public funds.

The 5G Pilots launched by the **5G Private-Public Partnership** support standardisation and speed up 5G take up in the context of vertical use cases. They are divided into two parts focusing on Connected and Autonomous Mobility with pilots implemented along 5G cross border corridors and mixed services, targeting validation of 5G for multiple use cases simultaneously (Industry 4.0,

healthcare, railway application, energy smart grid, media and extended reality, agriculture, smart city and public safety).

The 5G Observatory highlighted the strong EU commitment towards 5G, with 7 Member States having opened commercial services and more than 165 trials running in Europe, many to test vertical applications. Whilst Europe was not first to deploy non-standalone 5G, the Observatory shows that Europe is part of the leading pack for standalone 5G, with many deployment planned in 2020, as per the 5G Action Plan targets.

The Radio Spectrum Policy Group had identified the 26 GHz band as a 5G pioneer band. In line with its 5G spectrum roadmap, the Commission harmonised this band for wireless broadband use (including 5G) in the EU in April 2019. The last World Radio Conference in November 2019 confirmed the allocation of the 24, 25 to 27,5 GHz band to 5G usage on a global scale. **Radio spectrum Decisions**, for the unlicensed use of spectrum and general spectrum authorisation (involving short range devices and ultra-wideband technology) – e.g. in support of IoT applications were adopted. An urgent update of the 2019 Implementing Decision on the harmonisation of the 5G pioneer frequency band is needed to take into account the outcome of the World Radiocommunication Conference 2019 on the use of the band. DG CONNECT carried out a monitoring exercise to check the implementation by Member States of Commission Implementing Decisions 2018/1538, 2018/661, 2018/637, 2017/2077, 2017/191 and 2016/2317 and registered the data in its Spectrum Implementation Database.

<b>Specific objective 1.5:</b> <b>A modern, open and pluralistic society building on Europe's cultural diversity, creativity and respect of creators' rights and its values in particular democracy, freedom of expression and tolerance.</b>	Related to spending programmes: Horizon 2020, Multimedia Actions, Creative Europe MEDIA
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The intense work conducted until the May 2019 European Parliament elections helped spread awareness on the **cybersecurity risks to elections**. The 2018 "Compendium on cybersecurity of election technology" published by the NIS Cooperation Group became a reference document and was the basis for the first EU table-top exercise on cybersecurity of elections preparedness in the Member States, jointly organised by the Commission, ENISA and the European Parliament in April 2019. Together with DG JUST and DG HOME, DG CONNECT worked on several aspects of cybersecurity, which was also discussed in the European Cooperation Network on Election during.

The 2018 **Code of Practice on disinformation** is a self-regulatory set of standards to fight disinformation signed by platforms, leading social networks, advertisers and advertising industry, which presented detailed roadmaps to take action in 5 areas:

- Disrupting advertising revenues of certain accounts and websites that spread disinformation;
- Making political advertising and issue based advertising more transparent;
- Addressing the issue of fake accounts and online bots;
- Empowering consumers to report disinformation and access different news sources, while improving the visibility and findability of authoritative content;
- Empowering the research community to monitor online disinformation through privacy-compliant access to the platforms' data.

Online platforms and trade associations representing the advertising sector have submitted a baseline report in January 2019 setting out the state of play of the measures taken to comply with their commitments under the Code of Practice on Disinformation. Between January and May 2019, DG CONNECT carried out a targeted monitoring of the implementation of the commitments by Facebook, Google and Twitter with particular pertinence to the integrity of the European Parliament elections. In particular, the Commission asked the three platforms signatory to the Code of Practice to report on a monthly basis on their actions undertaken to improve the scrutiny of ad placements, ensure transparency of political and issue-based advertising and to tackle fake accounts and malicious use of bots. The Commission published the reports received for the five months together with its own assessment. In May 2019, Microsoft subscribed to the Code of Practice and also presented its roadmap. During 2019, DG CONNECT assessed the effectiveness of the Code following its initial 12-month implementation period, covering all commitments of the Code including the signatories' commitments to empower consumers and the research community.



DG CONNECT has set up a new Member States' **Expert Group on Safer Internet for Children**, to provide a forum ensuring that the ongoing work in Member States consistently addresses the challenges of child online safety, discussing practical implementation issues related to the current regulatory framework and exchanging good public sector practices. DG CONNECT continued to support child safety online through the **BetterInternet4Kids platform**, the network of **safer internet centres** across Europe as well as through the Alliance to better protect minors online – the self-regulatory initiative gathering key ICT and media companies at EU and global level, civil society and UNICEF to tackle harmful content and behaviour – in line with the recommendations stemming from the evaluation of the Alliance published in early 2019.

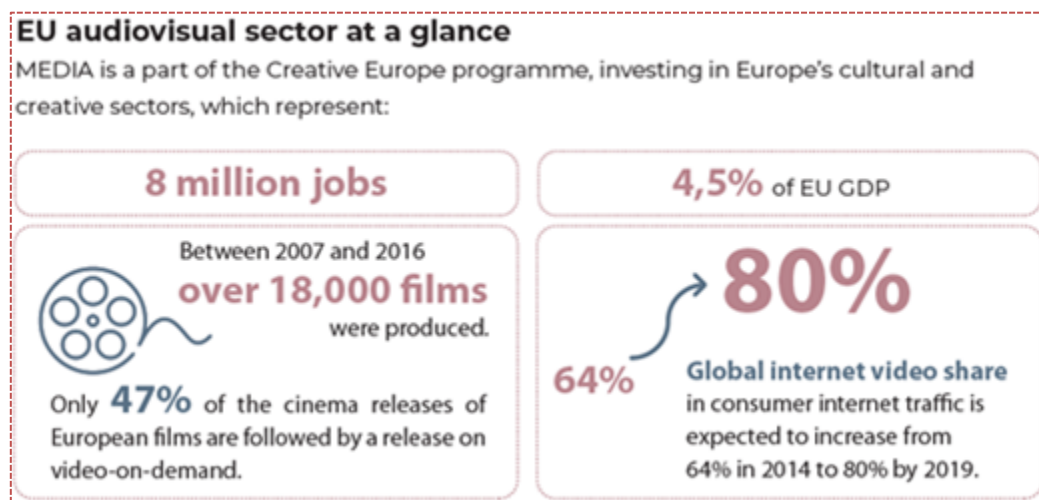
**Europeana is the Commission's digital platform for cultural heritage**, through which citizens and the cultural and creative industries can access European culture for the widest possible variety of purposes. Launched at the 2019 Digital Day, a **Declaration of cooperation on advancing digitisation of cultural heritage** was signed by 26 European countries. They will work more closely together to better use state-of-the-art digital technologies in addressing risks that Europe's rich cultural heritage is facing, enhancing its use and visibility, improving citizen engagement, and supporting spillovers in other sectors.

DG CONNECT opened up **eTranslation** to public administrations across the EU, supporting linguistic diversity and help administrations interact with businesses and citizens in the language of their choice. eTranslation is the Commission's machine translation service based on artificial intelligence, developed with funding the context of the CEF Digital Service Infrastructure for automated translation, working closely with DG Translation, and DG DIGIT.

EU Member States have until 19 September 2020 to transpose the revised

**Audiovisual Media Services Directive (AVMSD)** into national law. DG CONNECT prepared guidelines on the practical implementation of the notion of “essential functionality” and on the calculation of the share of European works in providers’ video on-demand catalogues and on the definition of low audience and low turnover based on which providers benefit from exemptions. Following consultations with the Contact Committee and a stakeholder meeting organised in February 2019 a targeted stakeholder consultation launched in February 2020, the Commission will publish the two sets of guidelines in 2020. According to the Directive, Member States have to ensure, where practicable and by appropriate means, that broadcasters reserve for European works a majority proportion of their transmission time. The share of European works on broadcasters continues to be above 60%. The revised Directive reinforces the promotion of European works on video-on-demand, which will have to ensure a share of minimum 30% of European works and prominence of those works.

The support offered by the Creative Europe MEDIA programme for the presence and promotion of European works online will further help to achieve the target. The programme’s support for distribution, new models of distribution and support for video-on-demand services are of particular relevance.



**MEDIA** helps European films be visible and find audiences despite the dominance of Hollywood studios and the fast growth of US online platforms<sup>5</sup>. It supported the work of film distributors, video-on-demand platforms, festivals and cinemas focusing on presenting non-national European films, thus increasing the exposition of European audiences to the plurality and diversity of audiovisual expressions created in Europe. MEDIA also contributes to increased exchange of creativity, perspectives and talents through support to international trainings and the creation of new quality audiovisual works (development and production stages), out of which 83% are co-productions.

Recognising the strategic importance of gender diversity to sustain a rich, highly creative audio-visual industry as well as more open, inclusive and competitive societies, **MEDIA implemented an active agenda on gender balance** in close cooperation with stakeholders’ organisations. Common actions included awareness raising, collecting and presenting data and promoting good practices.

<sup>5</sup> More details on the Creative Europe MEDIA sub-programme and related EU added value are available in the Creative Europe Programme Statement of the Draft General Budget of the European Union for the Financial Year 2021.



The Cultural and Creative Sectors Guarantee Facility under Creative Europe and the European Investment Fund, is an innovative market led instrument that addresses the financing gap for SMEs in these sectors. It provides guarantees and counter-guarantees on debt financing to financial intermediaries in order to improve access to finance to SMEs from cultural and creative sectors. It has been well received by the market and by the end of 2019 the Facility signed 13 guarantee agreements with 12 financial intermediaries from 10 countries. Loans have so far been distributed to 1697 SMEs, supporting EUR 340 million in debt financing (data for Q3 2019), of which 64% from the audiovisual sector.

**Relevant general objective:  
A New boost for Jobs, Growth and Investment**

**Digital Europe** is a new programme to support the deployment of large-scale digital capacity in Europe (high performance computing/quantum computing, artificial intelligence including data spaces, cybersecurity, cloud federation, advanced digital skills) and the digitisation of SMEs and the public sector. It will also support the European Green Deal. A partial political agreement was reached on 13 February 2019, as there is clear agreement on the importance of the topics included in the programme. DG CONNECT has been preparing the legal basis, programming and implementation of this new programme throughout 2019.

**FIVE FOCUS AREAS UNDER DIGITAL EUROPE PROGRAMME:**



Partial political agreement was also reached on the Commission proposal for **Horizon Europe**, the ambitious research and innovation programme that will succeed Horizon 2020. The programme’s general objective is to deliver scientific, economic and societal impact from EU investments in Research and Innovation to strengthen the scientific and technological bases of the Union and foster its competitiveness, deliver on the Union strategic priorities, and contribute to tackling global challenges. The budget of EUR 100 billion proposed by the Commission, is subject to ongoing discussions between the legislators.

<p><b>Specific objective 2.1:</b> <b>Europe maintains its position as a world leader in the digital economy, where European companies can grow globally, drawing on strong digital entrepreneurship and performing start-ups and where industry and public services master the digital transformation.</b></p>	<p>Related to spending programme: Horizon 2020</p>
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The **Innovation Radar** is a data-driven Commission initiative to identify high potential innovations and the key innovators behind them in Horizon 2020 projects. 7000 EU funded innovations were analysed and tracked in the radar. Since 2018, its data-driven online tool has been making information about EU-funded innovations publicly available. In 2019, a market creation potential

indicator was introduced.

DG CONNECT's Horizon 2020<sup>6</sup> work programmes for 2019 contained 4 calls for proposals for Societal Challenge 1 (Health, demographic change and well-being) and 1 call on "Socioeconomic and cultural transformations in the context of the fourth industrial revolution" (within Societal Challenge 6: Europe in a changing world – Inclusive, innovative and reflective societies). These calls have been successfully implemented.



The Commission Recommendation (EU) 2019/243 on a **European Electronic Health Record exchange format** was adopted on 6 February 2019. The Recommendation was taken up in the guidelines of the eHealth network of Member States representatives in June 2019. The research and innovation actions on

eHealth, wellbeing and ageing under Horizon 2020 Work Programme 2018-2020 included altogether 21 new projects launched in 2019.

Digital technologies create new opportunities to tackle societal challenges such as demographic change in Europe. The **Active & Assisted Living Joint Programme (AAL)**, aims to create better quality of life for older people and strengthen industrial opportunities in the field of healthy ageing technology and innovation. Each project consists of SMEs, research bodies and end-user organisations. The application for funding is organised at national level, which substantially lowers the barrier for local organisations and SMEs to participate. This is reflected in the high SME involvement of more than 40% in the funded projects. Recently, the AXO-SUIT project became a start-up called BIOX that is aiming to make a modular device that helps older adults to move and remain mobile and independent, available to a wider public. The assessment of the AAL I programme (2008-13) show that 19 out of the 52 analysed projects launched solutions/components on the market.

#### **mHealth4Afrika: A Community-based ICT for Maternal Healthcare in Africa**

Technological innovation can play an important role in strengthening people-centred healthcare delivery. An EU-funded project collaborated with Ministries of Health to co-design and validate an electronic platform to enhance patient diagnosis and treatment in resource-constrained

Up to date, over 20 cities signed the declaration "**Join, Boost, Sustain: the European way of digital transformation in cities and communities**". At the end of 2019, a new initiative to enable the extensive uptake and scaling up of digital solutions had brought together representative organisations of local governments, including the OASC (Open and Agile Smart Cities) and was supported by the Commission and the Committee of the Regions.

<sup>6</sup> More details on Horizon 2020 achievements, EU added value of the programme and Work Programme are available in the H2020 Programme Statement of the Draft General Budget of the European Union for the Financial Year 2021.

**Specific objective 2.2:  
Europe's research finds investment  
opportunities for potential technology  
breakthroughs and flagships, in particular  
through the Horizon 2020 programme and  
using Private Public Partnerships.**

Related to spending  
programme:  
Horizon 2020

Horizon 2020 supports core ICT industries through roadmap-based **Public-Private-Partnerships**. The work contributes to maintaining and developing the technology leading edge in key areas such as electronics, photonics, embedded systems, computing, robotics, big data or network technologies and systems, in which the EU has and should keep major strengths. In addition investment in the ECSEL Joint Undertaking enhance components and systems including support to federating R&D projects in nano-electronics and in integrated and cyber-physical systems including large scale pilot lines and demonstrators accelerating the exploitation of research results.

The same applies to the investment in the **EuroHPC Joint Undertaking** that focuses on acquiring, making available and applying latest HPC technologies in key sectors. It supports R&I to ensure Europe's presence in the supply chain of computing and data handling with emphasis on low power technologies starting from the microprocessor up to the complete system and relevant software applications.

**Artificial intelligence** is transforming our economies, societies and industry. Growth in computing power, availability of data and progress in algorithms have turned AI into one of the most strategic technologies of the 21st century. The stakes could not be higher. The way we approach artificial intelligence will define the world we live in. Amid fierce global competition, the EU should be ahead of technological developments in artificial intelligence and ensure that applications are swiftly taken up across its economy. As contributions towards these goals, 2019 saw the start of a EUR 20 million project which during its three-year lifetime will set up an AI-on-demand platform, bringing together and making available various AI resources and building services that enable their use. DG CONNECT also launched projects building five networks of robotics Digital Innovation Hub networks in four key areas. DG CONNECT also launched a EUR 50 million call for networks of AI research excellence centres. Finally, preparations started for a new partnership in AI, data and robotics with discussions with key stakeholder groups.



Artificial intelligence (AI) refers to systems that show intelligent behaviour: by analysing their environment they can perform various tasks with some degree of autonomy to achieve specific goals.



Mobile phones, e-commerce tools, navigation systems and many other different sensors constantly gather data or images. AI, particularly machine-learning technologies, can learn from this torrent of data to make predictions and create useful insights.

On **Smart connectivity (5G) and advanced applications**, the deployment and take up of densely connected 5G networks and systems open up new application areas. The work programme provide support to the experimentation facilities for third party experimenters, pilot validation of promising solutions, and possibilities for looking beyond 5G to prepare for the realisation of Smart Connectivity systems as a basis for a Next-Generation Internet. The development and large-scale deployment of Connected and Automated Mobility provides a unique opportunity to make our mobility system safer, cleaner, more efficient and more user-friendly.

As well as this strong industry focus, **5G PPP investments** also include preparations for the long term "Beyond 5G- Towards 6G" landscape, with new technological drivers to take into account. In particular, recent policy developments have prompted a stronger focus on key issues such as security, Green networks and Electro Magnetic Fields friendly networks. These are now reflected in the last iteration of the 5G PPP and will be used to prepare the next Smart Networks and Services partnership, currently under development for adoption in 2020.

To ensure the wide uptake of latest digital technologies across the economy and society, Horizon Europe supports the Focus Area **Digitising and transforming European industry and services**. This will be provided through Digital Innovation Hubs and cross-sectorial and integrated digital platforms and large-scale pilots for experimentation and co-creation with users.

New large-scale pilot projects were launched in 2019 covering smart farming, digitisation of energy (smart grids) and digital health respectively. EU direct and indirect investments in R&I related to the technology areas and sectors prioritised on key digital technologies, such as artificial intelligence, and digital transformation from Horizon 2020 were reinforced. The focus area on digitising and transforming European industry and services supported further prioritisation of the digital industrial platforms with the Member States on manufacturing, smart farming and rural economies, smart homes, energy, smart hospitals, smart living and 'plug and produce' equipment for manufacturing, leading to EU investments of 245 million in R&I projects. These actions resulted in an overall total EU investment of close to EUR 4 billion since 2016, leveraging an additional private investment about 4.5 times the EU investment.

Launched at the 2019 Digital Day, 25 European countries signed a **declaration of cooperation on 'A smart and sustainable digital future for European agriculture and rural areas'** to take a number of actions to support a successful digitalisation of agriculture and rural areas in Europe, recognising the potential of digital technologies to help tackle important and urgent economic, social, climate and environmental challenges facing the EU's agri-food sector and rural areas.

**Security** also remains a key transversal goal through a dedicated set of activities as well as a pervasive consideration for security issues throughout ICT research and innovation areas. In particular, with regards to cybersecurity, the protection of SMEs is a priority. The contractual PPP launched under H2020 is a key instrument to mobilise all stakeholders, involving industries from start-up to very large multinational companies in the field of cyber security.

**The BISON project developed a technology which can analyse speech and provide customer feedback in real-time.**

Using voice biometry (speech recognition), contact centres will be able to identify customers more easily. Currently the data generated in these centres are mined by humans, while the solution developed can provide feedback in real time. Call time is shortened and customers are happier, all in compliance with data protection rules.

Finally, the **STARTS** activity promotes silo-breaking collaboration between researchers, industry and artists to have European innovation profit from the out of the box thinking of artists. In particular, STARTS contributed to the internationally renowned Ars Electronica event.

DG CONNECT's work programmes for 2019 contained the implementation of 16 calls for proposals for Horizon 2020 and 1 call coordinated by other DGs or agencies.

The **Next Generation Internet initiative** includes an ambitious research and innovation programme with a Commission investment of more than EUR 250 million between 2018 and 2020. In the first ten months of 2019, the Commission received over 900 proposals from internet innovators on the topics of (i) privacy & trust enhancing technologies, (ii) search and discovery, and (iii) decentralised data governance. 90% of the applicants applied to EU funding for the first time. 180 projects were selected, which will translate into concrete technology developments available as soon as 2020. New topics have been added in 2019: on electronic identities; on service and data portability on the internet; and on renovating the architecture of the internet.

To reinforce research and technology development partnerships in **Cloud Computing and Software Technologies**, aiming at technological capacity building, the digital single market and the digital transformation and uptake, a total of 76 Research and Innovation actions are funded up to 2019 with a total amount of funding reaching EUR 253 million. Specifically in 2019, with Member States support, an additional funding of EUR 20 million were allocated to the total investment for Software Technologies. The ongoing software and cloud computing projects are collaborating effectively not only on common technical themes but also on ways beyond the usual dissemination and exploitation activities with a view to bringing products and services to the market. To reinforce the uptake of results and contribute to the digital transformation of the digital market in Europe, all cloud and software research projects are structured into three clusters of projects with a common goal to create an environment where synergies are exploited to the benefit of the beneficiaries of Software and Cloud H2020 grants. An important measure of the success of each cluster will be the effectiveness of their strategies to get digital products onto the market. The three clusters, namely Software Engineering for Services and Applications; Future Cloud Cluster; Data Protection, Security and Privacy in the Cloud contributed with recommendations on future research activities which were taken into account for the H2020 work programme for 2020.

**FET Flagships** are ambitious, highly-risky, long term and large scale research and innovation initiatives pursuing grand interdisciplinary scientific and technological challenges.



The **Graphene Flagship** reports more than 3400 top-class scientific publications and over 100,000 citations. Highlights include silicon-graphene batteries with improved performance, Perovskite solar cells with efficiency > 20% and extended lifetime, a photonic switch that is 10,000 times faster than competing technologies, and new techniques for graphene production. Over 130 companies have joined as member or associate member. Various new application-focused and industry-led subprojects were launched, e.g. developing technology for photovoltaics, batteries, optical communication, air purification and water filtration. New applications continue to be developed in areas such as flexible electronics, high frequency electronics, sensors, foams and coatings, photonics and biomedical.

The **Human Brain Project (HBP) Flagship** has achieved important scientific results in major research areas such as: the development of a human brain atlas, providing a powerful investigation window into the brain complexity; several

models and simulations of parts of the brain that are already delivering new insights and inspiring new experiments; a deeper understanding of the principles of brain organization and function etc. Recently, HBP led to the discovery of effective modulators and helped in designing new drugs and novel therapeutics for the treatment of diseases. By developing a specialised IT infrastructure EBRAINS that brings together neuroscience and high performance/data processing technologies, the Flagship is offering resources to tackle the brains' astonishing complexity, and simultaneously advances novel solutions in computing and artificial intelligence. Finally, HBP experts provide recommendations to help researchers and policy makers address emerging ethical issues.

The **Quantum Technologies Flagship** launched 3 calls: one for a third technology platform for quantum computing, one on software and middleware for quantum computing and one on activities promoting international cooperation and education and training. The preparation for a new initiative called EuroQCI began in 2019 aiming to deploy a quantum communication infrastructure (QCI) all over the EU.

A new large scale research initiative on high-performing, smart and sustainable **Future Battery Technologies**, named Battery 2030+ will receive first support from a EUR 42 million call under Horizon 2020 FET.

The **Enhanced European Innovation Council (EIC)** pilot supports researchers and innovators developing high-risk, breakthrough innovations with the potential to create new markets and boost jobs, growth and prosperity in Europe. Since 2019, FET Proactive and FET Open are now both included in the EIC extended pilot under "EIC Pathfinder".

The 2019 FET Proactive call "**Boosting Emerging Technologies**" with a budget of EUR 87.4 million will fund cutting edge research projects in "Human-Centric AI", "Implantable autonomous devices and materials", and "Breakthrough zero-emissions energy generation for full decarbonisation". In addition, the 2019 call on Transition to Innovation Activities with a budget of EUR 26 million will support projects further developing the early proofs of concept achieved under previous FET projects and move them closer to the market.

## 2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL

This section explains how the DG delivered the achievements described in the previous section. It is divided into two subsections.

The first subsection reports the control results and other relevant information that supports management's assurance on the achievement of the financial management and internal control objectives<sup>7</sup>. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive. It covers all activities, programmes and management modes relevant to the DG.

The second subsection deals with the other components of organisational

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<sup>7</sup> Art 36.2 FR: a) effectiveness, efficiency and economy of operations; b) reliability of reporting; c) safeguarding of assets and information; d) prevention, detection, correction and follow-up of fraud and irregularities; and e) adequate management of risks relating to the legality and regularity of underlying transactions.

management: human resources, better regulation principles, information management and external communication.

## 2.1 Financial management and internal control

Assurance is an objective examination of evidence for the purpose of providing an assessment of the effectiveness of risk management, control and governance processes.

This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. The results are explicitly documented and reported to the Director-General. These are:

- The reports submitted by the AOSDs, which include the outcome of the internal control monitoring taking place in each Directorate;
- The reports from Authorising Officers in other Directorates-General managing budget appropriations in cross-delegation;
- The reports on control results from entrusted entities as well as the result of the Commission supervisory controls on the activities of these bodies;
- The contribution of the Director in charge of Risk Management and Internal Control, including the results of internal control monitoring at Directorate-General level;
- The reports on recorded exceptions, non-compliance events and any cases of confirmation of instructions (Art 92.3 FR);
- The results of the ex-post audits;
- The limited conclusion of the internal auditor on the state of control, and the observations and recommendations reported by the Internal Audit Service (IAS);
- The observations and recommendations reported by the European Court of Auditors (ECA).

These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director-General of DG CONNECT.

This section is for reporting the control results and other relevant elements that support management's assurance. It is structured into (a) Control results, (b) Audit observations and recommendations, (c) Effectiveness of internal control systems, and resulting in (d) Conclusions on the assurance.

### 2.1.1 Control results

This section is for reporting and assessing the elements identified by management which support the assurance on the achievement of the internal control objectives<sup>8</sup>. The DG's assurance building and materiality criteria are outlined in AAR Annex 4. Annex 5 outlines the main risks together with the control processes to mitigate them and the indicators used to measure the

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<sup>8</sup> 1) Effectiveness, efficiency and economy of operations; 2) *reliability of reporting*; 3) *safeguarding of assets and information*; 4) prevention, detection, correction and follow-up of fraud and irregularities; and 5) adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 36.2). *The 2<sup>nd</sup> and/or 3<sup>rd</sup> Internal Control Objective(s) (ICO) only when applicable, given the DG's activities.*

performance of the relevant control systems.

DG CONNECT budget is implemented by the DG (85% - 1292.1MioEUR) and by other DGs and entrusted entities which have budget implementation tasks (15%-224.4MioEUR). Horizon 2020 represents the most important part in quantitative terms. This explains that this report will mostly focus on this part of the budget.

This report presents the elements supporting the assurance on the internal control objectives in two different segments: direct budget implementation by DG CONNECT and budget implementation tasks entrusted to other DGs and entities.

<b>Budget implemented by DG CONNECT (in EUR)</b>	
H2020	1 212 641 535
FP7	15 020 028
CIP ICT	49 066
CEF	12 845 321
Creative Europe MEDIA	25 779 802
Other	15 853 574
Administrative expenditure	9 872 675
<b>Budget implementation tasks entrusted to other DGs and entities (in EUR)</b>	
<b>1- Implementing Bodies</b>	
ECSEL	169 467 010
AAL Association	14 770 403
BEREC Office	5 701 000
ENISA	16 292 952
Financial instruments (EIB-PBI, CCSGF, CEBF)	18 167 662
<b>2- Cross delegations to DGs</b>	
EMPL, ESTAT, GROW, SANTE, OP, RTD, DIGIT, ENER, SANTE, JUST, HR	19 601
<b>TOTAL</b>	<b>1 516 480 630</b>

Furthermore, DG CONNECT was a partner DG for four executive agencies, which processed operational payments for a value of EUR 458.90 million linked to its activities.

<b>Entity</b>	<b>Operational payments implemented directly by the EAs linked to DG CONNECT activities (in EUR)</b>
Innovation and Networks Executive Agency (INEA)	75 878 637
Research Executive Agency (REA)	259 542 318
Executive Agency for Small and Medium-sized enterprises (EASME)	15 322 562
Education, Audiovisual and Culture Executive Agency (EACEA)	108 157 390
<b>TOTAL</b>	<b>458 900 907</b>

For the CIP, FP7 and H2020 programmes DG CONNECT uses flat rates for indirect costs which exceed the 7% ceiling of the Financial Regulation (art. 181.6). Such



flat rates have been decided to make the preparation of proposals and the management of projects easier. At the same time, the use of flat rates reduces the number of financial errors.

DG CONNECT has no cases of 'confirmation of instructions' (FR art. 92.3); cases of financing not linked to costs (FR art. 125.3); or cases of 'Derogations from the principle of non-retroactivity of grants pursuant to Article 193 Financial Regulation' (FR art. 193.2). The list of financial Framework Partnerships >4 years (FR art. 130.4) can be found in Annex 3.

Back in 2018, DG CONNECT had reported a critical risk linked to the implementation of the WIFI4EU initiative. Since then, the development of the online portal is completed and three calls have been launched successfully, allowing reducing the risk level to high.

## **Conclusion**

DG CONNECT has systematically examined the available control results and indicators, including those aimed to supervise entities to which it has entrusted budget implementation tasks, as well as the observations and recommendations issued by internal auditors and the European Court of Auditors. These elements have been assessed to determine their impact on the management's assurance as regards the achievement of the various internal control objectives mentioned above.

For FP7, as the estimated residual error rate of the financial operations under FP7 is above 2%, which is the materiality criterion for this programme. However, legacy now only represents around 1.61% of the total operational expenditure of 2019 and the error rate represents EUR 702 601 of financial exposure. As a result, no reservation is made.

For H2020, the audit results suggest that the detected representative error rate will remain within the established range. Together with the experience in FP7, they also suggest that the objective for the residual error rate will be respected. As a result, no reservation is made.

As regards the budget implemented by other DGs and entities, the cross subdelegated AODs, the executive agencies INEA, REA, EASME and EACEA, the ECSEL Joint Undertaking, the Active and Assisted Living Association, the decentralised agencies BEREC Office and ENISA as well as the EIB/EIF, from DG CONNECT's own monitoring and supervision work, which includes regular contacts/representation or at least desk reviews of relevant management reports and audit reports, DG CONNECT has not identified any issues which could impact the management's assurance.

Based on the above, in conclusion, DG CONNECT's senior management has reasonable assurance that, overall, suitable controls are in place and working as intended. Risks are being appropriately monitored and improvements and reinforcements have been implemented where necessary.

Conclusion on the Internal Control - Summary Tables									
DG CNECT	Scope: payments made	Effectiveness = control results and benefits			Efficiency = the time-to-indicators and other efficiency indicators	Economy = the cost of controls	Conclusion on the cost-effectiveness of controls	Information from auditors available	Reservations
ABB or other activity-level	as per AAR annex 3, table 2	Conclusion on "Legality and Regularity"	Conclusion on "Fraud prevention, detection and correction"	Conclusion on other Incos					
<b>Budget implemented by DG CNECT</b>									
H2020	1212.64	Positive, with specific remarks for the error rate for FP7	Positive	Positive	YES TTG= 229 days, TTP = 99% on time	YES	Positive	YES - ECA/IAS audits	NO
FP7	15.02								
CIP	0.05								
CEF	12.85								
Creative Europe	25.78								
Other	15.85								
Administrative expenditure	9.87								
<b>Budget implementation tasks entrusted to other DGs and entities</b>									
<b>1- Implementing Bodies</b>									
ECSEL	169.47	Positive, with specific remarks for the error rate for FP7	Positive	Positive, some specific remarks on Ecsel	YES	YES	Positive	ECA reports (see 2.1 Budget entrusted to other DGs and entities)	NO
AAL	14.77								
Berec Office	5.70								
Enisa	16.29								
Financial Instruments (EIB-PBL,CCSGF,CEBF)	18.17								
2- Cross delegations to EMPL, ESTAT, GROV, SANTE, OP, RTD,	0.02								
<b>TOTAL</b>	<b>1 516.48</b>								

### 1. Effectiveness = the control results and benefits

In order to be considered effective, controls are expected to meet the internal control objective (to be detailed hereafter) and for each of those control objectives result in benefits. These benefits should be explained and quantified wherever possible.

#### Legality and regularity of the transactions

DG CONNECT is using internal control processes to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions it is responsible for, taking into account the multiannual character of programmes and the nature of the payments concerned.

#### Budget directly implemented by DG CONNECT

The audit work for FP7 is almost completed with 2 out of the 3 remaining audits finalised in 2019. The error rates based on the FP7 audit work at 31 December 2019 are:

- Representative detected error rate: 5.45% based on 480 cost statements (out of a total of 481) for which the audit is completed;
- Cumulative residual error rate: 3.19% for DG CONNECT.

The audit strategy for FP7 is now considered to be fully implemented. The representative detected error rate for FP7, calculated on a multi-annual basis, is a

little over 5%. Since only one CRS item remains open, it can be assumed that the final cumulative residual error rate will be around 3.5%. These results are in line with the conclusions presented in the AAR 2018. The target cumulative residual error rate of 2% has not been attained. Nevertheless, the lessons learned from FP7 audits contributed significantly to the development of the improved Horizon 2020 control framework.

Given that the legacy now only represents around 1.61% of the total operational expenditure of 2019 and presents only 702 601 EUR of financial exposure, no reservation on this programme is made.

Information on the implementation of audit results and extrapolations is presented in annex 10, section 1, point A.

### **Results of the H2020 ex-post audits**

Following a review of a sample of ex-post audits and referring to the Commission's methodology for the calculation of the H2020 error rate, the European Court of Auditors observed that "*... ex-post audits aim for maximum coverage of the accepted costs, but rarely cover all the costs. The error rate is calculated as a share of all the accepted costs, instead of the amount actually audited. This means that the denominator in the error calculation is higher, so the error rate is understated. In case the errors found are of a systemic nature, the error is extrapolated which partially compensates for the above-mentioned understatement. However, since extrapolation is not performed for non-systemic errors, the overall error rate is nevertheless understated. The understatement of the error rate cannot be quantified. It is, then, impossible to determine whether the impact of this understatement is significant.*" As a result, the Court introduced recommendation 5.3 to address this observation, which was accepted by the Commission.

In response, the Commission is re-defining its methodology for calculating the H2020 error rate in line with the Court's observations. For the year 2019, the Commission does not have all the data necessary to calculate the error rate according to the revised methodology. However, in order to quantify the understatement mentioned by the Court in its report, it recalculated the error rate based on the sample of 40 audits finalised in 2018 and 2019 selected by the Court for its own DAS work. The methodology applied is that in the cases of non-systemic errors, the denominator used in the error calculation is the sum of costs actually audited and not the sum of all accepted costs. The application of the revised methodology on the 40 samples resulted in an error rate higher, on average, by 0.34% in comparison to the error rate calculated by applying the methodology used in the past. This additional error rate of 0.34% has been used to top-up the detected error rate for 2019 calculated according to the methodology used in the past. This results in the following error rates for Horizon 2020 on 31 December 2019:

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<sup>9</sup> The Horizon 2020 audit campaign started in 2016. At this stage, three Common Representative Samples with a total of 467 expected results have been selected. By the end of 2019, cost claims amounting to EUR 16.2 billion have been submitted by the beneficiaries to the services. The audit coverage for Horizon 2020 is presented in annex 10. In addition to the Common Representative Samples, Common Risk Samples and Additional Samples have also been selected. The total of all samples represents 3245 participations. The audits of 2115 participations were finalised by 31/12/2019 (out of which 962 in 2019). This sampling accommodates special needs of certain stakeholders with regard to audit coverage and selection method. In addition, top-ups, which are participations of selected beneficiaries and which are added to the selected participations, are included in the total participations selected.

- Representative detected error rate: 2.78%<sup>10</sup>, expected to rise to 3.30% taking into account the results of draft audit reports.
- Cumulative residual error rate for the R&I Family of DGs: 2.15 % (2.14 % for DG CONNECT), expected to rise to around 2.31 % (2.36 % for DG CONNECT) when taking into account the results of the draft audit reports.

The above-presented error rates should be treated with caution not only because of the above-mentioned top-up. Since not all results of the three Common Representative Samples are yet available, the error rate is not fully representative of the expenditure being controlled. Moreover, the nature of expenditure in the first years of the programme may not be totally representative of the expenditure across the whole period.

Since Horizon 2020 is a multi-annual programme, the error rates, and especially the residual error rate, should be considered within a time perspective. Specifically, the cleansing effect of audits will tend to increase the difference between the representative detected error rate and the cumulative residual error rate, with the latter finishing at a lower value.

As was the case last year, there is evidence that the simplifications introduced in Horizon 2020, along with the ever-increasing experience acquired by the major beneficiaries, affect positively the number and level of errors. However, beneficiaries still make errors, sometimes because they lack a thorough understanding of the rules, sometimes because they do not respect them.

In conclusion, DG CONNECT considers that the 2019 cumulative residual error rate for Horizon 2020 will fall within the target range established in the Financial Statement<sup>11</sup>, and therefore a reservation is not necessary for the Horizon 2020 expenditure

Regarding the future, the Commission will adapt its methodology for the calculation of Horizon 2020 error rate in line to the Court's observations starting with the audits finalised as from January 2020 on.

An overview of the DGs estimated overall amounts at risk and their estimated future correction for all types of expenditures of the DG is presented in section 2.1.2.

### **Budget implemented by entrusted entities**

DG CONNECT has entrusted parts of its budget for implementation to other Commission services, to the ECSEL Joint Undertaking, to the BEREC office and ENISA (decentralised agencies), to the AAL Association (body pursuant to Article 185 of the TFEU), and to the following Executive Agencies: Research Executive Agency (REA), the Innovation and Networks Executive Agency (INEA), the Executive Agency for Small and Medium-sized Enterprises (EASME) and the Education, Audio-visual and Culture Executive Agency (EACEA). A number of

<sup>10</sup> Based on the 298 representative results out of the 467 expected in the three CRS.

<sup>11</sup> The legislative financial statement accompanying the Commission's proposal for the Horizon 2020 regulation states: "The Commission considers therefore that, for research spending under Horizon 2020, a risk of error, on an annual basis, within a range between 2-5% is a realistic objective taking into account the costs of controls, the simplification measures proposed to reduce the complexity of rules and the related inherent risk associated to the reimbursement of costs of the research projects. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, corrections and recovery measures will have been taken into account is to achieve a level as close as possible to 2%."

financial instruments managed by the European Investment Bank (EIB) and the European Investment Fund (EIF) are also used<sup>12</sup>.

The total amount of payments made to these entities amounts to EUR 683.31 million.

Entity	Legal form	Purpose	Payments made (EUR million)
Other Commission Services through a number of cross-sub delegations	EU Institution	In the interests of sound budget implementation, the authorising officer by delegation ('the delegator') may, by way of exception, sub delegate management of a budget line or part of a line to another Director-General or Head of Service ('the delegatee'). DG CONNECT both gives and receives sub delegations.	0.02
REA	Executive Agency	REA manages large parts of the Horizon 2020 Framework Programme which began in 2014 and continues to look after remaining FP7 projects.	259.54
INEA	Executive Agency	INEA officially started its activities on 1 January 2014. For DG CONNECT it implements part of the Connecting Europe Facility (CEF) programme.	75.88
EASME	Executive Agency	The Executive Agency for Small and Medium-sized Enterprises (EASME) has been set-up by the Commission to manage several EU programmes on its behalf.	15.32
EACEA	Executive Agency	EACEA is responsible for the management of certain parts of the EU funding programmes in the fields of education, culture, audio-visual, sport, citizenship and volunteering and implements parts of the Creative Europe MEDIA sub programme.	108.16
ECSEL	Joint Undertaking	ECSEL is a partnership between the private and the public sectors for electronic components and systems. It, inter alia, contributes to the development of a strong and globally competitive electronics components and systems industry in the EU.	169.47
BEREC Office	Decentralised Agency	BEREC contributes to the development and better functioning of the internal market for electronic communications networks and services.	5.70
ENISA	Decentralised Agency	ENISA carries out the tasks assigned to it under the Cybersecurity Act for the purpose of achieving a high common level of cybersecurity across the Union, including by actively supporting Member States, Union institutions, bodies, offices and agencies in improving cybersecurity. ENISA acts as a reference point for advice and expertise on cybersecurity for Union institutions, bodies, offices and agencies as well as for other relevant Union stakeholders. ENISA contributes to reducing the fragmentation of the internal market by carrying out the tasks assigned to it under the Cybersecurity Act.	16.29
Active and Assisted Living (AAL) Association	Private Law Body	The AAL Programme is a funding activity that aims to create better conditions of life for the older adults and to strengthen the international	14.77

<sup>12</sup> Financial instruments to the EIB established under the CEF Broadband, the Connecting Europe Broadband Fund, and the Cultural and Creative Sectors Guarantee Facility managed by the EIF.

		industrial opportunities in the area of information and communication technology.	
European Investment Bank (CEF Debt Instrument)	Financial Instrument	Enable long-term capital market financing of infrastructure projects including, but not limited to, those carried out under project finance structures (on a risk-sharing basis).	0
European Investment Bank via Cube Infrastructure Managers S.A. - Connecting Europe Broadband Fund	Financial Instrument	Investment Fund to provide equity and quasi-equity financing to smaller-scale, higher-risk broadband projects, which do not have sufficient access to financing, in (under-served) suburban and rural areas. Cube Infrastructure Managers S.A. manages the Fund through a public procurement process carried out by the EIB.	8.81
European Investment Fund - Cultural and Creative Sectors Guarantee Facility	Financial Instrument	The CCS GF is managed by the EIF on behalf of the Commission in the context of the Creative Europe programme. The Facility benefits micro, small and medium-sized enterprises in the cultural and creative sectors, often facing difficulties in accessing loans, based in any of the participating countries.	9.36
<b>TOTAL</b>			<b>683.31</b>

In all cases of indirect management, the supervision arrangements are based on the principle of controlling 'with' the relevant entity which are described in annex 5. For further details on the supervision arrangements and on the control results of each of the entrusted entities please see Annex 10, section 1, point B.

None of the executive agencies for which DG CONNECT is parent DG reported a reservation in their AAR. INEA reported an error rate of more than 4% for CEF-Telecom; given the relatively low amounts involved and in line with the de-minimis rule<sup>13</sup>, INEA did not issue a reservation. This higher error rate is linked to a high incidence of NGO and SME participation, the high proportion of error prone personnel costs in the costs reported and the limited use of the Certificate for Financial Statements for the projects.

For the ECSEL JU, the European Court of Auditors stated as in previous years that it is not possible for the ECSEL to calculate a single reliable weighted error rate nor a residual error rate for FP7 payments. Further, during the full reconciliation exercise of all operational and administrative accounts, the JU office discovered at the end of 2018 a shortage of approximately EUR 1 million in its administrative accounts. This was immediately audited and traced back to a missing contribution payment of one of the private partners. In order to avoid a negative cash position at the end of the year 2018, all the contributors to ECSEL's administrative budget contributed to make up for the missing amount. From the Commission's side, this was clearly documented as an advance of EUR 320 000 for the amount to be contributed in 2020. At the same time, the private entity in deb committed to pay the missing amount in instalments over 2019 and 2020. The first instalment of EUR 549 500 was already paid.

For the decentralised agencies, BEREC and ENISA, DG CONNECT considers that its supervision has been effective and appropriate in 2019.

The annual on-site review of the AAL JP performed by DG CONNECT with independent external experts to assess the overall performance of the AAL

<sup>13</sup> As from 2019, a 'de minimis' threshold for financial reservations is introduced. Quantified AAR reservations related to residual error rates above the 2% materiality threshold, are deemed not substantial for segments representing less than 5% of a DG's total payments and with a financial impact below EUR 5 million. In such cases, quantified reservations are no longer needed.

Association confirmed the good operation of the AAL JP.

As regards the financial instruments (CEF Debt Instrument, CEF equity instrument: Connecting Europe Broadband Fund and the Cultural and Creative Sectors Guarantee Facility (CCS GF)), DG CONNECT considers that its supervision has been effective and appropriate in 2019. In particular, DG CONNECT considers that the reporting of the EIB and EIF is sufficient and provides relevant information.

Overall, we can conclude that DG CONNECT has set up internal control processes aimed to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned.

### **Estimated overall risk at closure**

In the context of the protection of the EU budget, the DGs' estimated overall risk at payment, estimated future corrections and risk at closure are consolidated at Commission level. DG CONNECT's data is shown in Table X and its accompanying notes below.

The estimated overall risk at payment for 2019 expenditure is between EUR 38.78 and 39.39 million. This is the AOD's best, conservative estimation of the amount of *relevant expenditure* during the year (EUR 1242.1 million) not in conformity with the contractual and regulatory provisions applicable at the time the payment was made.

This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in successive years. The conservatively estimated future corrections for 2019 expenditure are EUR 11.3 million. This is the amount of errors that the DG conservatively estimates will be identified and corrected by controls planned to be carried out in succeeding years.

The difference between those two amounts leads to the estimated overall risk at closure for the 2019 expenditure of between EUR 27.5 and 28.1 million. The estimated overall risk at closure for 2019 (EUR 27.5 and 28.1 million) is lower than the estimated overall risk at closure for 2018 (EUR 34.97-35.45 million) mainly because of the higher share of H2020 expenditure (compared to the FP7 expenditure) which legal basis and control system enable to achieve a low error rate. The estimated overall amount at risk at payment (EUR 38.78-39.39 million) is also lower than last year (EUR 49.9-50.3 million) for the same reason.

**Table X - Estimated overall risk at closure**

DG CONNECT	"payments made" (FY; m€)	minus new <sup>a</sup> prefinancing(in FY; m€)	plus cleared <sup>c</sup> prefinancing (in FY; m€)	= "relevant expenditure" <sup>nd</sup> (for the FY; m€)	Average Error Rate ( <i>weighted</i> AER; %) Between ... and ...		estimated overall amount at risk at payment (FY; €) Between ... and ...		Average Recoveries and Corrections ( <i>adjusted</i> ARC; %)	estimated future corrections[an d deductions] (for FY; m€)	estimated overall amount at risk at closure <sup>e</sup> (m€) Between ... and ...	
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10		
<b>Budget implemented by DG CNECT</b>												
<b>1- Programmes implemented by CNECT</b>												
H2020	1212.64	954.87	678.36	936.13	3.30%	3.30%	30.89	30.89	0.94%	8.80	22.09	22.09
FP7	15.02	0.00	2.68	17.70	5.45%	5.45%	0.96	0.96	2.26%	0.40	0.56	0.56
CIP	0.05	0.00	0.00	0.05	9.05%	9.05%	0.00	0.00	1.45%	0.00	0.00	0.00
CEF (procurement)	12.85	0.00	0.00	12.85	0.50%	0.50%	0.06	0.06	0.00%	0.00	0.06	0.06
CEF (grants)	0.00	0.00	0.65	0.65	5.37%	5.37%	0.03	0.03	0.83%	0.01	0.03	0.03
Creative Europe	25.78	0.65	2.26	27.39	1.50%	2.00%	0.41	0.55	1.50%	0.41	0.00	0.14
Other	15.85	4.40	15.47	26.92	2.00%	3.00%	0.54	0.81	0.00%	0.00	0.54	0.81
Administrative expenditure	9.87	0.00	0.00	9.87	0.50%	0.50%	0.05	0.05	0.00%	0.00	0.05	0.05
<b>Budget implementation tasks entrusted to other DGs and entities</b>												
<b>2- Implementing Bodies</b>												
EIB - Project Bond Pilot Initiative (PBI)	0.00	0.00	0.00									
EIF - CCSGF	9.36	0.00	0.00	9.36	0.00%	0.5%	0.00	0.05	0.00%	0.00	0.00	0.05
CEBF - Cube (B5)	8.81	0.00	0.00	8.81	0.00%	0.5%	0.00	0.04	0.00%	0.00	0.00	0.04
ECSEL (H2020)	165.14	0.00	0.00	165.14	3.30%	3.30%	5.45	5.45	0.94%	1.55	3.90	3.90
ECSEL (FP7)	4.33	0.00	0.00	4.33	5.45%	5.45%	0.24	0.24	2.26%	0.10	0.14	0.14
AAL (H2020)	9.75	9.75	0.91	0.91	3.30%	3.30%	0.03	0.03	0.94%	0.01	0.02	0.02
AAL (FP7)	5.03	5.03	0.00	0.00	5.45%	5.45%	0.00	0.00	2.26%	0.00	0.00	0.00
Berec office	5.70	0.00	0.00	5.70	0.5%	1.00%	0.03	0.06	0.00%	0.00	0.03	0.06
ENISA	16.29	0.00	0.00	16.29	0.5%	1.00%	0.08	0.16	0.00%	0.00	0.08	0.16
<b>3- Cross-subdelegation</b>				0.00			0.00	0.00		0.00	0.00	0.00
DGs and Offices	0.02	0.02	0.00	0.02	0.5%	0.5%	0.00	0.00	0.00%	0.00	0.00	0.00
Administrative expenditure	0.00	0.00	0.00	0.00	0.5%	0.5%	0.00	0.00	0.00%	0.00	0.00	0.00
Overall, total	1516.48	974.69	700.31	1242.10	3.12%	3.17%	38.78	39.39	0.91%	11.28	27.51	28.12



## Notes to the table

(1) differentiated for the relevant portfolio segments at a level which is lower than the DG total

(2) Payments made or equivalent, e.g. expenditure registered in the Commission's accounting system, accepted expenditure or cleared pre-financing. In any case, this means after the preventive (ex-ante) control measures have already been implemented earlier in the cycle.

In all cases of Co-Delegations (Internal Rules Article 3), "payments made" are covered by the Delegated DGs. For Cross-SubDelegations (Internal Rules Article 12), they remain with the Delegating DGs.

(3) New pre-financing actually paid by out the department itself during the financial year (i.e. excluding any pre-financing received as a transfer from another department). "Pre-financing" is covered as in the context of note 2.5.1 to the Commission annual accounts (i.e. excluding "Other advances to Member States" (note 2.5.2) which is covered on a purely payment-made basis).

"Pre-financing paid/cleared" are always covered by the Delegated DGs, even for Cross-SubDelegations.

(4) Pre-financing actually cleared during the financial year (i.e. their 'delta' in the Financial Year 'actuals', not their 'cut-off' based estimated 'consumption').

(5) For the purpose of equivalence with the ECA's scope of the EC funds with potential exposure to legality & regularity errors (see the ECA's Annual Report methodological Annex 1.1), our concept of "relevant expenditure" includes the payments made, subtracts the new pre-financing paid out [& adds the retentions made], and adds the previous pre-financing actually cleared [& subtracts the retentions released; and any deductions of expenditure made by MS] during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting.

(6) In order to calculate the weighted Average Error Rate (AER) for the total relevant expenditure in the reporting year, the detected error rates have been used – or an equivalent. The detected error rate for FP7 and H2020 was used for the budget implemented by DG CONNECT and for the budget implemented by entrusted entities.

(7) Even though to some extent based on the 7 years historic Average of Recoveries and financial Corrections (ARC), which amounts to 1.5% in DG CONNECT, which is the best available indication of the corrective capacity of the ex-post control systems implemented by the DG over the past years, the AOD has adjusted this historic average in order to come to the best but conservative estimate of the ex-post future corrections to be applied to the reporting year's relevant expenditure for the current programmes. In particular for the H2020, CIP and FP7 programmes, the average recoveries and corrections is the difference between the detected error rate and the residual error rate. This is in line with the method used by the other research DGs. Where no recoveries are expected, (for administrative expenditure, procurement, ...) a 0% rate was used.

- ***Fraud prevention, detection and correction***

DG CONNECT has developed and implemented its own anti-fraud strategy since 2009, on the basis of the methodology provided by OLAF. The strategy was last updated in February 2018 and is still fit-for-purpose.

Furthermore, DG CONNECT follows and implements the Common Anti-Fraud Strategy in the Research Family (RAFS) and its action plan. The RAFS was first established in 2012, and updated in 2015 and 2019 to respond to the new challenges of all the Research DGs and Services. The Executive Committee of the Common Implementation Centre (CIC) endorsed the updated RAFS and Action Plans on 12 March 2019. The implementation of the action plan is regularly monitored by the Steering Board and the Executive Committee of the Common Implementation Centre and the Fraud and Irregularities in Research (FAIR) Committee, in which DG CONNECT actively participates. The deadline of several actions of the 2019 action plan had to be postponed.

DG CONNECT continues to transmit information to OLAF about suspicions of fraud and other irregularities. The DG has held several meetings with OLAF concerning ongoing and closed investigations and participated in the Fraud Prevention and Detection Network organised by OLAF.

DG CONNECT has taken action in the following areas:

- Ethical behaviour of staff.
- Awareness of fraud risks for policy and financial officers and staff involved in grants and/or procurement.
- Timely implementation of OLAF reports.
- Good cooperation with stakeholders.
- Consideration of fraud risks when drafting legislative acts.

OLAF did not issue any investigation report with financial recommendation for DG CONNECT during 2019. DG CONNECT is implementing all the financial recommendations issued in the previous years and reports regularly to OLAF and DG BUDG on the status of the recoveries.

Overall, given the existing anti-fraud strategies and their implementation, it is considered that an effective and adequate fraud prevention and detection system is in place. More information on DG CONNECT's anti-fraud strategy can be found in annex 10, section 1 point C.

#### Entrusted entities

DG CONNECT ensures through its supervisory role that the entrusted entities have appropriate fraud prevention and detection measures in place.

The Commission Anti-Fraud Strategy is binding for all Commission services and the executive agencies. The DGs and executive agencies of the research family also adhere to the Common Anti-Fraud Strategy in the Research Family. DG CONNECT ensures compliance of the BEREC Office, ENISA and the ECSEL JU with anti-fraud requirements through its participation in their government boards.

ECSEL's Government Board adopted the Common Anti-Fraud Strategy in the Research Family in 2015 and is represented in the Fraud and Irregularities in Research (FAIR) Committee. The majority of its staff members participated in anti-fraud trainings.

Both ENISA and the BEREC Office implement their own anti-fraud strategies and action plans. The BEREC Office updated its strategy and the action plan in early 2020, ENISA is in the process of revising its strategy.

As regards the AAL Association, fraud is addressed in the risk management and ex-post audit strategy of the AAL Joint Programme agreed between the Commission and the AALA in July 2015. It obliges the national programme management agencies to provide an overview of their audit system. In particular, they provide the AAL Association - and in turn the Commission - information concerning the audit and control procedures to prevent fraud and irregularities.

For the Financial Instruments under management by the EIB, the fraud prevention strategy is based on the principles agreed between the Commission and the EIB. Specifically for the CEF Broadband Fund, since the project bond financing has already been executed and bonds are transparently traded on the Paris stock exchange, this transparency is the central fraud prevention measure. Similarly, the European Investment Fund (EIF) is in charge of the implementation of the Cultural and Creative Sectors Guarantee Facility in compliance with the Financial Regulation, the Financial and Administrative Framework Agreement and specific conditions laid down in the Delegation Agreement signed by the Commission and the EIF, which contains provisions on fraud prevention and detection and reporting on control results.

Overall, given the anti-fraud measures put in place by the entrusted entities and the fact that the information available did not provide any unfavourable observations concerning fraud prevention, detection and correction, it is considered that the entities have put in place an effective and adequate fraud prevention and detection system.

- ***Other control objectives: safeguarding of assets and information, reliability of reporting (if applicable)***

#### **Other control objectives: safeguarding of assets and information**

The assets reported by DG CONNECT in the balance sheet 2019 mainly concern short term and long term pre-financing related to the Horizon 2020 programme and the control system is covered in the section of the management of those programmes. A separate control strategy for safeguarding the assets is not deemed necessary for 2019.

#### **Other control objectives: Off-balance sheet items**

The contingent liabilities reported by DG CONNECT in 2019 (EUR 18.8 million) represent the open balance of the guarantee paid to the EIB for the project PBI in 2013 (EUR 7 million) and 2014 (EUR 13 million), later merged and currently called CEF DI financial instrument. The 'other significant disclosures' (EUR 2 176.6 million) reported in 2019 are related to the open 'RAL' for research grants in Horizon 2020 as well as other non-research grants and procurement files for Horizon 2020, CEF and Creative Europe MEDIA programmes. A separate control strategy is not deemed necessary for 2019.

## ***2. Efficiency = the Time-to-... indicators and other efficiency indicators***

The control **system for grant management under direct management of DG-CONNECT** is divided into four distinct stages: programming, evaluation and selection of proposals (stage 1), contracting (stage 2), monitoring the execution of the projects (stage 3) and ex-post controls and recoveries (stage 4). Key

indicators were defined for each stage. The efficiency indicators of each stage were analysed. A summary of the main indicators is presented below.

<b>Efficiency Indicators for the system of grant management</b>			
<b>Stage</b>	<b>Indicator</b>	<b>2019</b>	<b>2018</b>
<b>1</b>	Level of execution of the Work programme	100%	100%
	Attractiveness of the calls	9 proposals received for each selected proposal (average)	6.6 proposals received for each selected proposal (average)
	Average time-to-inform	114 days	109 days
	Evaluation review procedures number of successful evaluation reviews/total number of proposals received	0	1
	Time-to-pay evaluation experts	10.9 calendar days	12.8 calendar days
<b>2</b>	Time-to-grant	229 days	210 days
<b>3</b>	Time-to-pay	99.0% of the total number of payments were paid on time	98.5% of the total number of payments were paid on time
	Average project management cost	125.95 FTE for 952 projects with an average budget of EUR 5 738 633	99.13 FTE for 1074 projects the average budget was EUR 51 764 129
<b>4</b>	See section on legality and regularity of the AAR		

Based on an assessment of the most relevant key indicators above and control results (for details see annex 10, section 1, point D), it is considered that an efficient control system has been put in place.

The same conclusion can be reached for the cases under **indirect management**. Based on the reports and other available information related to the efficiency of the entities entrusted with budget implementation tasks, having no reason to believe that their reports would be incomplete or unreliable and not having received any unfavourable observations with regard to the efficiency of their operations, DG CONNECT concludes from the information available that resources assigned have been used efficiently.

In order to improve control efficiency in financial management, DG CONNECT has introduced, a new on-line system for organising meetings and reimbursing experts (AGM – Advanced Gateway to your Meetings). Some advantages of the use of AGM are a) paperless and on-line (e.g. no emails) organisation of meetings, b) reimbursement process centralised in PMO and c) reduced payment time of reimbursements.

### **3. Economy = the cost of controls**

As described above, the control system for grant management is divided into four distinct stages. Key indicators have been defined for each stage of the process.

The table below provides an estimate of the total costs of control for direct grant

management within DG CONNECT including the costs of the shared services. The estimated cost of controls for each of the four stages was calculated based on the corporate methodology for the estimation, assessment and reporting on the cost-effectiveness of controls. The details of the calculation are available in annex 10, section 1, point E.

The total cost of control within DG CONNECT for direct grant management can be evaluated at approximately EUR 32.5 million, corresponding to 2.56% of the total operational grant payments made in 2019. Including the costs of common services (REA and CIC), this percentage would reach 4.22%. This percentage is slightly higher than last year (3.31%).

The increase of the overall rate is linked to the increase of costs in each of the first three stages, and also to the decrease of total payments from EUR 1 465.99 million in 2018 to EUR 1 269.34 million in 2019.

DG CONNECT costs of controls	Overall rate 2019	Overall rate 2018
Stage 1 – programming and evaluation	0.38%	0.25%
Stage 2 – contracting	0.25%	0.19%
Stage 3 – monitoring the execution	1.87%	1.36%
Stage 4 – ex-post controls and recoveries	0.06%	0.05%
<b>TOTAL</b>	<b>2.56%</b>	<b>1.85%</b>
DG CONNECT share in cost of the corporate services	1.66%	1.46%
Overall cost effectiveness for grant management in DG CONNECT	4.22%	3.31%

The cost incurred by DG CONNECT for the monitoring and the supervision of the entities entrusted with budget implementation tasks amounts, approximately, EUR 3.57 million. They include primarily personnel costs (in total 24 Full Time Equivalents) and mission costs to attend supervisory board meetings for entities not based in Brussels.

The average cost of monitoring and supervision of the executive agencies, ECSEL, AAL Association, BEREC/BEREC Office, ENISA, the Financial Instruments and payments made under cross-subdelegations represent 0.52% of the operational payments made to these entities. This is slightly higher than last year's 0.36%. The reason for the increase of the overall rate is mainly explained due to the increased number of FTEs involved in the supervision of the executive agencies.

Entity	Overall rate 2019	Overall rate 2018
EC services through cross-sub delegations <sup>14</sup>	1.86%	0.33%
Executive agencies	0.39%	0.17%
ECSEL	0.24%	0.18%
BEREC Office	8.46%	10.64%
ENISA	3.02%	4.36%
Active and Assisted Living Association	0.95%	0.82%
CCS GF ( <i>Guarantee fund</i> )	1.42%	1.85%
CEBF ( <i>Equity instrument</i> )		

<sup>14</sup> For 'Administrative expenditure cross-subdelegated', the supervision arrangements are based on the principle of controlling 'with' the relevant entity. Being a Commission service itself, the Authorising Officer by delegation (AOD) of the cross-delegated service is required to implement the expenditure/appropriations subject to the same rules, responsibilities and accountability arrangements, notably on efficiency and cost effectiveness.

CEF Broadband Fund ( <i>Debt instrument</i> )		
TOTAL	<b>0.52%</b>	<b>0.36%</b>

The BEREC Office and ENISA have relatively small annual budgets. They do not manage calls for proposals, and the EU funds serve mainly for staff remuneration and administration purposes. They nevertheless have to fulfil a number of administrative requirements similar to all EU agencies but weigh more heavily on smaller agencies due to significant fixed costs and inability to take advantage of economies of scale. This explains the relatively high cost of control ratio.

The estimated cost of control has also been calculated at entrusted entity level. The details are provided in annex 10, section 1, point E.

#### **4. Conclusion on the cost-effectiveness of controls**

Based on the most relevant key indicators and control results, DG CONNECT has assessed the effectiveness, efficiency and economy of the control system and reached a positive conclusion on the cost-effectiveness of controls for which it is responsible. The benefits of the grant management control system are considered as a whole, as they cannot only be expressed in monetary terms.

The first objective of the control system is to achieve the related policy objective – to create growth and jobs. In this sense, the controls aim to ensure good work programmes, select the best proposals to be funded and verify the scientific deliverables. Thus, the benefits are much wider than the budget implemented in the given year.

The second objective of the control system is to ensure that the EU contribution paid to the beneficiaries is complying with internal control objectives. This means, in short, legal and regular transactions done in a cost-effective way. This report develops at several points how the balance between these two requirements has been found.

The benefits are not always quantitative and a simple cost benefit evaluation would not reflect this reality. Nevertheless, during the different control stages, some economies could be estimated as mentioned in this report.

Overall, it is considered that a cost-effective control system is in place given:

- the successful policy achievements as set out in Part 1;
- the quantitative and qualitative benefits arising from the control systems adopted;
- the error rates set out above, which are at a level considered as being an appropriate balance between different policy objectives and between trust and control;
- the costs of the control system compared to the level of expenditure;
- the good results as regards the efficiency of the time-to-pay, time-to-inform and time-to-grant indicators.

Considering the above and the fact that the control environment of DG CONNECT did not change in 2019, the control strategy over this expenditure will be maintained. However, the new MFF and the changes in the activities of the DG will trigger changes to the internal control system of the DG.

The DG involvement in the governance of the various entrusted entities did not show any events issues or problems that could have a material impact on assurance as regards effectiveness of controls.

Also, in absence of contradictory information in the reports received, efficiency is considered adequate. Although it can be seen that there are variations in the cost of controls ratios on entity level due to the specific situations of the BEREC Office and ENISA, also a positive conclusion can be reached concerning the economy of the control system.

The DG's control environment and control strategy for the various entrusted entities is stable compared to previous years. Given the above mentioned good control results, the current control strategy is also maintained.

## 2.1.2 Audit observations and recommendations

This section sets out the observations, opinions and conclusions reported by auditors – including the limited conclusion of the Internal Auditor on the state of internal control. Summaries of the management measures taken in response to the audit recommendations are also included, together with an assessment of the likely material impact of the findings on the achievement of the internal control objectives, and therefore on management's assurance.

### Internal Audit Service (IAS)

Seven **IAS engagements** were relevant to DG CONNECT, comprising an individual audit, four multi-DG audits and two consulting engagements related to executive agencies. Only the audit on better regulation was closed in 2019 with two important recommendations for which DG CONNECT defined an action plan. Details are provided in annex 10, point F.

In its contribution to the 2019 AAR process, the **IAS provided a limited conclusion on the state of internal control in DG CONNECT**, concluding that the internal control system in place for the audited processes is effective, except for a "very important" recommendation regarding the performance framework of CEF Telecom. In particular, DG CONNECT should put in place a performance framework that provides an overview of the performance of individual Digital Service Infrastructures and their contribution to the implementation of the annual CEF work programmes. DG CONNECT implemented most of the planned actions (five out of seven) to address the recommendation and mitigate the risks. In particular, DG CONNECT introduced a new comprehensive performance framework based on a full set of KPIs meeting the SMART and RACER criteria (including result indicators), which, aggregated, allow to monitor the overall performance of the CEF Telecom programme (see annex 10, point F). Note that the IAS did not yet perform a follow up audit on the implementation of this recommendation.

### Conclusion

As a result of the assessment of the risks underlying the auditors' observations together with the management measures taken or planned in response, DG CONNECT believes that the recommendations issued do not have a major impact on the declaration of assurance. All recommendations issued by the IAS, including the very important recommendation on CEF Telecom, are subject to a systematic follow-up and their status of implementation is closely monitored.

### European Court of Auditors (ECA)

In 2019, apart from its annual report, three multi-DG ECA performance audits, one review and a briefing were relevant to DG CONNECT. Details for each of

these exercises are provided in annex 10, point F.

DG CONNECT is mostly concerned by Chapter 5 of the annual report of the European Court of Auditors for the financial year 2018, namely 'Competitiveness for growth and jobs'. The error rate for Chapter 5 is of 2%, which is significantly lower than in the last two years, when the estimated level of error was slightly above 4%. Research spending remains a higher-risk area and the main source of error due to a reimbursement system based on the declaration of eligible costs. The calculation of personnel costs remains a major source of error, particularly for new entrants and SMEs.

In 2019, the ECA closed two multi-DG audits and one rapid case concerning DG CONNECT:

- **Cross-Border Health Care access in Europe:** EU actions in cross-border healthcare are ambitious and enhance Member States collaboration, but they require better management.
- **Performance Audit on INEA:** INEA fulfilled the delegated tasks and expected results, with some limitations. The ECA found shortcomings in the implementation of CEF.
- **Rapid case review on the transparency and efficiency of the support to EURONEWS:** EU support helps Euronews to broaden its coverage of European affairs but funding needs to be better monitored.

In addition, the ECA closed a briefing paper on the EU support for energy storage and started an audit on the Digitising Europe Industry initiative. At the end of 2019, DG CONNECT was lead service for three open recommendations from the Court stemming from the special report on broadband in the EU Member States.

Further details on all these exercises are provided in Annex 10, point F.

## Conclusion

As a result of the assessment of the risks underlying the auditor's observations, together with the management measures taken or planned in response, the management of DG CONNECT believes that the recommendations issued by the ECA do not raise any critical assurance implications and are being implemented as part of the on-going continuous efforts in terms of further improvements.

At the end of 2019, action plans to address the ECA recommendations were in place for broadband, cross-border health and EURONEWS, and the plan for INEA was under preparation.

## 2.1.3 Assessment of the effectiveness of internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, to ensure the achievement of its policy and management objectives. Compliance with the internal control framework is a compulsory requirement.

DG CONNECT uses the organisational structure and the internal control systems suited to achieving its policy and internal control objectives in accordance with the internal control principles and has due regard to the risks associated with the environment in which it operates. DG CONNECT assesses on a continuous basis



the effectiveness of its internal control systems, in order to determine whether they work as intended and ensuring that any control weaknesses in the system are detected, analysed and considered for improvement.

The end of year assessment is based on a the assessment of a number of indicators called internal control monitoring criteria and the analysis of various sources of other information such as the register of deviations, IAS and ECA audit findings and the risk register. For a summary of the end of year assessment, please refer to annex 11.

On basis of its assessment of the above elements, DG CONNECT concluded that its internal control system during the reporting year is effective and that the components and principles are present and functioning as intended. However, and without qualifying the conclusion, minor deficiencies were observed for the Principles 10 and 13 respectively:

Performance framework of the CEF Programme and its monitoring: DG CONNECT has one open very important IAS recommendation concerning the need to put in place a performance framework that provides an overview of the performance of individual DSIs and their contribution to the implementation of the annual CEF work programmes. In view of the progress in the implementation of the related action plan at the end of 2019, which already addresses a large part of the risks identified by the IAS, the risk linked to this recommendation is considered to be low (more details on the IAS recommendations are provided in section 2.1.2).

Training/coaching of unit secretariat and DMO correspondent: The participation of DG CONNECT secretariats and DMO correspondents to document management trainings (70%) may lead to a lower than planned (100%) awareness among staff concerning the most recent changes to document management rules. Considering the actions undertaken by Management to mitigate the risk including the dissemination of information on management of documents, the risk is considered to be low.

## **2.1.4 Conclusions on the assurance**

This section reviews the assessment of the elements reported above (in Sections 2.1.1, 2.1.2 and 2.1.3), and the sub-conclusions already reached. It draws an overall conclusion to support the declaration of assurance and whether it should be qualified with reservations. The information reported in section 2.1 results from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director-General of DG CONNECT.

The statement of assurance is based on the analysis of the internal control system established in DG CONNECT supported by the conclusions of the audits from the IAS and ECA which did not highlight any critical recommendation, the IAS opinion, the conclusions of the review of the effective implementation of the internal control principles and the reports received from cross delegated Authorising Officers by Delegation, the INEA, REA, EACEA and EASME executive agencies, the EIB, the ECSEL Joint Undertaking, the Active and Assisted Living Joint Programme and the BEREC Office and ENISA Decentralised Agencies.

DG CONNECT's assessment on legality and regularity concluded on a residual error rate for H2020 of 2.36% and 3.19% for FP7.

For H2020, the audit results suggest that the detected representative error rate

will remain within the established range (between 2% and 5%). Together with the experience in FP7, they also suggest that the objective for the residual error rate will be respected. As a result, DG CONNECT does not consider that a reservation is needed for Horizon 2020 expenditure.

The audit work for FP7 is completed. The Common Representative Error Rate is 5.45%. The residual error rate for DG CONNECT amounts to 3.19% with a corresponding amount at risk (including the relevant FP7 expenditure of ECSEL and AAL) of EUR 702.6k. By the end of the programming period, the Residual Error Rate will not be below the materiality threshold defined in Annex 4 'Materiality Criteria'. However, given the limited payments of the year (EUR 22.02 million i.e. below 5% of the total payments) and the limited financial impact (EUR 702.6k i.e. below EUR 5 million), and in accordance with the de-minimis rule<sup>15</sup>, no reservation is issued. The possibilities to simplify the FP7 rules have been exhausted. The last projects are now in the final stage of implementation: the total amounts paid per year are very low and will further decrease, reducing also the financial impact.

In 2018, DG CONNECT made a reservation on the CIP payments. However, in view of the very limited amounts of payments (EUR 49k) and the minor financial impact (EUR 3.7k), and in accordance with the de-minimis rule, that reservation is also lifted.

In its 2018 annual report, the Court of Auditors concludes on an error rate of 2% for the entire 2017 spending in the MFF chapter 'Competitiveness for growth and jobs'. This figure is significantly lower than in the last two years, when the estimated level of error was slightly above 4%. However, the Court points out that research spending remains a higher-risk area and the main source of error under Chapter 5.

In the annual limited conclusion of the IAS on the state of Internal Control in DG CONNECT, the IAS concludes that the internal control system in place for the audited processes are effective, except for a 'very important' recommendation that needs to be addressed regarding CEF Telecom. In particular DG CONNECT needs to put in place a performance framework that provides an overview of the performance of individual DSIs and their contribution to the implementation of the annual CEF work programmes. DG CONNECT is duly addressing this recommendation in line with the agreed action plan.

### **Overall amount at risk at closure**

For DG CONNECT, the estimated overall amount at risk at payment for the 2019 expenditure is between EUR 38.78 and 39.39 million. This is the AOD's best, conservative estimation of the amount of relevant expenditure during the year (EUR 1 242.1 million) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.

The conservatively estimated future corrections for the 2019 expenditure amount to EUR 11.3 million. This is the amount of errors that the DG conservatively estimates to identify and correct from controls that it will implement in successive years. The difference between those two amounts leads to the estimated overall

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<sup>15</sup> As from 2019, a 'de minimis' threshold for financial reservations is introduced. Quantified AAR reservations related to residual error rates above the 2% materiality threshold, are deemed not substantial for segments representing less than 5% of a DG's total payments and with a financial impact below EUR 5 million. In such cases, quantified reservations are no longer needed.

amount at risk at closure between EUR 27.5 and 28.1 million.

### **Overall Conclusion**

In conclusion, management has reasonable assurance that, overall, suitable controls are in place and working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director-General, in his capacity as Authorising Officer by Delegation has signed the Declaration of Assurance.

# DECLARATION OF ASSURANCE

*I, the undersigned, Roberto Viola*

***Director-General of Directorate-General for Communications Networks, Content and Technology***

***In my capacity as authorising officer by delegation***

***Declare that the information contained in this report gives a true and fair view<sup>16</sup>.***

***State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.***

***This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the Internal Audit Service -and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.***

***Confirm that I am not aware of anything not reported here which could harm the interests of the institution.***

***Brussels, 31 March 2020***

***<e-Signed>***

***Roberto Viola***

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<sup>16</sup> True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG.

## 2.2 Other organisational management dimensions

### 2.2.1 Human resource management

The main challenges for DG CONNECT in the area of HR management have been the overall human resources reduction despite the very high number of policy initiatives and legislative files, the reduction in support levels and the increase of DG CONNECT presence in Luxembourg.

The way HR services are being delivered staff has significantly changed in the past years. While the strategic HR decisions remain the competence of DG CONNECT's small HR Business Correspondent (HR BC) team, the bulk of the administrative implementation of the HR decisions has been delegated to the Account Management Centre 3 Unit of DG HR.

In 2019, the top priorities were to relieve the HR BC of non-strategic tasks, to improve processes, especially in the area of selection and recruitment, to improve and roll-out the Staff Matters Portal across all HR domains and to improve HR IT tools (Sysper, etc.) and data analytics.

In light of the overall pressure on human resources, DG CONNECT carefully monitored the **allocation of human resources** in light of political and operational priorities, while meeting its yearly obligations in terms of resources reduction as laid down by the Budgetary Authority. This included the redeployment of staff from support functions to operational activities.



As a result of the renewed political agreement between the Commission and the Luxembourg authorities, the Commission committed to further **increase the presence of services and staff in Luxembourg** within the legal, financial and digital areas. DG CONNECT activities being gradually transferred concern mainly eInfrastructure & Science Cloud, High Performance Computing & Quantum Technology, eHealth and eGovernment & Trust (Digital Pole).

The DG CONNECT quantitative target of 6 first **female appointments at middle management level** as of 01/05/2017 – as set out in the Commission decision SEC(2017)359 – was reached by 01/01/2019.

In order to properly equip staff with the necessary skills, competences and knowledge required for the completion of the DG's political and operational priorities, DG CONNECT management approved a **Learning & Development Strategy** tailored to the needs of the DG.

DG CONNECT followed-up to the 2018 Commission staff satisfaction survey, with a DG participation rate of 68% and an employee engagement score of 68%, in line with the Commission average and +8% compared to the 2016 survey. With a view to maintain a high level of staff satisfaction despite the many HR challenges, DG CONNECT endorsed a **development plan**, after having duly consulted staff. The DG implements actions to address staff concerns and make DG CONNECT an even better place to work. In particular the 'We are CONNECT' flagship initiative continued with the aim to increase the sense of belonging to DG CONNECT, and hence staff engagement, and to promote knowledge-sharing and cooperation.

## 2.2.2 Better regulation

The policy implementation and planning unit of DG CONNECT provided support for the implementation of most of the Better Regulation policy cycle requirements as well as their implementation in the DG (Standard Operating Procedures) through the organisation of a training session in spring 2019. The Unit provided direct assistance on the preparation, monitoring and coordinating the policy/strategic planning activities as well as REFIT reporting and REFIT Platform input. Two impact assessments and several public and targeted consultations were organised. A new framework contract was signed in December 2019 to support DG CONNECT in the preparation of impact assessments and evaluations. The IAS performed an audit on Better Regulation in 2019 (see section 2.1.2).

## 2.2.3 Information management aspects

The corporate strategy for data, knowledge and information management aims to improve the way we manage data, information and knowledge assets within the Commission and to enable collaborative working. A multi-annual Work Programme, which is defined by the Information Management Team and adopted by the Information Management Steering Board (IMSB), implements the strategy.

During the reporting year, DG CONNECT did a complete check of the ARES/NOMCOM-filing plan. This was followed-up with information and a guidance note sent to all staff.

On external collaboration, our Futurium citizen engagement platform hosts a growing number of thematic communities. The platform hosts now 40 thematic stakeholder communities, has more than 22 000 members (up from 13 500 in 2018) and hosts 2500 post/comments and 1400 documents. In 2019, Futurium has attracted more than 380 000 visits.

DORIS (Data Oriented Service) is our flagship system providing data analytics services in support to DG CONNECT units for processing stakeholder feedback. To date, DORIS supported 200 consultations run by ~120 Units in 26 DGs.

The Stakeholder Relation Management (SRM) tool is designed to share knowledge regarding stakeholders and ensure GDPR compliance. The Advanced Virtual Assistant (AVA) helps preparing meetings with stakeholders as well as drawing up meeting reports, managing and sharing stakeholder information, informing participants, etc. SRM/AVA is now available to the entire DG.

### **Data protection**

In November 2018, the Commission adopted an action plan to prepare its services for the entry into force of the new data protection regulation nr 2018/1725 applicable to European institutions and bodies.

DG CONNECT's Data Protection Coordinator (DPC) prepared a Data Protection Action Plan specific for DG CONNECT. In this context, the DG's 17 legacy notifications were revised and where needed converted into records. There are only three legacy notifications which are still in the process of being converted. Three new data processing activities have been identified and the records and Privacy Statements are currently being drafted.

To be prepared for data breaches, DG CONNECT adopted a Standard Operating

Procedure (SOP) including guidance for the data controllers. Five data breaches were identified in 2019. In one instance the European Data Protection Supervisor was notified because it could not be concluded that the data breach was unlikely to result in a risk for the rights and freedoms of natural persons.

DG CONNECT's DPC is also providing support and advice to the data controllers to improve the quality of the information provided to data subjects (staff and citizens) and to facilitate the exercise of data subjects' rights. In particular, the DPC has been assisting data controllers in the revision of existing privacy statements in terms of content (concise, transparent, intelligible, using clear and plain language) and visibility (easily accessible form) and in the drafting of new ones, when necessary, following the above-mentioned lines. In 2019, DG CONNECT received 3 requests for exercise of data subjects' rights. In all cases, the data subjects were satisfied with the action taken by the DG. With regard to the facilitation of data subjects' rights, the DPC is drafting, in consultation with the data controllers, a procedure for the exercise of data subjects' rights.

With the aim of effectively implementing the accountability principle, the Data Protection Coordinator organised trainings and special awareness raising activities.

## 2.2.4 External communication activities

Our main communication challenges were (a) the closing of DSM actions and wrap-up communication on all the DSM achievements, and (b) the preparation of the new Commission and new priorities communication planning and strategy mainly by streamlining all our messages to relevant audiences increasing effectiveness via all our media channels including the web, tailored made audio-visual material and social media.

During the Juncker Commission our external communication concentrated mostly on the initiatives which make up the Digital Single Market, and occasionally feeding our topics to the three corporate communication campaigns, namely #InvestEU, #EUProtects and #EU&Me. We used press channel through the SPP centralized communication and web and social media channels at DG level.

DG CONNECT topics have been widely covered by media and social media all over Europe, and awareness of our policies among Europeans remained relatively high.

We replaced the previous media monitoring external contract with a more efficient and in-house solution which costs less and is more appreciated by the units and the DG CONNECT management.

**Audio visual products** are the core for much of the communication work we do whether for the web or social media. An estimate of 600 various visual "products" were designed in 2019. **Factsheets** remained the main tool to explain policy issues using visuals and figures.

Other work was related to **Infographics** (including stories on Intra-EU calls, eHealth and cybersecurity); coordinating the **summer brochures series** (altogether 34 brochures) on all our key topics; the team's involvement in **campaigns/projects for the social media** was on a rise (including the DSM #DigitalYou campaign in April, our communication efforts on copyright or the Advent calendar in December).

The year finished with close cooperation with DG COMM's graphic designers team to prepare the **MoodBoard** for the Digital priority of the new Commission and an

extensive icon library for all to use.

On the video side, the videos on the YouTube DSM channel received **nearly 1.7 million views** in 2019, compared to 128,865 views in 2018.

10 episodes of **Futuris** were produced by Euronews focusing on DG CONNECT projects, including quantum, artificial intelligence, supercomputers or e-health.

On copyright, in preparation of the adoption of the directive and after, we used our Social Media channels to explain and clarify the controversial points of the directive that created a lot of negative publicity and complaints especially certain aspects that were taken up by some MEPs and/or internet activists as (allegedly) detrimental to freedom of speech and other (digital) rights. As a result we prepared a set of FAQs in all the EU languages.

On the #digitalYou campaign, this was planned via our Social Media pages (Twitter, Instagram & Facebook) with daily posts during the 100 days before the European elections to show the policies & progress we made in the previous years thanks to the Digital Single Market, with concrete examples in the digital topics in areas like AI, Telecoms, eHealth, Media, Digital Culture, eGovernment, Blockchain, Data, Supercomputer. We used dedicated thematic weeks touching upon one key topic per week.

## THE EXAMPLES OF ECONOMY AND EFFICIENCY

In line with the prior analysis carried out within the context of the Synergies and Efficiencies Review, DG CONNECT has launched pilot projects and adopted some measures, which were pursued in 2019, in order to optimize the use of resources and improve efficiency, thus contributing to a leaner, less bureaucratic, better integrated and more flexible Commission. This includes focussing resources on frontline activities by minimising the number of staff working in support functions and internal redeployment to strive towards a more balanced and reasonable level of support, in accordance with the targets agreed with DG HR. The yearly target for 2019/20 amounted to 20 full time equivalents and the cumulative target 2016-2019/20 to 95 full time equivalents.

As an outcome of the above-mentioned Review, the HR function across the Commission is being modernised and largely centralised. Within this context, DG CONNECT participated to the launch of the second pilot phase, which started in 2017 and was fully rolled out over 2019. More specifically, beyond the savings of 17 full time equivalents, DG CONNECT discussed proposals and made recommendations on the new processes and HR governance structure, contributing to synergies and efficiencies in HR management across the Commission.