



2017

Annual Activity Report

**DG Communications
Networks, Content
and Technology**



This Annual Activity Report for the year 2017 covers the activities of the Commission's Directorate-General for Communications Networks, Content and Technology (DG CONNECT).

A Connected Digital Single Market (DSM) constitutes one of the top priorities of President Juncker, which is implemented through the Commission's 2015 DSM Strategy. The 2017 mid-term review of the Strategy shows that the Commission has delivered all main initiatives for building a true DSM but important pieces of legislation are still being discussed between the European Parliament and Council.

First tangible results for the benefit of the European citizens have been realised, with mobile roaming charges having been abolished since 15 June 2017 and unjustified geoblocking in the EU being abolished as of 3 December 2018 thanks to a political agreement reached in November 2017.

The European Parliament and the Council also reached political agreements on other important initiatives, like the WiFi4EU voucher scheme, which will provide free public wi-fi networks in 6000 to 8000 communities across the EU, and the use of the ultra-high frequency band in the EU, allowing wireless broadband and innovative 5G use across the Union. Finally, the EU transposed the Marrakesh Treaty to facilitate access to books for visually impaired persons into EU law.

In addition, the Commission adopted several legislative proposals prepared by DG CONNECT, on ePrivacy, the Free Flow of Non-Personal Data in the EU and a Cybersecurity Package, establishing a European cybersecurity research and competence centre, and an EU-wide certification scheme for secure products and services.

Moreover, ministers of 7 Member States committed to concrete progress in high performance computing by signing the EuroHPC Declaration on 23 March 2017 during the Digital Day, which was part of the celebrations of the 60 years of the Treaties of Rome celebrations. By the end of the year, 12 Member States had joined. The same day, a Letter of Intent to intensify cooperation on testing of automated road transport in cross-border test sites paving the way for a first set of cross-border corridors which have been agreed later in the year.

In December 2017, the Digital Opportunity Traineeships were launched which will provide on-the-job trainings to students and recent graduates of all faculties focusing on advanced digital skills.

DG CONNECT also implements important EU programmes which are geared to deliver on the DSM and the Commission's objective to boost jobs, growth and innovation: the ICT part of the Research Framework Programme Horizon 2020, the telecommunications strand of the Connecting Europe Facility and the MEDIA subprogramme of Creative Europe.

Part 1 of the report sets out in detail the key policy achievements of the DG and our contribution to boost jobs, growth and investment with digital technologies improving people's lives and increasing the competitiveness of the European economy at large and its key sectors. Part 2 provides information on the management of resources allocated to the DG, and how the DG is organised internally. This section contains information about the balance that the DG found between trusting and controlling beneficiaries that it funds, and the costs and benefits of controls of the different parts of the grant management operations.

I hope that the report offers a good overview of the various operations of the DG and helps in understanding the added value that information and communication technology can bring to the EU citizens. For more information please visit our website: <https://ec.europa.eu/digital-single-market/dg-connect>

Let me close by expressing my deep gratitude to all DG CONNECT staff for their intensive efforts over 2017 allowing to reach key milestones of the Digital Single Market.

Roberto Viola

Director-General

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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.¹

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.

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.

DG CONNECT communicates and cooperates with institutional and non-institutional stakeholders at national, EU and international level in the implementation of the DSM Strategy and research programmes. Under the auspices of the College, the DG works with the College and 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 possibly 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, including the swift transposition of new European rules into national law. Internally, key partner services are the Secretariat General, the Legal Service, the Research Family DGs, in particular DG Research and Innovation, and other DGs involved in the Digital Single Market, in particular DG Internal Market, Industry, Entrepreneurship and SMEs, DG Justice and Consumers, DG Competition and DG Mobility and Transport. We cooperate closely with major policy initiatives and partnerships, such as the Grand Coalition for digital jobs.

¹ DG CONNECT's mission statement.

DG CONNECT ensures that its priorities and the international dimension of policy work are reflected in the relations with international partners, and that our policy and research activities are compliant with the Union's international commitments. This implies establishing Commission positions on bilateral level with countries and regions outside the Union, and in multilateral and international fora, including G7 and G20. To this end, DG CONNECT ensures close cooperation with the European External Action Service and other DGs on international aspects of digital policies, including countries in the EU Eastern Partnership and in particular of the Western Balkans.

As part of its overall remit, DG CONNECT implements EU research policy and supports the development of the European Research Area mainly through the Research Framework Programmes FP7 and Horizon 2020. FP7 (2007-13) is phasing out in terms of active projects while the Horizon 2020 projects are coming on stream, while preparations for the new Multiannual Financial Framework have started.

DG CONNECT supervised and governed 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 was in charge of the Electronic Components and Systems for European Leadership (ECSEL) Joint Undertaking, the Active and Assisted Living (AAL) Joint Programme, the European Union Agency for Network and Information Security (ENISA) and the Body of European Regulators for Electronic Communications (BEREC and the BEREC Office). DG CONNECT also acted 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.

In follow-up to the 2016 DG CONNECT organisation chart changes, the DG has successfully implemented the requirements resulting from the Synergies & Efficiencies Review in accordance with the yearly targets set by DG Human Resources. DG CONNECT focussed resources on core priorities by reducing over time support staff and contributed to the implementation of the political agreement to gradually increase Commission staff and services in Luxembourg.

EXECUTIVE SUMMARY

The 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 constitutes 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 Treaties².



a) Key results and progress towards the achievement of general and specific objectives of the DG (executive summary of section 1)

1) General Objective "A Connected Digital Single Market"

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

Since May 2015, the Commission has delivered on all proposals and policy initiatives announced in its Digital Single Market strategy. It has presented 35 proposals and policy initiatives which all seek to remove existing online barriers and allowing citizens, business and governments to benefit from the growing connected online digital market place. Overall, good progress has been made and agreements have been reached on most of these proposals as set out in the **Mid-Term Review on the implementation of the Digital Single Market Strategy - A Connected Digital Single Market for All** of May 2017. The Commission called for swift agreements by the European Parliament and the Council on the proposals under the Digital Single Market Strategy and for all parties to ensure that the measures proposed are rapidly adopted and implemented to allow people and businesses in the EU to fully benefit from a functional Digital Single Market.

² Article 17(1) of the Treaty on European Union.

The Commission identified three main areas where further EU action is needed: **(1) to develop the European Data Economy to its full potential, (2) to protect Europe's assets by tackling cybersecurity challenges, and (3) to promote the online platforms as responsible players of a fair internet ecosystem.**

In addition, the review explores a number of important policy areas critical for unlocking the true value of the data economy: digital skills, digitising industry and services (e.g. connected cars), High-performance computing, artificial intelligence, modernising public services and e-government and digital health and care.



On 14 June 2017, the EU legislators adopted the Regulation on **cross-border portability of online content services**, which sets new rules allowing Europeans to travel and enjoy online content services across borders.

Following intensive negotiations between the co-legislators, **political agreement on a Regulation to put an end to unjustified geo-blocking** has been achieved in November 2017. Removing such discrimination and getting companies to change their current behaviour online will bring significant benefits to European consumers, such as improved access to information and wider choice.

"Ending unfair geoblocking is a great step forward for consumers and the building of a real Digital Single Market working for all. Along with the end of roaming charges and portability, EU citizens will be able to buy their new furniture online, book hotel rooms or use their credit card across borders, like at home." Mariya Gabriel

The MEDIA sub-programme has made a significant contribution to the Digital Single Market. It **strengthens the capacity of the audiovisual industry** to take advantage of the single market through cross-border collaboration, circulation and access, thus overcoming national fragmented markets. MEDIA has also provided concrete **support to industry to adapt in the light of a changing business and regulatory environment** by supporting innovative distribution strategies and business models in order to spur companies to scale up their activities, which is essential to be competitive within the digital single market.

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

15 June 2017 marked the date for the end of **roaming surcharges for all travellers in the EU**. These “**Roam-like-at-home**” rules entered into force successfully benefitting all EU citizens travelling outside their home country within the EU.



Securing network and information systems in the EU is essential to keep the online economy running and to ensure prosperity. The European Union works on a number of fronts to promote cyber resilience across the EU. On 13 September 2017, the Commission adopted a "**cybersecurity package**" that included a comprehensive set of measures tackling what the Commission considers the key priorities in cybersecurity: reinforced resilience, the creation of a single market for cybersecurity, effective EU cyber deterrence and strengthened international cooperation.

In line with the objective to increase trust in and the security of digital services, the Commission adopted in January 2017 a proposal for a **Regulation on Privacy and Electronic Communications** aimed at revising and updating the ePrivacy Directive. DG CONNECT supports the effort of the co-legislators to ensure a swift adoption to provide a high level of privacy protection for users of electronic communications services and a level playing field for all market players. The proposal will enhance harmonisation of the rules for businesses and the level of protection of privacy and personal data for end-users in line with the new General Data Protection Regulation that will apply as of 25 May 2018.

Following the 2016 **Communication on Online Platforms**, DG CONNECT prepared guidance on the liability of online platforms in the form of a Communication adopted in September 2017, clarifying the actions that the Commission expects online platforms to take to tackle illegal content.

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

High-performance computing (HPC) is the use of super computers and parallel processing techniques for solving complex computational problems. In the digital era, it is a strategic resource for Europe's future. High-performance computing, enabling the processing of large amounts of data, is at the core of major advances and innovation in the digital age. Over 2017, 12 EU Member States signed the **EuroHPC Declaration**. This political commitment to work together and with the Commission on a high-performance computing initiative led to the Commission's proposal for a Council Regulation establishing a **Joint Undertaking on HPC**, which was adopted on 11 January 2018.

On 10 January 2017, the Commission adopted a Communication on **Building a European Data Economy**, which looks at proven or potential blockages to the free movement of data and presents options to remove unjustified and or disproportionate data location restrictions in the EU. It also considers the barriers around access to and transfer of non-personal machine-generated data, data liability, as well as issues related to the portability of non-personal data, interoperability and standards. Data driven innovation is a key enabler of growth and jobs and has the potential to significantly boost

European competitiveness in the global market. In order to make the most of the data economy, it is essential to enable data to flow across borders and to use data beyond national borders. Removing data localisation restrictions is considered the most important factor for the data economy to unlock its full potential, and to grow up to 739 Bn€ in 2020, doubling its value to 4% of GDP. Moreover, removing existing data localisation measures will drive down the costs of data services, provide companies greater flexibility in organising their data management and data analytics, while expanding their use and choice of providers. On 13 September 2017, the Commission delivered on its commitment and adopted the **proposal for a Regulation on a Framework for the Free Flow of Non-personal Data in the EU** aiming at a more competitive and integrated internal market for data storage and other processing services and activities.

Following the identification of priorities on **ICT standardisation**, the Commission continues supporting the development of the standards needed to ensure interoperability for the completion of the Digital Single Market in important domains such as 5G, Internet of Things, cybersecurity, Data and Cloud; and with wider impact on the digital transformation on industry and consumers (e.g. Industry 4.0; eHealth; Cooperative, Connected and Automated Mobility), as well as measures to improve the overall ICT standardisation framework, through a series of different actions.

The spread of digital is having a massive impact on the labour market and the type of skills needed in the economy and society. To boost the digital skills of all Europeans, the Commission continued to support the Digital Skills and Jobs Coalition and the EU Code Week and launched in December 2017 a pilot initiative, called "Digital Opportunity Traineeships" to provide on-the-job trainings to students and recent graduates of all faculties focusing on advanced digital skills.

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

DG CONNECT brought together policy, regulatory and funding measures to improve connectivity through future-proof and ubiquitous digital networks and service infrastructures.

On 17 May 2017, the European Parliament and the Council adopted the **Decision on the use of the 470-790 MHz (UHF) frequency band** in the Union to better coordinate long-term spectrum use within the ultra-high frequency band and in particular to boost mobile services by ensuring the use of more radio frequencies from the 700 MHz band, which is ideal for providing high-quality internet to users whether they are indoors in a large city, in a small distant village or on a highway, used in line with EU-level harmonised technical conditions by 2020.

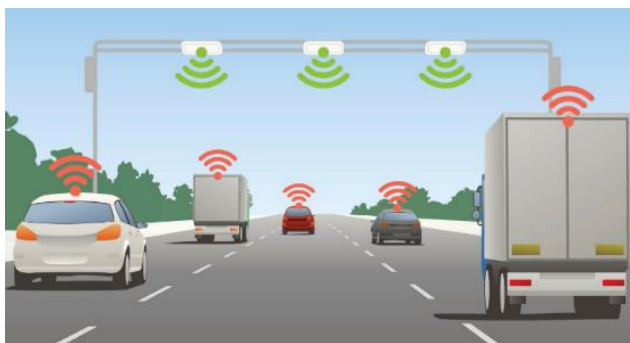


At least 6000 to 8000 local communities will be able to benefit from a total funding of €120 million until 2020.

As part of the 2016 "Connectivity package", the **WiFi4EU initiative** was adopted on 25 October 2017 by

the European Parliament and the Council. This voucher scheme will start its first call in 2018, supports installing free public Wi-Fi hotspots in local communities across the EU.

On **Cooperative, Connected and Automated Mobility (CCAM)**, 27 Member States plus Norway and Switzerland signed the Letter of Intent on cross-border demonstration and testing of CCAM on the Digital Day, 23 March 2017, in Rome. Building further on this initiative, six cross-border initiatives have been announced by Member States.



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

In September 2017, the co-legislator adopted legislation providing a wider access of books and texts for people who are visually impaired or have other print disabilities in a format suitable for them.

Europeana is the Commission's digital platform for cultural heritage. Through Europeana, citizens and the cultural and creative industries can access European culture for the widest possible variety of purposes. In September 2017, the funding instrument for the **Europeana** core service has been changed to ensure sustainability of the core service platform.

In its first full year of activity, the **Cultural and Creative Sectors Guarantee Facility** which is a financial instrument of Creative Europe has already exceeded its target. Transactions with banks across Europe for a total of 38 M€ (in Spain, Romania, France, Italy, Belgium and the Czech Republic) were signed. They are expected to generate 358 M€ of leveraged financing. The European Fund for Strategic Investment has already enhanced its participation in the facility up to an amount of 60 M€. The overall size of the facility has increased from 121 M€ to 181 M€, and is expected to generate more than 1 bn€ of loan financing for SMEs operating in the cultural and creative sectors.

2) General Objective "A New Boost for Jobs, Growth and Investment"

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 Startup Europe initiative. Startup Europe has been closely working with national and regional representatives to ensure consistency among their initiatives to create startups ecosystems. New activities have been designed jointly with DG International Cooperation and Development in the area of extending Startup Europe to third countries, notably Africa. Startup Europe has taken a leading role in coordinating policies and programmes developed by other DGs, in particular DG Research and Innovation and DG Internal Market, Industry, Entrepreneurship and SMEs.

One of the major show stoppers for the **smart cities** uptake is the lack of ICT city interoperability based on an open standards platform. 2017 saw DG CONNECT chairing the European Innovation Partnership for Smart cities and Communities (EIP SCC) and organising its General Assembly with its Urban Platform Initiative having a fast growing stakeholder support (110 cities and 93 industries).

The Digital Single Market mid-term review identified three priorities in the area of **eHealth and ageing**: secure access and exchange of electronic health records, data infrastructure for personalised medicine and innovation for user empowerment and integrate care. Consequently, a public consultation "Transformation of Health and Care in the DSM" was conducted in 2017 to prepare a Communication on Digital Transformation of Health and Care in the Digital Single Market.

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

Future Emerging Technologies (FET) Flagships are ambitious, highly-risky, long term and large scale research and innovation initiatives pursuing grand interdisciplinary scientific and technological challenges. The two **Flagships, Graphene and the Human Brain Project (HBP)** have been producing outstanding results since their start in October 2013: more that two thousand top-class scientific publications, 46 Graphene prototypes delivered, 156 Software or software based services released by HBP, 6 spin-out companies created and more than 350 concrete collaborations with industry resulting in 17 new products and 60 patent applications.

The Commission's Expert Group on Quantum Technology published in November 2017 its final report with recommendations on the governance and implementation modalities, including industrial aspects. This was the basis for the ramp-up phase of the **FET Flagship on Quantum**, with the first elements of the Strategic Research Agenda implemented by the Horizon 2020 Work Programme 2018.

With respect to **FET Proactive** which encourages researchers from different disciplines to work together on new technologies in specific domains, around 100 FP7 and 63 Horizon 2020 projects were managed by the DG.

Contractual Public-Private Partnerships (cPPPs) play a strategic role and are of key importance in the support to ICT. In total, seven PPPs are now supported entirely or partly through the H2020 Leadership in Enabling and Industrial Technologies -ICT (LEIT-ICT): 5G, Photonics, Robotics, Big Data, Factories of the Future, High Performance Computing and the Cybersecurity. In addition to the cPPPs, DG CONNECT continues financing the Electronic Components and Systems for European Leadership (ECSEL) Joint Undertaking. A **mid-term review of the cPPPs** over the first three years of Horizon 2020 was carried out by a group of independent experts and completed in September 2017. Whilst recognising that the instrument is too young to provide an exhaustive evaluation, the experts concluded that cPPPs broadly achieved the purpose for which they were created.

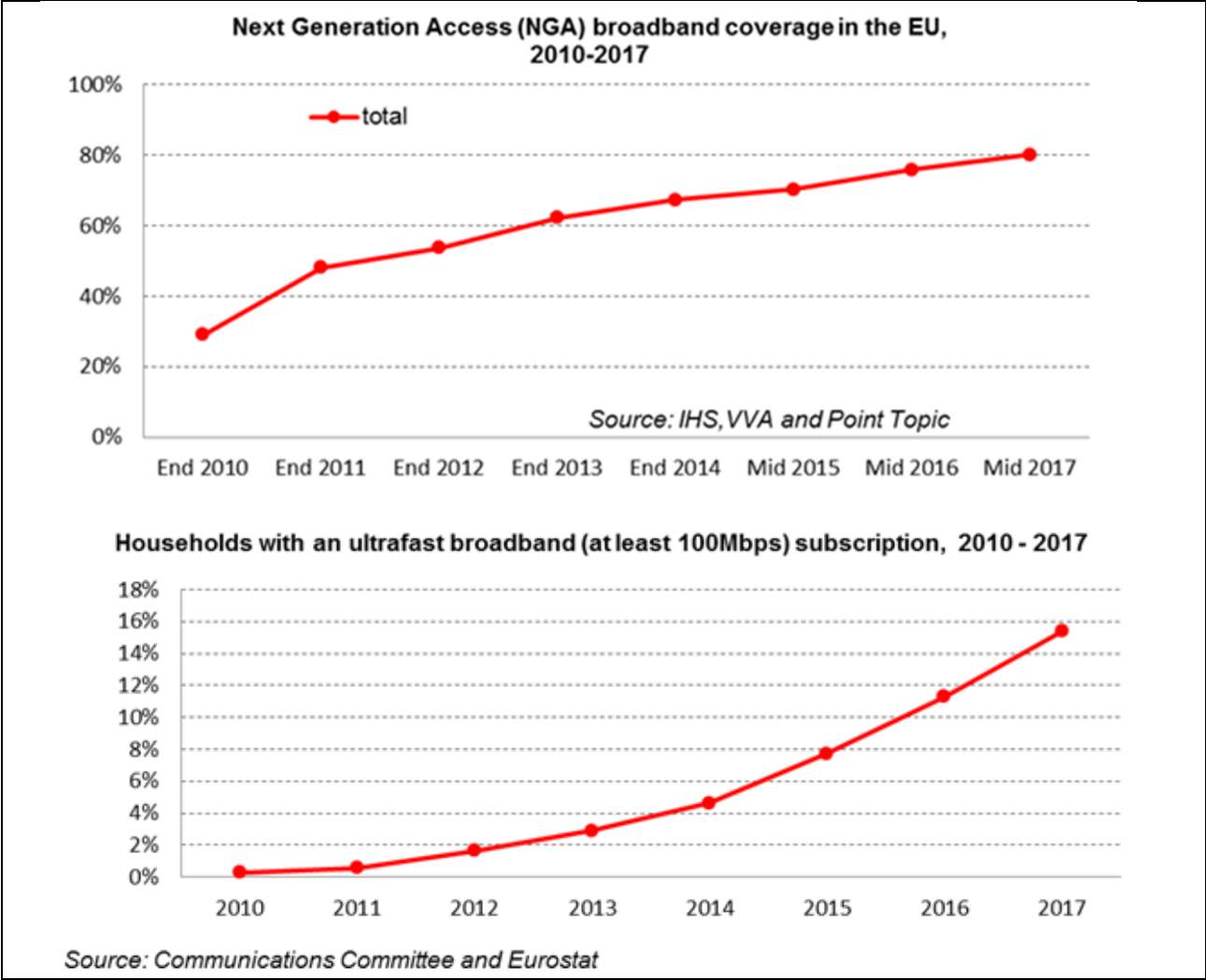
b) Key Performance Indicators (KPIs)

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.

KPI 1: Increased portability of online content service	
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 Portability Regulation was adopted on 14 June 2017 and will be applicable as of 1 April 2018, when 100% paid-for subscriptions for online content services will be portable across borders.

KPI 2: Deployment of network infrastructure promoting a Gigabit society		
Interim milestone (2020)	Target (2025)	Latest known results (July 2017)
<p>a) 100% coverage at 30 Mbps (EU citizens, DAE target³)</p> <p>b) 50% take-up at 100 Mbps (households, DAE target³)</p>	<p>c) Coverage of all main socio-economic drivers (such as schools, transport hubs and main providers of public services as well as digitally intensive enterprises) with Gigabit connectivity allowing 1 Gbps download, 100 Mbps upload and very low latency.</p> <p>The targets for coverage were determined in September 2016 in the context of the Gigabit Communication adopted as part of the Telecom review.</p>	<p>a) Next Generation Internet Access (NGA) 80% coverage at 30 Mbps (EU citizens, DAE target)</p> <p>b) 15.4% take-up at 100 Mbps (households, DAE target)</p> <p>c) Data not yet available</p>

³ The Digital Agenda for Europe (DAE) is part of the Europe 2020 strategy and was adopted by the Commission on 19 May 2010. It defined a set actions to contribute significantly to the EU's economic growth and spread the benefits of the digital era to all sections of society. One of the seven DAE's priority area of actions is to develop faster internet access.

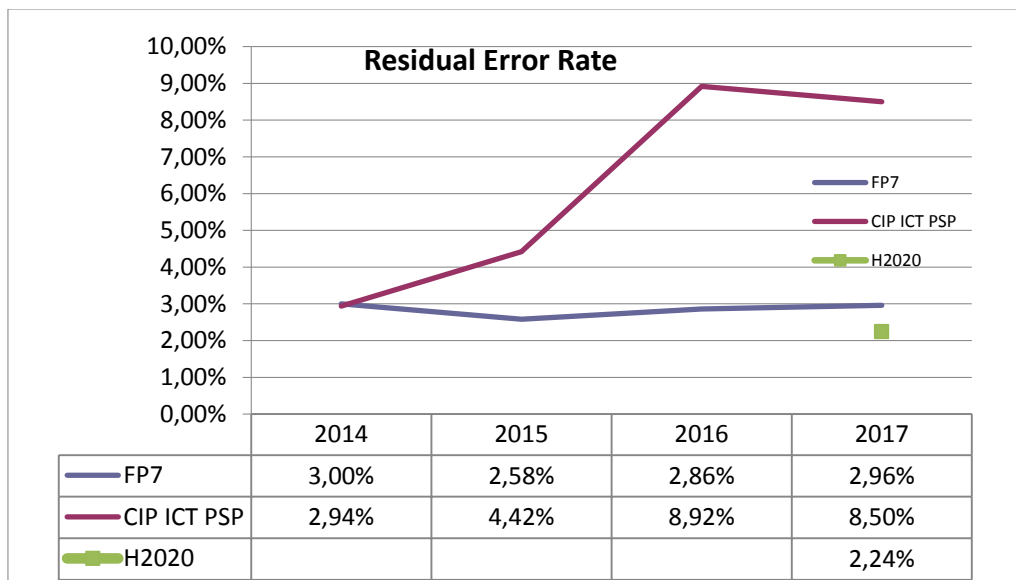


KPI 3: Leveraging private investment through Private Public Partnerships		
Interim Milestone (2017)	Target (2020)	Latest known results
Additional private funding matching at least EU funding (i.e. 1.3 Bn€).	Private investment at least 3 times the total EU funding for the cPPPs.	Private investment estimates as reported by the cPPP associations for 2016 ⁴ is at least three times the value of the EC contribution to cPPP projects. 2017 leverage information will be available from 1 September 2018 based on published cPPP report.

⁴ For leveraging private investment through PPPs KPI, data source for the latest known results does not meet performance indicator criteria as data source is coming from information received from cPPP associations in the context of the annual monitoring exercise for 2016. The cPPP mid-term review identified a lack of consistent methodology to collect and elaborate the leverage private investment ratios between the different cPPPs. To remediate this weakness and in the context of the 2017 exercise, the Commission plans to engage external experts who will look at the draft reports to be submitted by the cPPPs and provide guidance on KPIs.

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)	
Target as defined in the Horizon 2020 Specific Programme	Latest known results (source: CORDA (31.12.2017)).
Target at the end of H2020: LEIT ICT: 3 patent applications per 10 M€ funding FET: 1 patent application per 10 M€ funding	LEIT ICT: 23 patents applications (= 0.1/ 10 M€ funding), 3 patents awarded (= 0.01/ 10 M€ funding). FET: 62 patents applications (= 2.16/ 10 M€ funding), 5 patents awarded (= 0.17/10 M€ funding). Output data is collected through the continuous project reporting of beneficiaries under their own responsibility. At this early stage of data reporting, no systematic data quality check has been performed, hence data is solely based on self-declarations of project coordinators. The preliminary statistics for LEIT ICT show progress in the number of patents applications and patents awarded. However, as many Horizon 2020 projects are in their early phases, they have not yet produced large numbers of patents as patenting and commercial exploitation often take a long time.

KPI 5: H2020, FP7 and CIP ex-post control residual error rate



H2020

Given the early stage of the programme lifecycle, a limited number of audits have been finalised. In total, the audit of 392 participations were audited and the detected error rate in the first common representative sample is 1,6%. However, if we take into account the draft audit reports then the expected representative error rate for the full sample will be around 2,82%. The residual error rate (i.e. the rate of error remaining after corrections (recoveries, offsettings) have been made) for the research family is 1,44 %, and is expected to rise to around 2,24% when taking into account the draft audit reports.

FP7

The residual error rate of the Seventh Research Framework Programme (FP7) amounts to 2,96% and is above the 2% materiality threshold. DG CONNECT therefore issues a reservation as in the past years and in line with similar reservations expressed by the other DGs of the Research Family.

CIP-ICT-PSP

The residual error rate for the Competitiveness and Innovation Programme (CIP) ICT PSP amounts to 8,50%. The residual error rate will not decrease under the materiality threshold and DG CONNECT therefore also expresses a reservation on the legality and regularity of these payments as last year. The residual error rate of the CIP ICT PSP programme should be considered with caution. Contrary to FP7 for which the calculations of the error rates are based on a large number of cost statements, the CIP error rate calculations are based on a number of audits which is more limited. In 2017, the 10 audits with the highest adjustments account for 59% of the total amount adjusted. Without these 10 audits, the detected error rate would be of 4,2% which is similar to the FP7 representative error rate. Given the similarity of the control systems of the FP7 and CIP ICT PSP programmes, such error rate would be plausible.

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, the staff of 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.

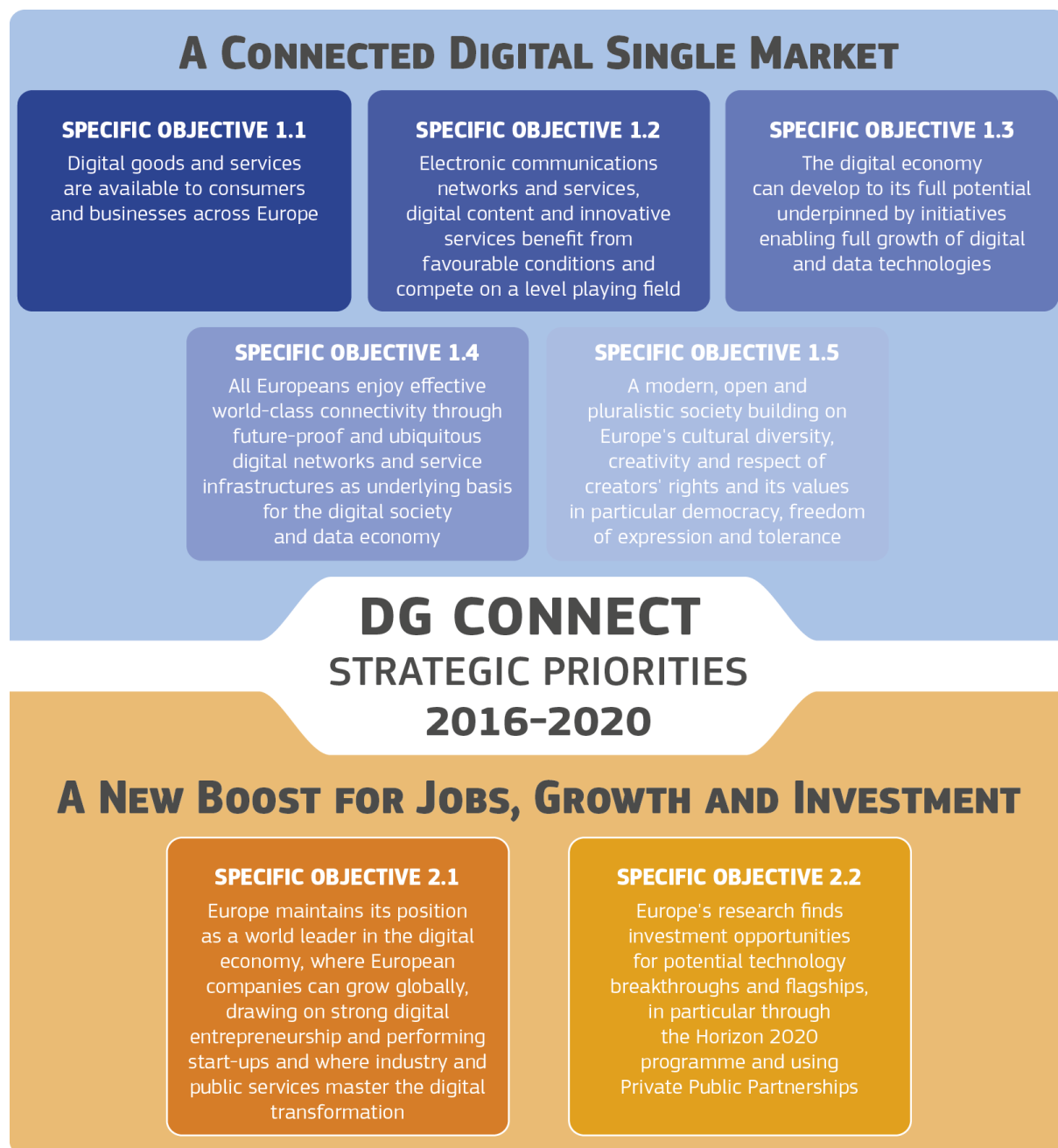
The Commission has adopted a set of internal control standards, based on international good practice, aimed to ensure the achievement of policy and operational objectives. The financial regulation requires that the organisational structure and the internal control systems used for the implementation of the budget are set up in accordance with these standards. DG CONNECT has assessed the internal control systems during the reporting year and has concluded that the internal control standards are implemented and function 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 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 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 albeit qualified by a reservation concerning the rate of residual errors with regard to the accuracy of cost claims in the 7th Research Framework Programme's and the ICT PSP part of the Competitiveness and Innovation Framework Programme's grant agreements.

d) Provision of information to the Commissioner

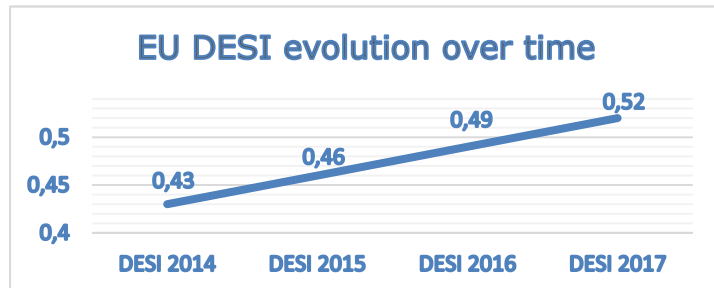
In the context of the regular meetings during the year between the DG and the Commissioner on management matters, also the main elements of this report and assurance declaration, including the reservations envisaged have been brought to the attention of Vice-President Andrus Ansip, responsible for Digital Economy and Society until 6 July 2017 and Commissioner Mariya Gabriel, responsible for Digital Economy and Society as of 7 July 2017.



1. KEY RESULTS AND PROGRESS TOWARDS THE ACHIEVEMENT OF GENERAL AND SPECIFIC OBJECTIVES OF THE DG

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. According to the 2017 data, the score has steadily increased from 0.43 to 0.52 between 2014 and 2017.



As digital technologies are changing very quickly, the methodology to calculate the index is reviewed every year. In its 2016-2020 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 2014 baseline of 13 Member States, the target value corresponds to a DESI score of 0.45 and 23 EU countries are already above this target in 2017.


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

Related to spending programme: Creative Europe MEDIA


The value of e-commerce in the EU is growing, but its full potential still remains untapped

On 20 November 2017, the European Parliament, the Council and the Commission reached a **political agreement to end unjustified geoblocking** for consumers wishing to buy products or services online within the EU, after intense negotiations on the details of the text, delivering on one of the priority commitments of the Digital Single Market Strategy. The new rules, which will enter into force by the end of 2018, will ensure that consumers no longer face unjustified barriers such as being re-routed back to a country-specific website, or asked to pay with a debit or credit card from a certain country.

The sale of goods (without physical delivery)

 A Belgian customer wishes to buy a refrigerator and finds the best deal on a German website. The customer can order the product and collect it at the trader's premises or organise delivery himself.

The sale of electronically supplied services

 A Bulgarian consumer wishes to buy hosting services for her website from a Spanish company. She will now have same access to the service as the Spanish consumers.

The sale of services provided in a specific physical location

 An Italian family can buy a trip directly to an amusement park in France without being redirected to an Italian website.

The ambitious **copyright modernisation package** – three Regulations and two Directives – constitutes a key element of the Digital Single Market Strategy. The co-legislators made significant progress in the adoption of the proposals.

The Regulation on cross-border portability of online content services was adopted on 14 June 2017 and will apply as from April 2018. It will allow EU citizens to access and use portable online content services they have subscribed to at home, such as online music, film or games, when they are temporarily present in another Member State.

The negotiations on the two other proposals, the **Directive on copyright in the DSM** and the **Regulation on online transmissions of broadcasters and retransmissions of TV and radio programmes**, are ongoing in the EP and Council. Both proposals aim at ensuring i) better choice and access to content online and across borders, ii) improved copyright rules on research, education and inclusion of disabled people, and iii) a fairer and sustainable marketplace for creators, the creative industries and the press.

The MEDIA programme has effectively accompanied the copyright modernisation package through activities which support the adaptation of the audiovisual industry to the challenges and opportunities of the DSM. For example, the MEDIA Work Programme 2018 introduced a requirement for MEDIA supported works to use standard identifiers in order to facilitate rights clearance and cross-border distribution. Also, more effective sharing of publicly funded subtitling was promoted, thus fostering cross-border circulation. More broadly, MEDIA supports innovative distribution strategies and business models in order to spur companies to scale up their activities, which is essential to be competitive within the digital single market.

Over the past decade, the EU political and legislative context, the online environment and the **top level domain** market have changed considerably, posing both strategic challenges and opportunities for the .eu TLD. Hence, after 15 years since the adoption of the first .eu Regulation, a REFIT (Regulatory Fitness and Performance Programme) initiative was conducted to ensure that the .eu legal framework still serves its intended purpose. It included a "back-to-back" evaluation (including an online public consultation) and impact assessment, which forms the bases for future action. According to the evaluation findings, although the .eu TLD is a well-established domain, it shows early signs of stagnation, due in part to the rigidity of its set-up, which prevents it from reacting with the necessary flexibility to technological changes. The core problem is that the current regulatory framework insufficiently supports the stability and sustainability of the .eu TLD and does not fully exploit the potential of the .eu TLD for the DSM implementation and for the promotion of the EU's online identity.

Specific objective 1.2:

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

Related to
spending
programme(s):
Horizon 2020

DG CONNECT played a central role in the successful negotiations on the new **Wholesale Roaming Regulation**, providing the necessary analysis to enable



a rapid convergence of the European Parliament and the

Council on the final text of the new Regulation, which was formally adopted in April 2017. DG CONNECT then played an active role, in close collaboration with national regulatory authorities, to ensure a smooth and successful implementation of **the new roam-like-at-home rules by mobile operators throughout the EU from 15 June 2017**. Overall compliance by mobile operators with the new roaming rules has been observed. The sustainability derogations by NRAs were granted where expected. Consumers have become rapidly and widely aware of the rules and many have already significantly changed their roaming behaviour last summer as shown by a Eurobarometer survey carried out in September 2017.

"The European Union is about bringing people together and making their lives easier. The end of roaming charges is a true European success story."

Jean-Claude Juncker

On 13 September 2017, the Commission adopted a "**Cybersecurity package**" that included a comprehensive set of measures tackling the key priorities in cybersecurity: reinforced resilience, the creation of a single market for cybersecurity, effective EU cyber deterrence and strengthened international cooperation. The package is composed of a number of legislative and non-legislative initiatives:

- A Joint Communication of the Commission and the European External Action Service "Resilience, Deterrence and Defence: Building strong cybersecurity for the EU".
- The "EU Cybersecurity Act" - a proposal for a Regulation on ENISA to become the "EU Cybersecurity Agency" and on ICT cybersecurity certification. This proposal is currently being negotiated with the co-legislators with the aim to adopt it in spring 2019.
- The Commission recommendation on "Coordinated Response to Large Scale Cybersecurity Incidents and Crisis (Blueprint)".
- A Communication "Making the most of Network Information Security – towards effective implementation of Directive (EU) 2016/1148 concerning measures for a high common level of security of network and information systems across the Union".
- A proposal for a Directive on combating fraud and counterfeiting of non-cash means of payment; and a report assessing Member States' measures to comply with the Directive on attacks against information systems, both prepared by DG Migration and Home Affairs.



STEPPING UP EUROPEAN CYBERSECURITY

The EU will be equipped with a **European Cybersecurity Agency** to assist Member States in dealing with cyber-attacks, as well as a new **European certification scheme** that will ensure that digital products and services are safe to use. *(proposed in September 2017)*



In light of the expiry of the **ENISA** mandate in 2020 the Commission conducted an extensive assessment regarding the current performance and future role of ENISA which included stakeholder

consultations. The evaluation in particular focused on assessing ENISA in terms of relevance, effectiveness, efficiency, coherence and EU value-added. Overall, the evaluation concluded that ENISA's objectives remain relevant today. Despite its small budget, the Agency has been operationally efficient in the use of its resources. In terms of effectiveness, ENISA partially met its objectives, which can partly be explained by the high reliance on external expertise over in-house expertise, and by the difficulties in recruiting and retaining specialised staff. ENISA managed to make an impact in the vast field of network and information security with its added value lying primarily in its ability to enhance cooperation mainly between Member States and in the fact that there is no other actor at EU level that supports such broad scope of network and information security stakeholders. The largely positive outcome of this evaluation was also a key factor in ENISA being proposed to take on a strengthened role within the Cybersecurity Act in September 2017.

Following the 2016 Communication on Strengthening Europe's Cyber Resilience System and Fostering a Competitive and Innovative Cybersecurity Industry, the **European Cybersecurity Organisation (ECSO) was established as a public-private partnership**. The ECSO increased to 230 members representing all market segments, with six working groups on the industry side of the covering cybersecurity aspects of certification, market analysis, SMEs, skills and research.

The Commission also adopted a proposal for the **ePrivacy Regulation** in January 2017 with a view to an entry of application at the same time as the General Data Protection Regulation in May 2018. DG CONNECT facilitated the work of the co-legislators throughout 2017.

Interinstitutional negotiations are on-going on **the proposal for a Directive establishing the European Electronic Communications Code and on the proposal for a Regulation establishing the Board of European Regulators for Electronic Communications (BEREC)**. In the context of the political dialogue with the national parliaments, the Commission informed national Parliaments about the compliance of the proposals with the principles of subsidiarity and proportionality. Furthermore, following the adoption of the two texts, the Commission carried out a public consultation with the view to taking stock of the opinion of the different stakeholders on the adopted texts. DG CONNECT assisted the co-legislators during the discussion of the texts, feeding the debate with clarifications, background information and legal analysis. Two informal interinstitutional trilogues took place during the last quarter of 2017, with the view to reaching a political agreement at first reading as early as June 2018.

The adoption of the Decision on Termination Rates has been postponed in view of the parallel negotiations on the European Electronic Communications Code. In parallel, DG CONNECT has continued to work on the conceptual approach to the regulatory treatment of termination rates.

Complementing the regulatory framework, conditions have been put in place to support EU **deployment of 5G through a trial roadmap**, which has been supported by key actors of the EU 5G landscape. In addition, 19 demo projects were launched under Horizon 2020, supporting the validation of 5G by industrial users.

The **FIWARE⁵ Foundation**, established end of 2016, opened its office in Berlin in January 2017 and has grown to 15 staff. It has increased its strategic collaboration with other initiatives, such as the Connecting Europe Facility (CEF), ETSI (European Telecommunications Standards Institute), TM (TeleManagement) Forum, the Industrial Data Space initiative and many more. For instance, ETSI has started an Industry Specification Group to develop technical specifications on context information management based on FIWARE, aiming to integrate these specifications in the overarching OneM2M architecture on IoT (global standards initiative for Machine to Machine Communications and the Internet of Things) architecture. These collaborations contribute to the growth of the FIWARE ecosystem.

The negotiations between the co-legislators on the proposal for a Directive amending the **Audiovisual Media Services (AVMS) Directive** are on-going, with 5 trilogue meetings held in 2017. The Commission assisted the co-legislators during the negotiations, providing clarifications and answering questions at numerous technical meetings and during trilogues. Most of the provisions have been provisionally closed although there are still important provisions that have not been discussed yet. The adoption of the Directive legislative proposal is expected in the 1st half of 2018.

Concerning **Online platforms**, the Commission stepped up the fight against illegal content, in particular through a Communication prepared by DG CONNECT, setting out the actions that the Commission expects online platforms to take, in terms of detection, identification and removal of such material. The Commission continued to monitor the progress in this domain through a number of stakeholder dialogues.

In parallel, evidence gathering continued throughout 2017 on potentially unfair trading practices in platforms-to-business relations, through dedicated studies, workshops, and economic modelling. This work was carried out as part of an impact assessment, with a view to preparing possible measures in spring 2018.

Only 2 Member States have notified an eID scheme to the Commission under the eIDAS Regulation, with other Member States being in the process to notify. They have until September 2018 to notify and have committed to respect this target during the 2017 Tallinn Summit. In the **eGovernment Tallinn declaration**, signed on 6 October 2017, the Member States reaffirmed their commitment to progress in linking up their public eServices and implement the eIDAS Regulation and the Once-Only Principle to provide efficient and secure digital public services that will make citizens' and businesses' lives easier. It marks a new political commitment at EU level on priorities that will ensure high quality, user-centric digital public services for citizens as well as seamless cross-border public services for businesses.

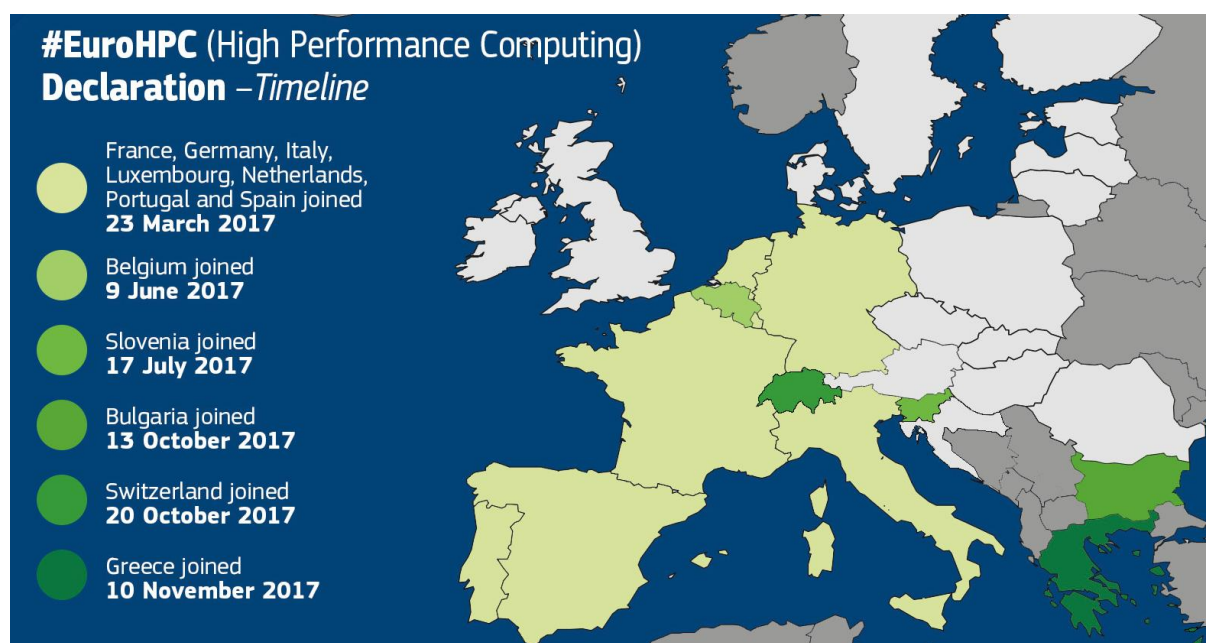
⁵ FIWARE is an open platform technology which consists of a set of high multifunctional software components available to any developer community (www.fiware.org).

The CEF Digital Service Infrastructure (DSI) building block take up has gained momentum in 2017. The deployment in the Member States at both national and regional level has progressed in particular in the sectorial DSI included in the CEF Regulation, such as the Business Registers Interconnection System (BRIS) DSI and the eJustice DSI. Furthermore 2017 was also the first year where the reuse of the building blocks beyond the CEF Regulation really took off, for instance in the 'tabacco reporting' area and in the maritime area.

Specific objective 1.3:
The digital economy can develop to its full potential underpinned by initiatives enabling full growth of digital and data technologies.

Related to spending programme(s):
 Horizon 2020, CEF

By the end of the year, the **EuroHPC** Declaration was signed by 12 EU Member States (France, Germany, Italy, Luxembourg, the Netherlands, Portugal, Spain, Belgium, Slovenia, Bulgaria, Greece, Croatia and one associated country, namely Switzerland. Contacts are ongoing with the other Member States and associated countries to sign. This political commitment to work together and with the Commission on a **High Performance Computing (HPC) initiative** led to the Commission's proposal for a Council Regulation establishing a Joint Undertaking on HPC adopted on 11 January 2018.



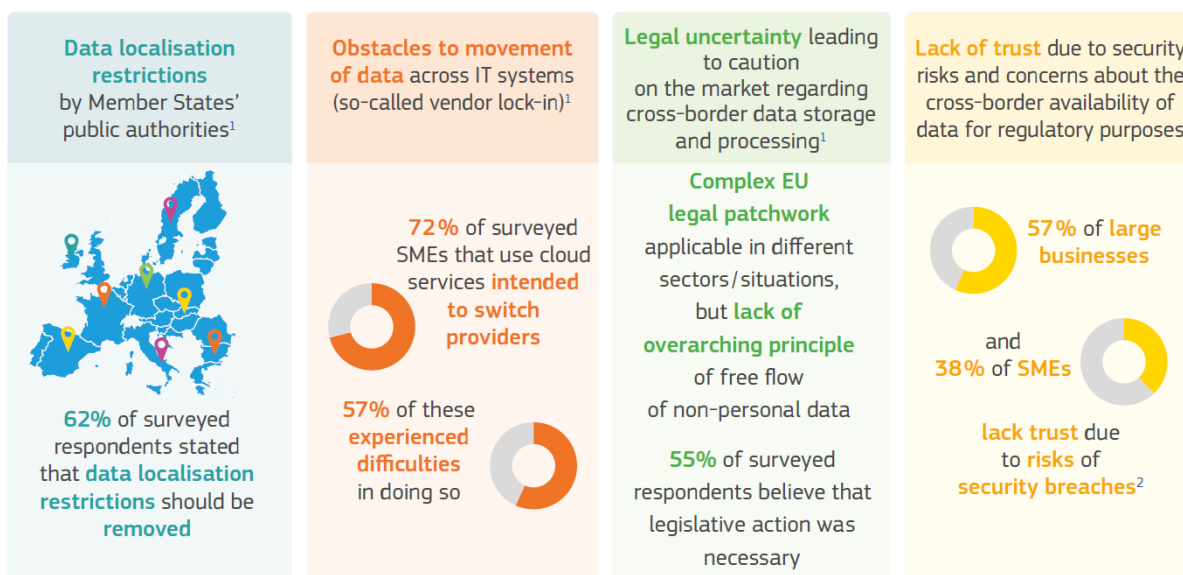
On 13 September 2017, the Commission adopted a proposal for a Regulation on a **Framework for the Free Flow of Non-personal Data** in the European Union, which aims at a more competitive and integrated internal market for data storage and other processing services and activities. The main pillars of the proposal are:

- improving the mobility of non-personal data in the single market, which is limited in many Member States by localisation restrictions or legal uncertainty in the market;
- ensuring that the powers of competent authorities to request and receive access to data for regulatory control purposes remain unaffected; and

- making it easier for professional users of data storage or other processing services to switch service providers and to port data.

What is the situation today?

The European Commission has identified 4 types of obstacles to data mobility within the EU:



The 2017 Data Economy Communication raised a series of issues around the ever-increasing amount of data created by machines, sensors or processes. In the mid-term review of the DSM Strategy, the Commission announced an **initiative on accessibility and re-use of public and publicly funded data** and to further explore the issue of privately held data which are of public interest. The Commission also stated that it would continue to assess the need for action concerning the emerging data issues as identified in the 2017 Data Communication. Preparatory work began in the second half of 2017, in particular for the review of the Public Sector Information Directive with a study to support the impact assessment and a public online consultation.

The focus of the **Digitising European Industry (DEI)** initiative was on implementation. The European Platform of National Initiatives was set up during the Digital Day in Rome in March 2017⁶, providing a forum to discuss the state of play and to exchange best practices. Overall, 15 national initiatives joined this European Platform so far and more are under preparation. Moreover, first calls for proposals related to digital innovation hubs and digital industrial platforms were launched and projects were selected. Two roundtables related to the DEI initiative took place, steering the initiative in the right direction and mobilising EU Member States. Also, a very successful first DEI European Stakeholder Forum gathered several hundred stakeholders to discuss the current state of play.

⁶ <https://ec.europa.eu/digital-single-market/en/news/digitising-european-industry-2-years-brochure>

With 100 M€ per year for **Digital Innovation Hubs**, the Commission has also achieved significant progress and its intervention has accelerated and further scaled up the effort of the Member States on those Hubs, notably through the I4MS (ICT for manufacturing SMEs) and Smart Anything Anywhere (SAE) initiatives. They are supporting hundreds of innovation experiments per year to help start-ups, SMEs and mid-caps in their digital transformation. In 2017 a coaching and mentoring initiative for the development of 29 potential new Hubs concluded, and a 2 M€ worth initiative was launched focussing in particular on regions with slower adoption of digital technologies, especially in the new Member States. Moreover, a catalogue of Digital Innovation Hubs has also been launched to enable SME and Digital Innovation Hubs across the EU to find the right set of competences for their digital transformation⁷. Together with the Member States and the digital PPPs, value chains across six sectors were analysed and selected as priorities for the next digital industrial R&I programme. These are Connected Smart Factories, Smart Agriculture, Digital Transformation of Health and Care, Mobility and Connected Automated Driving and Smart Energy. It led to prioritise for the period 2018-2020 1 Bn€ for digital industrial platform building, large scale testing, and pilot lines. Achievements related to the regulatory frameworks within the Digital Single Market strategy and to skills are reported in other sections of this AAR.



In order to increase the uptake of **Internet of Things (IoT)** technology in the EU, DG CONNECT worked on three pillars of action contributing to an EU single market for IoT:

- preparing a regulatory framework to increase consumer trust and investment in IoT through the Communication "Building a European Data Economy" adopted by the Commission in January 2017 and the proposal for a Regulation on Security Certification in September 2017, allowing the development of IoT certification schemes and a Trusted IoT label;
- funding five large-scale pilots under the Horizon 2020 Focus Area IoT in smart farming & food, wearables, eHealth, connected & automated driving and smart cities;
- promoting a dynamic ecosystem around IoT in liaison with the Alliance for IoT Innovation (AIOTI) and the DEI Roundtable.

On 29 November 2017, the Commission adopted a **Communication Setting out the EU approach to Standards Essential Patents (SEPs)** led by DG Internal Market, Industry, Entrepreneurship and SMEs where DG CONNECT contributed actively as associated DG. This communication sets out key principles to foster a balanced, smooth and predictable framework for SEPs for an efficient and sustainable ICT standardisation framework, incentivising the development and inclusion on top technologies in standards and ensuring smooth and wide dissemination of standardisation technologies needed for the DSM.

⁷ <http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

On 2 May 2017, the Commission adopted the proposal for the '**Single Digital Gateway**' Regulation led by DG Internal Market, Industry, Entrepreneurship and SMEs. DG CONNECT contributed to this proposal by introducing for the first time the '**Once-Only Principle**' for the procedures covered by the regulation, which will cut the administrative burden on businesses and citizens significantly as they will no longer have to provide a second time an evidence if they have already provided it to another administration in the European Union. In December 2017 the Council agreed on the general approach.

To boost the **digital skills** of all Europeans, the Commission continued to support the **Digital Skills and Jobs Coalition, EU Code Week** and introduced the **Digital Opportunity Traineeships**. One year after its creation, the **Coalition** now brings together more than 340 members and 90 pledgers ready to take action on reducing digital skills gaps of citizens, the labour force, ICT professionals and in education. The activities of the Coalition have so far reached several millions of citizens with thousands of awareness raising events, and over 3.7 million trainings offered on-line and face to face. Member States were also invited to develop comprehensive national digital skills strategies and the Commission encouraged the setting up of National Coalitions for Digital Skills and Jobs of which there are currently 18. The 2017 edition of **Code Week** reached around 1 million Europeans.

Many European businesses state that young people leaving school do not have the skills adapted to their needs. More than 40 % of enterprises in Europe who are looking for ICT specialists say they struggle to find the right people and ICT vacancies continue to grow. To help meet this challenge, the Commission launched in December 2017 a pilot initiative, called "**Digital Opportunity Traineeships**". The initiative will provide on-the-job trainings to students and recent graduates of all faculties focusing on advanced digital skills, which are highly requested in the labour market. The pilot will offer up to 6000 traineeships between 2018 and 2020.

The launch of the **European Open Science Cloud - Hub project**, is an important step for the development of the European Open Science Cloud (EOSC), which is one of the two main pillars of the 2016 European Cloud Initiative. The EOSC-Hub mission is to enable seamless and open access to a system of research data and services provided across nations and multiple disciplines. The project will offer these resources via the Hub – an integration and management system of the European Open Science Cloud, acting as a European-level entry point for all stakeholders. The Hub will deliver a catalogue of services, software and data from the EGI Federation (European Grid Infrastructure), EUDAT CDI (Collaborative Data Infrastructure), INDIGO-DataCloud (INtegrating Distributed data Infrastructures for Global ExpLOitation) and major research e-Infrastructures. The Hub builds on mature processes, policies and tools from the leading European federated e-Infrastructures to cover the whole life-cycle of services, from planning to delivery and aggregates services from local, regional and national e-Infrastructures in Europe and worldwide.

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/EFSD/ESIF

Cube Infrastructure Managers, the fund manager of the **Connecting Europe Broadband Fund**⁸ (CEBF), continues to pitch the Fund to a number of private institutional investors, and has multiplied physical meetings in multiple countries (Italy, Germany, Austria, Canada, US, etc.). So far, 178 investors have been contacted by the Manager, of which 25 are currently engaged in documentation review. To date (March 2018), only one has provided some form of assurance (e-mail) concerning its commitment to the Fund for 20 M€. Some investors have passed for a first closing, but have nevertheless indicated an interest to join at a later stage (second closing), when the Fund will have already financed some projects. As such, the Anchor Investors (Commission, EIB and the three National Promotional Banks and Institutions) are in the process of reviewing their internal approvals to make sure that their commitment would be maintained even in the case of a "dry close" (i.e. first closing without any private investors on board), while also reviewing the Fund's features to ensure (a higher) private participation in a potential second closing (to take place 18 months after the first).

On the investments side, the project pipeline elaborated by the Manager currently comprises 49 projects, of which 33 (representing 366 M€ total potential investments) are already in an advanced due diligence stage, allowing first projects to be funded as soon as the Fund is officially launched (current target date: 15 June 2018).

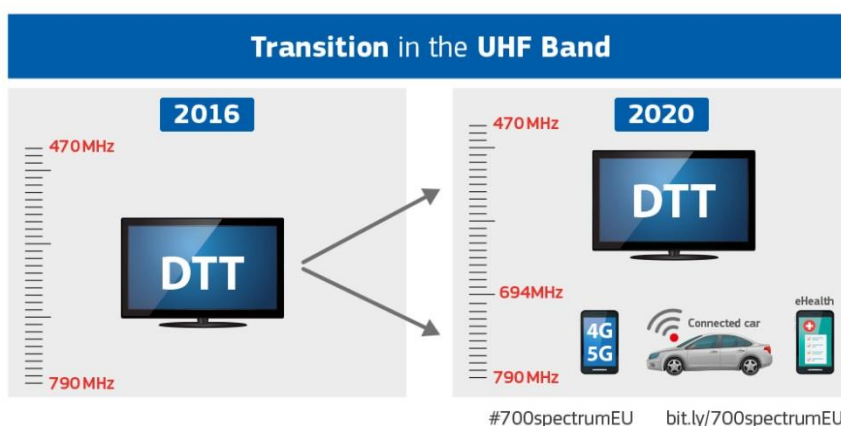
In the context of achieving the **Gigabit Society** objectives, a dedicated Communication Committee Working Group was established in September 2017, in order to facilitate best practice exchange and identification of common approaches supporting Member States reviewing and updating their **National Broadband Plans** (NBP) and establishing their 5G "paths-to-deployment". The discussions have more particularly addressed the strategic elements that should be part of these national 5G roadmaps, the need for cross-border coordination of some elements of such roadmaps, the facilitation of the deployment of small cells (network densification) and the possible role of public authorities as a lead user/buyer of advanced 5G connectivity solutions (for example in the area of public protection & disaster recovery applications). The Working Group held three meetings in 2017 and will finalise its work by April 2018. The final deliverables will be presented at the Communication Committee Meeting of June 2018.

In 2016, President Juncker launched the **WiFi4EU** initiative aiming to provide free public Wi-Fi networks in 6,000 to 8,000 communities across the EU. On 4 November 2017, the European Parliament and the Council Regulation underpinning the WiFi4EU initiative entered into force as the legal basis for a possible funding of 120 M€ using the Connecting Europe Facility (CEF) budget and other sources. Funding to the initiative's participants will be given via a simple voucher scheme, directly managed at EU level and distributed via online applications.

⁸ More details on CEBF and 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 2019

A great deal of effort has been devoted to prepare an entirely new model of spending modalities (design of financial circuits, risk management, simplification of processes, IT development, etc.). The Commission adopted the necessary amendments to the **CEF Telecom Work Programme**⁴ on 21 November 2017.

The Decision of the European Parliament and of the Council on **the long-term use of the ultra-high frequency (UHF) band** implements a balanced approach for the use of the UHF band (470-790 MHz), which includes on the one hand a common



schedule for making the 700 MHz band effectively available for wireless broadband and innovative 5G use as of 2020 across the Union, under harmonised technical conditions and ensures, on the other hand, a long-term availability of the sub-700 MHz band for the distribution of traditional and innovative audiovisual media services to the general public until 2030.

The **5G PPP**, in concertation with stakeholders at large, has defined a 5G trial roadmap published at the 5G Global Event in Tokyo in May 2017 and further refined at the fourth 5G Global Event in Seoul in November 2017. This roadmap piggybacks a) on private trials and proposes a way forward for trials with vertical industries, showcasing event, and deployment in cities and b) on pilot initiatives in European cities launched by Member States. These trials are facilitating the objective of the commercial deployment of 5G in 2020 as proposed in the **5G action plan**. A first version of the **5G standard** has been adopted in December 2017, in line with the main technological options studied in 5G PPP phase 1. The 5G PPP phase 2, which prepares the ground for the next version of the 5G standards, has been launched for a total amount of 150 M€ and includes multiple projects to test 5G technology in the context of vertical use cases, in line with the EU vision of "5G for verticals".

DG CONNECT has been very active in supporting the development and deployment of **cooperative, connected and automated mobility (CCAM)** through the DSM. The developments on digital topics such as data, cybersecurity, connectivity/5G or spectrum availability are mission-critical for the success of CCAM. Emphasis was put on different stakeholders (notably car-manufacturers and telecoms) agreeing on joint actions and roadmaps with a focus on digital topics to promote CCAM. Key mechanism are the roundtable meetings with industry that are chaired by the Commissioner. The role of 5G is, on the one side, key for the successful deployment of CCAM and, on the other, CCAM is a key driver for the deployment of 5G.

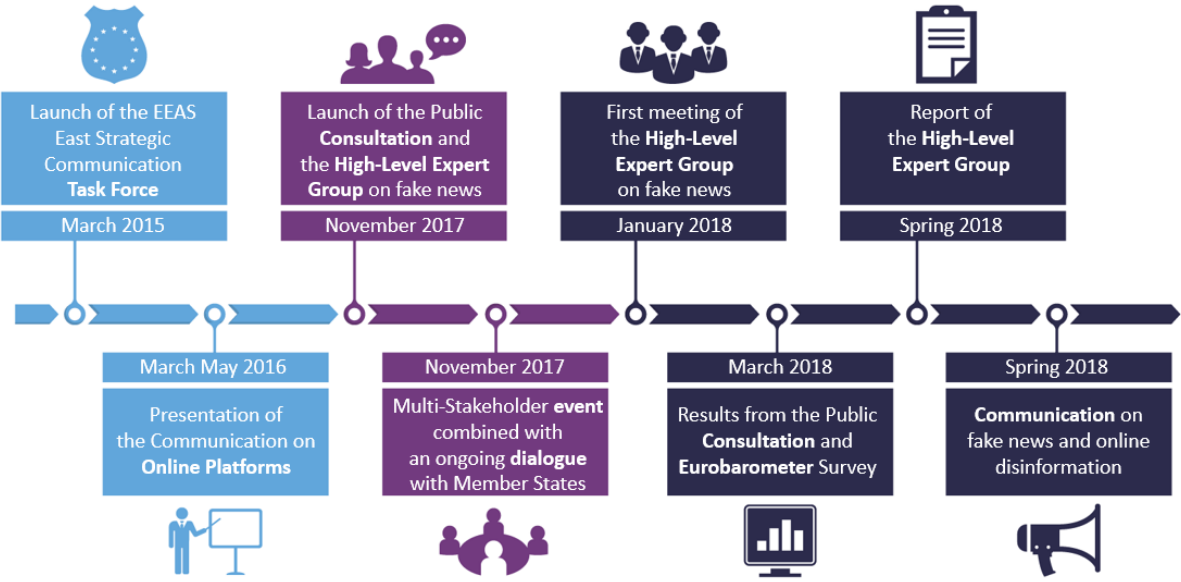
DG CONNECT is working with Member States and industry stakeholders on setting up digital corridors to bring cross-border automated driving forward. The Commission has made a contribution by making 50 M€ available in Horizon 2020 for such 5G-based corridors.

Specific objective 1.5:
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.

Related to spending programmes:
 Horizon 2020, Multimedia Actions, Creative Europe MEDIA

The area of **social media** experiencing very rapid changes during 2017, the **Roadmap for media and social media** was split into two white papers, with the one on social media delivered in 2017. Simultaneously, a very complex process on addressing fake news has started which is why the focus on social media was emphasized.

In line with calls of the European Parliament, President Juncker stated in his mission letter to Commissioner Gabriel, that **the Commission needed to look into the challenges the online platforms create for our democracies as regards the spreading of fake information**, and initiate a reflection on what would be needed at EU level to protect our citizens. DG CONNECT launched in November 2017 a wide consultation process, consisting of an open public consultation and a flash Eurobarometer, it has set up a High Level Expert Group on Fake News (HLEG), and organised a multi-stakeholder conference, a workshop with Member States and a meeting of the Media Literacy Expert Group focussed on fake news, in addition to participating in several other fora to discuss the challenge of fake news.



The rules implementing the **Marrakesh Treaty in the EU**⁹ – one Directive and one Regulation – were adopted by the Council and the Parliament in September 2017. This will facilitate access to published works for people who are blind, visually impaired or print disabled, by allowing them to have better access to special format copies of books across the EU and from other parts of the world.

⁹ <https://ec.europa.eu/digital-single-market/en/news/implementation-marrakesh-treaty-eu-law>

Progress has been made regarding the implementation of the 2016 **Web Accessibility Directive** aiming at making websites and mobile apps of public sector bodies more accessible for people with disabilities. In 2017 an expert group was set up to advise the Commission on the specific subjects to be included in the implementing act foreseen in the Directive. DG CONNECT followed up on questions on the transposition of some Member States.

Different actions have been undertaken in 2017 to improve the model of **Europeana, the EU digital platform for cultural heritage**, including the move to procurement for Europeana core services. An independent evaluation of Europeana was launched to provide input on the modalities for future strategies and funding including a public consultation which received more than 1200 responses.

The **European Centre for Press and Media Freedom's** (ECPMF) main aim is to unite Europe's fragmented media freedom community and to address media freedom violations in EU member states and beyond. The Centre provides practical help to journalists in need and works with partners to raise awareness on media freedom issues in the EU and Candidate Countries. Part of this funding scheme is 'Mapping Media Freedom Project', which is a collaborative platform that monitors threats, violations and attacks to media freedom in Europe. Other activities include International Press Institute's work on abuse of defamation laws and the resource centre of the Osservatorio Balcani e Caucaso Transeuropea. The developing cross-borders investigative journalism funding scheme will be also continued.

The **Media Pluralism Monitor** (MPM) is designed to identify potential risks to media pluralism in Member States. It considers 20 indicators across four domains, from legal, economic and socio-demographic point of views and is run in an independent manner by the **Centre for Media Pluralism and Media Freedom** at the European University Institute. The 2017 Monitor covered all EU Member States and three candidate countries and will be available online. The Centre is promoting media freedom and pluralism across Europe, notably by presenting the Media Pluralism Monitor in conferences in several Member States. The Centre also organised a summer school for young journalists and media professionals. In 2017, the Centre has updated and published a series of fact sheets on issues related to media legislation and practices in the EU.

MEDIA programme in a nutshell

The **MEDIA sub-programme of Creative Europe** provides funding for the development, promotion and distribution of European works within Europe and beyond. Each year, MEDIA supports around 2,000 European projects including films, TV series, video games, training, cinemas and much more.

The MEDIA programme invests in the training of producers, distributors, directors and screenwriters to help them adapt to new technologies. More than 2200 professionals are helped to be trained annually through transnational and international projects.

The 2017 mid-term evaluation of Creative Europe¹⁰ found that **MEDIA** has achieved significant results. In particular MEDIA has met its specific objectives of supporting transnational collaboration and cross-border circulation of EU works. It has sustained an internal market for non-national European films by supporting the cross-border distribution of over 400 films per year, equivalent to 25% of Europe's

annual film production.

¹⁰ More details on Creative Europe mid-term review and 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 2019.

Films receiving MEDIA distribution support reached over 65 million admissions per year (not including admissions on national markets). The Europa Cinemas network has boosted the exhibition of European films in a cost-effective way, with every Euro invested generating an estimated 13€ of revenue through additional audiences. Through its support MEDIA has concretely widened the access European audiences and citizens to culturally diverse content.

Increasing circulation of works and reaching wider audiences is key to strengthening the competitiveness of Europe's audiovisual industry in the digital single market. In 2017, 70 million people watched non-national audiovisual works supported by MEDIA (not counting national admissions). For example, in 2017 the Cannes Palme d'Or winner "The Square" was attributed MEDIA distribution support. Moreover, the Europa Cinemas network, which is MEDIA's biggest beneficiary, supports roughly 1,000 European cinemas in 33 European countries focusing on European films.



In its first full year of activity, the **Cultural and Creative Sectors Guarantee Facility** which is a financial instrument of Creative Europe has already exceeded its target. Eight transactions with banks across Europe for a total of 38 M€ (in Spain, Romania, France, Italy, Belgium and the Czech Republic) were signed. These transactions are expected to generate 358 M€ of leveraged financing. The European Fund for Strategic Investment has already enhanced its participation in the facility up to an amount of 60 M€. The overall size of the facility has increased from 121 M€ to 181 M€, and is expected to generate more than 1 Bn€ of loan financing for SMEs operating in the cultural and creative sectors.

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

DG CONNECT completed the strategic scoping for the last period of Horizon 2020¹¹ (H2020) and ensured the adoption of the 2018-20 Work Programmes for ICT. The DG also ensured the adoption of the 2017 Work Programme for the Connected Europe Facility's (CEF) Telecom strand and prepared the 2018 Work Programme. Importantly, the DG advanced in its analysis and preparations for the upcoming Commission proposals for the digital parts of the new Multiannual Financial Framework. In parallel to the assessment and definition of different digital priority projects (e.g. in the areas of high-performance computing and quantum technologies, cybersecurity, artificial intelligence...), the DG has been looking into different implementation mechanisms and financing options for these projects. Among others, financial instruments have been considered as a viable support measure, also by blending with grants, and by creating synergies across or within programmes.

In 2017, DG CONNECT carried out the mid-term evaluations of DG CONNECT activities in both Horizon 2020 and the Connecting Europe Facility (CEF). The findings of both evaluations fed into the overall evaluation exercises managed, respectively, by DG Research and Innovation and DG Mobility and Transport.



Overall, the interim evaluation of Horizon 2020¹² published in May 2017 concluded that the programme's original rationale for intervention and objectives remain largely valid. While it also concluded that Horizon 2020 demonstrates potential in terms of supporting breakthrough market-creating innovation, it highlighted the need for substantially strengthening that support. The programme was found to be relevant and highly attractive to participants, yet it suffers from large-scale oversubscription. As to Leadership in Enabling and Industrial Technologies-ICT (LEIT ICT), one of the main findings was that, although the Programme responds to the needs of the organisations involved, certain relevant areas were not covered (e.g. specific hardware and software tools and techniques in areas such as health, robotics and biology). Experts also found that synergies remain underexploited, and that openness for topics and ideas of the research community is lacking to some extent, due to the prescriptiveness of calls and their timelines.

On 11 January 2018, the Commission adopted a Communication on the interim evaluation of Horizon 2020, which outlines its views on how the impact of a successor research and innovation investment programme could be maximised. The final Horizon 2020 Work Programme for 2018-2020 is already testing some of the solutions designed to address these lessons learnt.

¹¹ More details on H2020 achievements, EU added value of the programme and workprogramme are available in the H2020 Programme Statement of the Draft General Budget of the European Union for the Financial Year 2019.

¹² H2020 mid-term-evaluation: <https://ec.europa.eu/research/evaluations/index.cfm?pg=h2020evaluation> (for FET and LEIT ICT, thematic annexes in annex 2 to the SWD)

The mid-term evaluation of CEF¹³ published in February 2018, concluded that, although the cross-border digital services supported by the programme help improve the daily lives of Europeans through enhanced digital inclusion and connectivity and are a key tenet of the Digital Single Market, current eligibility rules limit the programme's ability to capitalise on the latest technological developments and address emerging policy priorities (for example cybersecurity-related challenges). Moreover, it states that available funding levels have so far only allowed to partially addressing the current needs in terms of cross-border digital infrastructures in areas of public interest, and that CEF has so far brought about programme-level synergies but not the expected cross-sector synergies at project level (e.g. connected cooperative and automated mobility, alternative fuel infrastructure for vehicles, smart grids, and deployment of 5G along the transport network).



<p style="text-align: center;">Specific objective 2.1:</p> <p>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.</p>	<p>Related to spending programme: Horizon 2020</p>
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In a push to move closer to mass deployment of **smart city** solutions, the urban platform initiative of the European Innovation Partnership on Smart Cities and Communities (93 industrial partners and 110 cities) has been following a systematic and ambitious multiannual plan to address the lack of interoperability, vendor lock-in, city reluctance to procure and deploy and a fragmented market. 2017 saw the validation and release of the Leadership Guide and Management Framework, aiming to convince decision makers and helping the process within the siloed municipal administration. Moreover, the "Reference Architecture and Design Principles" (which became a DIN standard 91357 and was taken up by European and global SDOs) was finally released defining open and interoperable platforms with portable applications and no vendor lock-in. ETSI started the development an extension for smart cities of the SAREF ontology (semantic interoperability language for IoT in SmartM2M/OneM2M) and standardised the CityKeys smart cities indicators. These developments are opening the market, allowing a host of smaller and bigger players to provide innovative solutions, creating of local ecosystem and contributing to jobs and growth.



During the preparation of the interim evaluation of the **eHealth Action Plan 2012 – 2020** it became obvious that the action plan does not fully address the needs of health and care systems as well as the market. The areas where new actions need to be taken were presented in the mid-term review of the DSM in May 2017. The initially planned Staff Working Document (SWD) on the interim evaluation of the eHealth Action Plan

¹³ CEF mid-term evaluation: <https://ec.europa.eu/digital-single-market/en/news/connecting-europe-facility-publication-mid-term-evaluation-report>

was replaced by a Communication and the accompanying SWD on the digital transformation of health and care, to be adopted in 2018.

There has been an exponential growth of the **Startup Europe platform** during 2017, with 60 EU nodes being part of Startup Europe platforms in addition to nodes in Africa, Latin America, Southern Mediterranean, Balkans, Eastern Partnership and Silicon Valley. Moreover, the One-Stop-Shop for startups is well established and recognised in Europe with an average of 37000 unique visitors per month, besides 25000 Twitter followers, 15000 members of the Facebook Startup Europe group. The platform has concretely supported 715 startups in the scale-up phase to grow across borders. Moreover, 60 tech startups hubs are well mapped in the City Index. Startup Europe Week platform organised 411 activities across 250 cities in Europe. For the first time Startup Europe Awards recognised the best startups in 16 Member States becoming the Eurovision for startups. Startup Europe Platform of universities expanded to 38 universities. For hardware startups, the European Makers Week platform reached out to 160 cities. Finally, 350 matchmaking sessions between startups, investors and corporates were successfully organised to help startups grow across borders.

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SPACE CYBER SECURITY CLIMATE FASHION EDTECH GASTRONOMY

For more information: www.startupeuropeawards.eu

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

A **mid-term review of the contractual public-private partnerships (cPPPs)** over the first three years of Horizon 2020 was carried out by a group of independent experts and completed in September 2017. Whilst recognising that the instrument is too young to provide an exhaustive evaluation, and acknowledging differences in the nature and 'life-cycle' stages of the cPPPs, the experts concluded that cPPPs broadly achieved the purpose for which they were created, namely a more structured shift from a top-down to a bottom-up approach in defining European R&I strategies, spanning the whole innovation cycle and relevant actors. Recommendations were provided concerning inter alia governance, links to other instruments, key performance indicators and Member States' involvement.

In 2017, **ECSEL Joint Undertaking** launched its first two Lighthouse Initiatives, a concept related to a set of coordinated activities to facilitate the cooperation of several ECSEL actions with H2020 (e.g. FET Flagships), Eureka, national or regional projects, as well as the contribution to standardisation, or assisting the uptake of technology to address societal challenges.

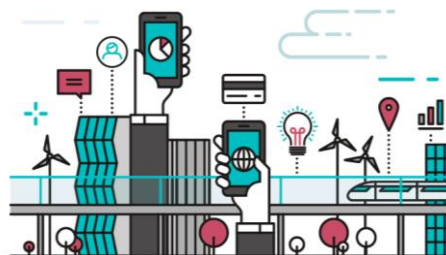
The Lighthouse related to Connected and Automated Driving started with the project Autodrive (Advancing fail-aware, fail-safe, and fail-operational electronic components, systems, and architectures for highly and fully automated driving to make future mobility safer, more efficient, affordable, and end-user acceptable.) In the area of Industry 4.0, ECSEL has launched a Lighthouse with the project Productive 4.0 (Electronics and ICT as enabler for digital industry and optimized supply chain management covering the entire product lifecycle). Two other projects of particular relevance for competitiveness of the European microelectronics industry are TakeMi5 (Technology Advances and Key Enablers for Module Integration for 5 nm), and R3PowerUP (300mm Pilot Line for Smart Power and Power Discrete Components).



**FUTURE
INTERNET
PPP**

The **FI-PPP (Future Internet – Public Private Partnership)** ended 31 December 2016, The impact of the FI-PPP is already tangible and further benefits can be expected, as confirmed in the recent expert report "Breaking the Mould: A New Model for EU Innovation Programmes". The FI-PPP/FIWARE experience offers valuable learning points related to the challenging organisation of an impact-oriented programme. These are now used for the **Next Generation Internet (NGI) initiative**. In 2017, the NGI preparations that started in 2016 were stepped up.

The overall mission of the Next Generation Internet initiative is to **re-imagine and re-engineer the Internet** for the third millennium and beyond. We envision the information age will be an era that brings out the best in all of us. We want to **enable human potential, mobility and creativity** at the largest possible scale - while dealing responsibly with our natural resources. In order to preserve and expand the European way of life, we **shape a value-centric, human and inclusive Internet for all**.



Four Coordination and Support Actions, as well as a major study, were launched to assist the Commission in shaping the NGI initiative and engaging the relevant stakeholders to

build an increasingly dynamic, collaborative, vibrant and participatory Research and Innovation Ecosystem for NGI. Future Internet Forum (FIF) Member States' representatives have been active in implementing NGI Contact Points in 23 countries, organising 14 national workshops (with main outputs made available in a White Paper) and driving other activities on a national level to engage and increase the number of relevant stakeholders over Europe and beyond.

Cloud and software are among the key enablers of digital services, e-government and, ultimately, the successful Digital Single Market in Europe. The EU has, therefore, continued to invest, in the framework of H2020, into cloud and software research in order to stimulate technological capacity building and wider take-up of cloud. The investment is focused, in particular, on advanced cloud infrastructures and services, including low-power computing, as well as new advances in software technologies, including open source.

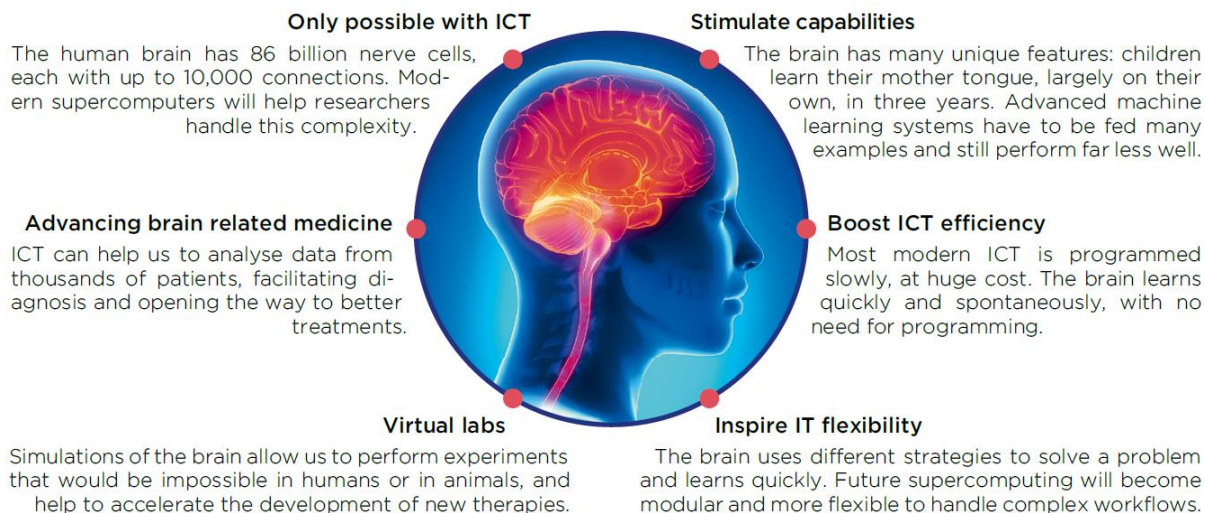
Phases 1 & 2 of the **5G PPP** have invested about 280 M€ in the development of 5G core technologies and demonstrations with verticals. Phase 3 will complement these investments with about 260 M€ funding. The 5G PPP has successfully supported the development of multiple key 5G radio technologies (waveforms, radio access architecture..) and of key network technologies (composition of virtualised services across multiple operator domains). By relying on global interoperable approaches for 5G networks, the PPP has contributed to an ambitious policy of international cooperation.

The **Photonics cPPP** was established to build on the strengths of the European Photonics sector and to reinforce its competitiveness through a long-term commitment to a common shared vision. Photonics has a fundamental capacity to transform industrial processes and products in many different application areas ranging from manufacturing, ICT, lighting & energy to healthcare, security and environmental protection. The first Photonics PPP test labs and pilot production services are now being made accessible to all SMEs in Europe to spur new competitive products and accelerate time to market. In 2017, new grant agreements have been signed for a total EU funding of 96.4 M€ adding to the 278 M€ already committed in the period 2014-2016. The total funding for the Photonics cPPP in H2020 is expected to reach 700 M€. The Vision Paper "Europe's age of light" was published¹⁴ in October 2017 by the Photonics PPP with the support of the European Commission. It is the outcome of an extensive consultation process involving the European photonics community as well as external experts.

The **Commission's Expert Group on Quantum Technology** published its final report of recommendations on the governance, implementation modalities, and a Strategic Research Agenda including industrial aspects in November 2017. This was the basis for the ramp-up phase of the Future Emerging Technologies Flagship on Quantum, with the first elements of the Strategic Research Agenda implemented by the Horizon 2020 Workprogramme 2018. The respective calls for proposals, with a total volume of 130 M€ of EU funding, was published in 2017. In parallel, the governance aspects of the Flagship were being prepared, with a set of structures that will involve the Commission, representatives of national funding agencies, renowned quantum experts and the Flagship Coordination and Support Action for overall coordination.

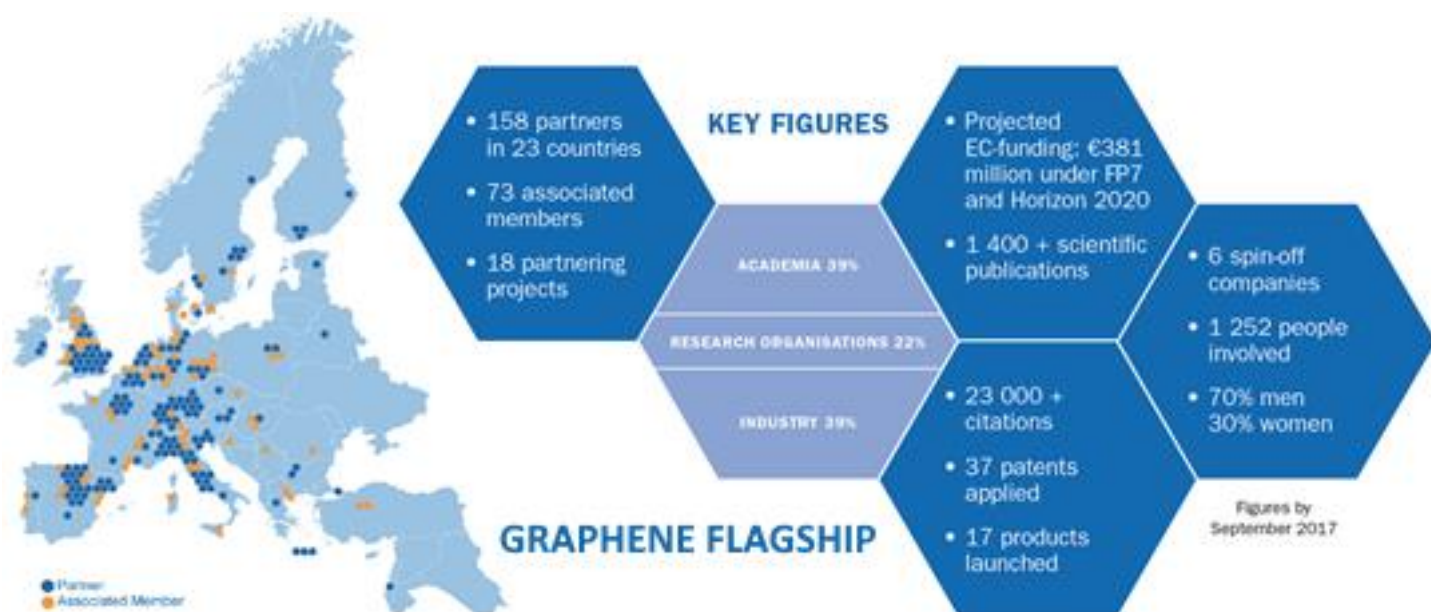
¹⁴ <https://www.photonics21.org/download/ppp-services/photonics-downloads/Photonics21-Vision-Paper-Final.pdf>

The Graphene and the Human Brain Project Flagships, continued progressing along their 10 year science and technology roadmaps. The Horizon 2020 interim evaluation highlighted both Graphene and the Human Brain Project (HBP) as having a "great potential to underpin new disruptive technologies leading to radically new markets and applications".



The indicators related to the number of publications and patents show a good performance of both flagships, with differences due to the nature of each initiative. For instance, HBP activities related to the development of a research platform that requires a lot of background engineering work do not translate into scientific publications and patents.

The **Future Emerging Technologies (FET) Work Programme 2018-2020** adopted by the Commission in October 2017 will support the continuation of the Graphene and HBP flagships for the period covering April 2020 March 2023, with a clear shift to innovation and impact. It also features the ramp-up of a new flagship on Quantum Technologies, and preparatory actions for new FET-Flagships which could start in the next Research Framework Programme.



Glossary

A

AAL= Active and Assisted Living
ABB= Activity Based Budgeting
ABC= Audit, Budget and Control
AMC= Account Management Centre
AFS= Anti-Fraud Strategy
AIOTI= Alliance for IoT Innovation
AOD= Authorising Officers by Delegation
AOSD= Authorising Officers by Subdelegation
AVMS= Audiovisual Media Services

B

BEREC= Body of European Regulators in Electronic Communications
B2B= Business To Business
BR= Better Regulation

C

CAD= Connected and Automated Driving
CAS= Common Audit Service
CAR= Communication Automotive Research and innovation
CCAM= Cooperative, Connected and Automated Mobility
CCS GF= Cultural and Creative Sectors Guarantee Facility
CDI= Collaborative Data Infrastructure
CEBF= Connecting Europe Broadband Fund
CEF= Connecting Europe Facility
CERTs= Computer Emergency Response Teams
CIP= Competitiveness and Innovation Programme
cPPP= Contractual Public Private Partnership
CRAS= Common Representative Audit Sample
CRS= Common Representative Sample
CSC= Common Support Centre
CWP= Commission Work Programme

D

DAE= Digital Agenda for Europe
DEI= Digitising European Industry
DESI= Digital Economy and Society Index
DG= Directorate-General (Commission)
DG AGRI= DG Agriculture and Rural Development
DG DIGIT= DG Informatics
DG EAC= DG Education and Culture
DG ECFIN= DG Economic and Financial Affairs
DG EMPL= DG Employment, Social Affairs and Inclusion
DG ENER= DG Energy
DG FISMA= DG Financial Stability, Financial Services and Capital Markets Union

DG CONNECT_aar_2017_final

DG GROW= DG Internal Market, Industry, Entrepreneurship and SMEs
DG HOME= DG Migration and Home Affairs
DG HR= DG Human Resources and Security
DG JUST= DG Justice and Consumers
DG MOVE= DG Mobility and Transport
DG REGIO= DG Regional and Urban Policy
DG RTD= DG for Research and Innovation
DMO= Document Management Officer
DSI= Digital Service Infrastructure
DSM= Digital Single Market

E

EACEA: Education, Audiovisual and Culture Executive Agency
EASME: Executive Agency for Small and Medium-sized Enterprises
EC= European Commission
ECA= European Court of Auditors
ECPMF= European Centre for Press and Media Freedom
ECSEL= Electronic Components and Systems for European Leadership
ECISO= European Cybersecurity Organisation
EDES= Early Detection and Exclusion System
EDPR= European Digital Progress Report
EEAS= European External Action Service
EECC= European Electronic Communications Code
EFSI= European Fund for Strategic Investments
EGI= European Grid Infrastructure
EIB= European Investment Bank
EIC= European Innovation Council
eIDAS= electronic IDentification, Authentication and trust Services
EIDR= Entertainment Identifier Registry
EIF= European Investment Fund
ENISA= European Union Agency for Network and Information Security
EOSC= European Open Science Cloud
EP= European Parliament
ESIF= European Structural and Investment Funds
ESTAT= Eurostat
ETSI= European Telecommunications Standards Institute

F

FAIR Committee= Fraud and Irregularities in Research Committee
FAFA= Financial and Administrative Framework Agreement
FET= Future Emerging Technologies
FI= Financial Intermediaries

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FIF= Future Internet Forum
FI-PPP= Future Internet – Public Private Partnership
FP= Framework Programme
FP7= Seventh Research Framework Programme
FTE= Full Time Equivalent
FR= Final Recipient

G

GB= Governing Board

H

HAN= Hermes-Ares-Nomcom
H2020= Horizon 2020
HBP= Human Brain Project
HPC= High Performance Computing
HR= Human Resources

I

IAS= Internal Audit Service
ICC= Internal Control Coordinator
ICF= Internal Control Framework
ICMC= Internal Control Monitoring Criteria
ICT= Information and Communication Technologies
IEE= Intelligent Energy Europe
IFI= International Financial Institution
IMSB= Information Management Steering Board
INEA= Innovation and Networks Executive Agency
INDIGO= INtegrating Distributed data Infrastructures for Global ExpLOitation
IoT= Internet of Things
IPCEI= Important Project of Common European Interest
ISAN= International Standard Audiovisual Number

J

JRC= Joint Research Centre

L

LEIT= Leadership in Enabling and Industrial Technologies
L&D= Learning & Development

M

MPM= Media Pluralism Monitor
M2M= Machine To Machine

N

NBP= National Broadband Plans
NGA= Next Generation Internet Access
NGI= Next Generation Internet
NIS= Network Information Security
NRAs= National Regulatory Authorities

O

OLAF= European Anti-Fraud Office
OP= Publications Office

P

PAB= Public Authorities Board
PPP= Private Public Partnership
PSP= Policy Support Programme
PRACE= Partnership for Advanced Computing in Europe (the pan-European high performance computing research infrastructure)

Q

Q= Quarter

R

R&D= Research and Development
R&I= Research and Innovation
RAFS= Research Anti-Fraud Strategy
RAP= Rules of Application
REA= Research Executive Agency
REFIT= Regulatory Fitness and Performance programme
RSM= Risk-Sharing Mechanism

S

SAREF= Smart Appliances REference
SEPs= Standards Essential Patents
SMEs= Small and medium-sized enterprises
SMP= Significant Market Power
SOP= Standard Operating Procedures
SRM= Stakeholders Relations Management
SVoD= Subscription Video on Demand
SWD= Staff Working Document

T

TLD= Top-Level Domain
TTG= Time to Grant
TTP= Time to Pay
TVoD= Transaction Video on Demand

V

VP= Vice-President (Commission)

2. ORGANISATIONAL MANAGEMENT AND INTERNAL CONTROL

This section answers to the question *how* the achievements described in the previous section were delivered by the DG. This section is divided in two subsections.

The first subsection reports the control results and all other relevant information that support management's assurance on the achievement of the financial management and internal control objectives. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive; appropriately covering all activities, programmes and management modes relevant for the DG.

The second subsection deals with the other components of organisational 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. Its results are explicitly documented and reported to the Director-General. The reports produced 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 in indirect management as well as the result of the Commission supervisory controls on the activities of these bodies;
- The contribution of the Internal Control Coordinator (ICC), including the results of internal control monitoring at Directorate-General level;
- 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 reports 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 the internal control system, and resulting in (d) Conclusions as regards assurance.

2.1.1 Control results

This section reports and assesses the elements identified by management that support the assurance on the achievement of the internal control objectives¹⁵. The DG's assurance building and materiality criteria are outlined in the AAR Annex 4. Annex 5 outlines the main risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the control systems.

DG CONNECT budget is implemented by DG CONNECT and by other DGs an entrusted entities which have budget implementation tasks. The research programmes represent the most important part in quantitative terms. This explains that this report will mostly focus on this part of the budget.

This report will present 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.

Budget implemented by DG CONNECT (in €)	
1- Research Programmes	
H2020	1.160.821.366
FP7	156.457.838
CIP	12.414.983
Other measures and Pilot projects	2.004.475
Administrative expenditure	10.351.137
2- Non Research Programmes	
Communication actions, Creative Europe, Connecting Europe Facility, single market policy other programmes and pilot projects	47.785.606
Administrative expenditure	2.034.969
Budget implementation tasks entrusted to other DGs and entities (in €)	
1- Implementing Bodies	
ECSEL	284.221.005
AAL Association	6.827.628
BEREC Office	4.246.000
ENISA	10.574.977
EIF (CCSGF)	12.993.428
2- Cross delegations to AGRI, DIGIT, EMPL, ENER, ESTAT, GROW, JUST, OP, RTD & SANTE	10.203.406
TOTAL	1.720.936.817

¹⁵ Effectiveness, efficiency and economy of operations; reliability of reporting; safeguarding of assets and information; prevention, detection, correction and follow-up of fraud and irregularities; and 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 32).

Furthermore, DG CONNECT was a partner DG for four executive agencies (see below table). These executive agencies processed operational payments for a value of 364,61 M€ linked to DG CONNECT activities.

Entity	Operational payments implemented directly by the EAs linked to DG CONNECT activities (in €)
Innovation and Networks Executive Agency (INEA)	31.819.081
Research Executive Agency (REA)	132.035.371
Executive Agency for Small and Medium-sized enterprises (EASME)	94.060.085
Education, Audiovisual and Culture Executive Agency (EACEA)	106.699.998
TOTAL	364.614.535

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, DG CONNECT, in accordance with the other members of the Research Family, maintains a reservation for FP7 expenditure.

For the financial operations under CIP, the results of the ex-post audits show that the residual error rate is also above 2%. As the 2% residual error rate target at the end of the programming period for CIP ICT PSP will not be attained, a reservation on CIP is also maintained for the reporting period.

Considering that a simplification of the existing legislative framework for FP7 and CIP is not an option and that the legality and regularity objective has to be balanced with other objectives such as the attractiveness of the programmes and the cost of controls, the error rate will not further reduce without affecting the effectiveness of the programme.

For H2020, the first audit results suggest that the detected (and in future 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, it does not consider that a reservation is needed for Horizon 2020 expenditure

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, we are well aware of the reservations of REA, EASME and EACEA and the issues concerning the ECSEL JU with respect to the

definition of an error rate and do not consider that they represent a failure of our supervision. However, DG CONNECT follows a prudent approach and includes the related FP7 budget from ECSEL and the AAL Association within the scope and exposure of its reservation for FP7.

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 other issues which could impact the management's assurance and there are no indications that the reporting would not be reliable or complete. For none of the management / control segments any reputational risk was identified by senior management for the reporting period which could have a significant impact on assurance on the achievement of the internal control objectives.

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.

The table below presents the control results in summary.

DG CONNECT	Scope: payments made (M€)	Conclusion on the Internal Control Components				Information from auditor's available	Reservations
<i>ABB or other activity-level</i>	<i>as per AAR annex 3, table 2</i>	Conclusion on "Legality and Regularity"	Conclusion on "Efficiency and cost-effectiveness"	Conclusion on "Fraud prevention and detection"	Conclusion on other Incos		
Budget implemented by DG CONNECT							
H2020	1160,82	Positive, with the exception of FP7 for which the res. error rate is 2,96% and CIP for which the error rate is 8,50%	Positive TTG = 209 days, TTP = 97,2% on time	Positive	Positive	Yes	YES, for FP7 and CIP
FP7	156,46						
CIP	12,41						
Administrative Expenditure	12,39						
Communication Actions, Creative Europe, Connecting Europe Facility, single market policy other programmes and Pilot Projects	49,79						
TOTAL	1391,9						

Budget implementation tasks entrusted to other DGs and entities							
1- Implementing Bodies							
EIB - Project Bond Pilot Initiative (PBI)	0						
Ecsel	284,22					YES (in particular see 2.1.1 Budget entrusted to other DGs and entities Ecsel)	Relevant payments to Ecsel, and AAL are covered in the FP7 reservation
AAL	6,83	Positive, with the exception of the relevant payments to Ecsel and AAL which are covered in the FP7 reservation	Positive	Positive	Positive some specific remarks on Ecsel		
Berec office	4,25						
Enisa	10,57						
EIF (CCSGF)	12,99						
2- Cross subdelegations							
AGRI, DIGIT, EMPL, ENER, ESTAT, GROW, JUST, OP, RTD, SANTE	9,76					NO	NO
Administrative Expenditure	0,44						
TOTAL	329,1						

TOTAL	1720,94
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2.1.1.a Direct budget implementation by DG CONNECT

Coverage of the Internal Control Objectives and their related main indicators

Control effectiveness as regards legality and regularity

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.

For the Research programmes, the main legality and regularity indicator is the error rate detected by ex-post audits. It should however be noted that the ex-ante controls put in place by the DG plays an essential role in ensuring legality and regularity of the transactions. The different risks and related mitigating ex-ante controls for each stage of the process are described in annex V. Because of its multi-annual nature, the effectiveness of the control strategy can only be fully measured and assessed in the final stages of the FP, once the ex-post control strategy has been fully implemented and systematic errors have been detected and corrected.

The general control objective, as stated in Annex 4 to this report, is to ensure for the Seventh Framework Programme and the CIP ICT PSP that the residual error rate, i.e. the level of errors which remain undetected and uncorrected, does not exceed 2% by the end of the FP's management cycle. For Horizon 2020, the Commission's proposal for the Regulation establishing the H2020 framework programme¹⁶ refers to a risk of error over the course of the multiannual expenditure period, on an annual basis, within a range of 2-5 %, with the ultimate aim to achieve a residual level of error as close as possible to 2%.

¹⁶ COM(2011) 809/3 Proposal for a Regulation of the European Parliament and of the Council establishing Horizon 2020 – the Framework programme for Research and Innovation (2014-2020), see point 2.2, pp 98-102.

The question of being on track towards this objective is to be (re)assessed annually, in view of the results of the implementation of the ex-post audit strategy and taking into account both the frequency and importance of the errors found as well as a cost-benefit analysis of the effort needed to detect and correct them.

For Horizon 2020, the Common Audit Strategy, adopted on 22 March 2016 covers all the implementing bodies.

For FP7, the Common Audit Strategy and its results cover the DGs and the Executive Agencies.

For the CIP ICT PSP and Safer Internet programmes, DG CONNECT implements a dedicated multi-annual audit strategy. These audits are performed by an external audit firm contracted by DG CONNECT.

This report will not further address the management of the financial operations under non-research programmes (CEF, Safer Internet) because they represent limited amounts.

The Common Representative Sample (CRS) provides an estimate, via a representative sample of cost claims across the Research and Innovation family, of the **overall level of error** in the Research Framework programmes, across all services involved in its management. All of these grants follow the same homogeneous overall control system set out in this report.

The CRS is complemented by 'risk-based' audits; audits selected according to one or more risk criteria. These audits are intended to detect and correct as many errors as possible for instance by targeting the larger beneficiaries and identification of possibly fraudulent operators. These audits are also referred to as 'corrective' audits.

Different indicators are calculated to provide a comprehensive view of legality and regularity:

Overall Detected Error Rate: this is the error rate derived from the results of all audits, whether audits on a representative sample of beneficiaries or audits implemented for other reasons (large beneficiaries, preventive audits, risk factors, etc). Its value is cumulative and can be calculated for a specific implementing body or for the whole Research and Innovation family.

Representative Error Rate for the Framework Programme: this is the error rate derived solely from the results of the CRS, extrapolated to the overall population and calculated for each FP as a whole. This error rate provides an estimate of the level of error in the given framework programme at the time of the audits, but does not factor in the follow-up and corrections/recoveries undertaken by Commission services after the audit, nor does it provide information on the net final financial impact of errors.

Residual Error Rate: the residual error rate, on a multi-annual basis, is the extrapolated level of error remaining after corrections/recoveries undertaken by Commission services following the audits that have been made. The calculation of the residual error rate, as shown in **Annex 4**, is based on the following assumptions:

1. all errors detected will be corrected;
2. all non-audited expenditure subject to extension of audit findings is clean from systematic material errors so that the residual error rate can be estimated to be equal to the non-systematic error rate.

The residual error rate develops over time and depends on the assumptions set out above. This indicator is reliable and acceptable for the purposes for which it was intended, i.e. as a legality and regularity indicator on the progress made, through its ex-post audit strategy, in dealing with errors over a multi-annual basis. However, it

remains an estimate as long as not all cost claims have been received and not all cases of extension of audit findings have been fully implemented yet.

H2020

Given the stage of the programme lifecycle, a limited number of cost claims totalling 4.1 Bn€ of requested funding had been received by the services by the end of 2017. The first Horizon 2020 audits were launched in the middle of 2016 and further audits were launched in 2017. The first Common Representative Sample (CRS), a Common Risk Sample and an Additional Sample¹⁷ have been selected. In total, by December 2017, 625 participations had been selected for audit, covering all the services signing grants in Horizon 2020.

In total, the audit of 392 participations has been finalised (385 on 2017 selection of 625 participations and 7 on the 2018 selection). This includes 110 out of 142 participations selected in the first CRS. The error rate on 31.12.17 is:

Overall detected error rate based on 392 participations: 1,54 %.

The detected error rate based on 110 out of 142 participations selected in the first CRS is 1,6%. However, if we take into account the draft audit reports then the expected representative error rate for the full sample will be around 2,82%.

Residual Error Rate for the research family: 1,44%, expected to rise to around 2,24% when taking into account the draft audit reports.

The error rates set out above **can only be a preliminary estimation and must be treated with care**. The CRS is not yet complete, and is therefore not yet fully representative of the expenditure that it covered. In addition, the first CRS was taken at an early stage of the programme in order to provide an early indication of the error rate and, also, whether the simplifications introduced in Horizon 2020 have been effective. The nature of expenditure in the first years of the programme may not be totally representative of the expenditure across the whole period of expenditure. In any case, the programme being multi-annual, the error rates, and especially the residual error rate, must be considered over time. In particular, the cleaning effect of audits over time will tend to increase the difference between the representative/detected error rate and the residual error rate, with the latter decreasing.

There is nevertheless evidence that the simplifications introduced in Horizon 2020, as well as the increased experience of major beneficiaries, are reducing the number and level of errors made by beneficiaries. However, beneficiaries still make a number of errors, sometimes because of a lack of understanding of the rules, sometimes because of a non-respect of the rules.

The Model Grant Agreement, and its accompanying annotations, have already been adjusted to introduce simplifications or clarifications on different points. The results of the first audits have already been¹⁸ considered in a working group bringing together auditors from the Commission and the Court to see where additional simplifications and clarifications may be needed.

Considerable efforts have been made to ensure clear communication of the rules and guidance to participants and their auditors. By the end of 2017 a total of

¹⁷ This last 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 which are added to the selected participations, are included in the total participations selected.

¹⁸ Note – this meeting is expected to occur in March 2018.

75 communication events had been organised in 26 different countries with a total of 6.600 participants.

Trials of lump sum funding will be undertaken in the 2018 work programme to evaluate if this form of entitlement funding, which would avoid errors of legality and regularity, is appropriate to achieving all the objectives of research policy.

The financial statement accompanying the Commission's proposal to the legislative authority 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 project. The ultimate aim for the **residual level of error** at the closure of the programmes after the financial impact of all audits, correction and recovery measures will have been taken into account is to **achieve a level as close as possible to 2 %.***"

The first audit results suggest that the detected (and in future 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.

In conclusion, DG CONNECT considers that the error rate will fall within the range established in the H2020 financial statement, so it does not consider that a reservation is needed for Horizon 2020 expenditure.

Seventh Research Framework Programme (FP7)

The audit work for FP7 is almost completed. The last Common Representative Audit Sample was launched in 2016, of which only 21 audits remained open at the end of 2017.

DG CONNECT spending as per the (cash) budget on FP7 accounted for 15% of payments in 2017, and this is expected to fall in 2018.

Against this background, a final wrap-up of the FP7 audit campaign is made below and FP7 audits will no longer be covered in detail in future AARs, which will only continue to report on the implementation of FP7 audit results.

Audit coverage of FP7

The Research family as a whole had a target of 4 056 audit results for FP7. With FP7 4 324 audits results covering 64,2% of FP7 expenditure completed by the end of 2017, this original target was exceeded by 6%. The percentage of FP7 expenditure covered by the audits (64,2%) refers to the value of the participations of the audited beneficiaries. It includes both the fully audited participations (8,4%), also referred to as the 'direct' coverage, and the non-audited participations which nevertheless, after the full treatment of audit results, are clean from systematic errors (55,8%), also referred to as the 'indirect' coverage.

DG CONNECT had a target of 838 audit results for FP7. With 856 FP7 audits results covering 68,5% of FP7 expenditure completed by the end of 2017. Once the FP7 audits still open are closed (47 audits for CONNECT), the original target for FP7 audits will have been exceeded by 7,7%. The percentage of FP7 expenditure covered by the audits (68,5%) refers to the value of the participations of the audited beneficiaries, split in 8,4% direct coverage and 60,2% indirect coverage.

Error rates

The error rates resulting from FP7 audit work are:

Common Representative Error Rate: based on 461 costs statements for which the audit is completed (95 % out of a sample of 486), this error rate is **4,95%**.

Residual Error Rate: at this point in time, this error rate amounts to 2,96% .

Conclusion ex-post audits for FP7

The Common Representative Error Rate for FP7, calculated on a multiannual basis, is around 5%. The Residual Error Rate is 2,96%.

With 47 audits still to be completed, the Residual Error Rate may still change in 2018. However, since the current Residual Error Rate 2,96% is almost identical to that of last year 2,86% and only a small number of audits remains open, it can be assumed that the final Residual Error Rate will be around this value.

These results are in line with the conclusions expressed in AARs over the years: that the Common Representative Error Rate resulting from audits of FP7 will be around 5% at the end of the programme and the residual error rate at around 3%.

These amounts do not necessarily mean that there is a loss to the Community budget. Many of the projects spend more than the capped budget, and so the real loss to the Community budget will be lower than when estimating the financial impact by using the error rates above.

The reservation in the declaration of assurance for the FP7 expenditure is addressed in Section 2.1.5.

DG CONNECT made continuous efforts to mitigate the risk of error in FP7 expenditure, including:

- *a number of simplifications* (for example those contained in the Commission Decision of 2011) and modifications to the Model Grant Agreement;
- a major communication campaign targeting beneficiaries and their auditors;
- continuous review of ex-ante control procedures, often based on the results of audits by the Commission auditors as well as those of the European Court of Auditors;
- 856 ex post audits, together with the recovery of overpayments and the extrapolation of systemic errors to *unaudited cost claims of the same beneficiaries in terms*.

However, it is clear that the 2% residual error target for FP7 will not be attained. Nevertheless, the lessons learned from FP7 audits have been used in the development of the Horizon 2020 programme's general framework.

Implementation of audit results

The table below provides the results of the implementation of FP7 direct audits (47,3 M€ adjusted).

Year	Audit activity		Results in favour of the EC		Open for implementation		Implemented (registered in contract management system)						TOTAL (in terms of participations)	
							Offset from payment		Recoveries		Waived (amounts below materiality criteria)		Open	Implemented
	# audits closed	# participation audited	# participations	Adjustments in EUR	#	€	#	EUR	#	€	#	€		
FP7 Total	857	1.718	885	47.332.838	16	1.033.169	336	16.923.278	447	26.821.200	84	2.555.190	2%	98%
From which CAS	292	473	207	9.728.510	9	231.860	66	4.491.440	130	4.996.256	2	8.954	4%	96%

The level of implementation of ex-post audit results is 98%. For FP7, the amount of corrections implemented by extrapolation of systemic errors presented, at the end of December 2017, was a cumulative figure of 7,2 M€. This is 1,7 M€ more compared to the end of 2016. The current implementation rate of extrapolations (expressed in number of cases) for FP7 on a cumulative basis is 73,58%. This implementation rate is lower at the end of 2017 as it was in 2016 (94%) as many audits with extrapolations were closed in the second half of 2017 (17 audits closed with extrapolations accounting for 11% of all extrapolations).

ICT Policy Support Programme of the Competitiveness and Innovation framework Programme (CIP ICT PSP).

In order to ensure audit coverage on this part of the budget, a specific audit strategy was defined in 2012 and updated in 2015 and 2016. The strategy is almost completed with only 16 audits to be closed. Against this background and the fact that CIP payments only accounted for 0,7% of the 2017 payments and will continue to decrease in coming years, a final wrap-up of the audit campaign is made below and CIP audits will no longer be covered in detail in future AARs, which will only continue to report on the implementation of audit results.

CIP ICT PSP applies the same materiality criteria and principles as FP7. These criteria, principles and the methodology to calculate the error rate are laid down in annex 4. The results of the ex-post audits performed on CIP ICT PSP projects show a detected error rate of 9,41% for 2017 and a cumulated residual error rate of 8,50%, which is above the 2% materiality criterion. This residual error rate would lead to an amount at risk of 4,91 M€.

However, those error rates should be considered with caution. Contrary to FP7 for which the calculations of the error rates are based on a representative sample covering audits of 461 cost statements, the CIP error rate calculations are based on a number of audits (109 audits at the end of 2017) which is more limited. In 2017, the 10 audits with the highest adjustments account for 59% of the total amount adjusted. Without these 10 audits, the detected error rate would be of 4,2% which is similar to the FP7 representative error rate.

Given the similarity of the control systems of the FP7 and CIP ICT PSP programmes, such error rate would be plausible.

Given that the residual error rate calculated for the CIP ICT PSP programmes is higher than 2% and that the 2% residual error rate target at the end of the programming period for CIP ICT PSP will not be attained, a reservation on CIP is maintained for the reporting period.

An in depth analysis of the 10 CIP ICT PSP audits with the largest audit adjustments shows that the largest contribution to the overall level of error comes from:

- Incorrectly calculated hourly rates/ productive hours;
- Non-compliance with the requirements for the time recording;
- Non-compliance with the rules for using consultants.

The above mentioned errors are responsible for 66% of the total adjustment of those 10 audits.

It should be noted that, under H2020, the eligibility rules linked to these three areas have been simplified.

Audit coverage

The share of the directly audited requested contributions in the audit sample amounts to 11,2%. On a cumulative basis, 109 CIP ICT PSP audits (155 if we include audits done by the European Court of Auditors and the risk based audits) were closed covering 70,8 M€. In 2018, 16 further audits will be closed.

Implementation of audit results

The table below provides the results of the implementation of CIP ICT PSP direct audits (including risk-based audits and audits performed by the European Court of Auditors).

Year	Audit activity		Results in favour of the EC		Open for implementation		Implemented (registered in contract management system)						TOTAL (in terms of participations)	
							Offset from payment		Recoveries		Waived (amounts below materiality criteria)		Open	Implemented
	# audits closed	# participations audited	# participations	Adjustments in €	#	€	#	€	#	€	#	€		
CIP Total	155	275	176	8.799.617	8	257.172	28	670.323	138	7.871.595	2	527	5%	95%

The level of implementation of ex-post audit results amounts to 95%. For CIP, the amount of corrections implemented by extrapolation of systemic errors presented, at the end of December 2017, a cumulative figure of 0,9 M€. This is 55k€ more compared to the end of 2016. The current implementation rate of extrapolations (expressed in number of cases) for CIP is 45%. This implementation rate is low at the end of 2017 as many audits with extrapolations were closed in the second half of 2017 (15 audits closed with extrapolations accounting for 31% of all extrapolations). The extrapolations will be further implemented in 2018.

Efficiency and Cost-effectiveness of controls

Based on an assessment of the most relevant key indicators and control results, DG CONNECT has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion.

As regards cost-effectiveness, the conclusion is based on an overall cost-effectiveness indicator of 2,6%. This is broken down in an 'overall cost-effectiveness of control'-indicator for direct management of 1,60% within DG CONNECT and 3,06% including the cost of the corporate services, and an 'overall cost-effectiveness of control'-indicator for indirect management of 0,31%¹⁹ for which a detailed analysis is provided below.

¹⁹ This includes the cost of control related to the Financial Instruments which could be estimated at 2,21%.

The estimated costs of control at entrusted entity level has also been estimated in this report.

As regards efficiency, this conclusion is based on the positive evolution of the "time-to-inform", "time-to-grant" and "time-to-pay" indicators.

This section gives further details on the efficiency related indicators and secondly on the overall cost-effectiveness of the control systems.

The control system for grant management 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 have been defined for each stage of the process.

Stage one: Programming, evaluation and selection of proposals

The first stage concerns the preparation and the publication of the calls for proposals and the subsequent evaluation of the received proposals. The overall control objective of this stage is to ensure that the most promising projects, meeting the policy objectives, are among the selected proposals. In order to ensure this control objective, DG CONNECT has put in place a set of rules and procedures that are objective, transparent and ensure equal treatment of all applicants.

The selection process implies an initial screening of the submitted proposals to assess their admissibility and eligibility. In a second stage the eligible proposals are evaluated by an independent evaluation panel and an adequate evaluation review procedure is put in place in case of complaints regarding the evaluation. The aim of all steps in this process is to ensure a robust and transparent selection which in turn will guarantee the highest value for money return.

The key indicators which can be used to measure the performance of this stage are the level of execution of the DG's work programmes, the attractiveness of the calls, the time-to-inform, the time-to-pay evaluation experts and the number of requests for an evaluation review.

Level of execution of the DG's work programmes

DG CONNECT's work programmes for 2017 foresaw the implementation of 12 calls for proposals for H2020 and 2 calls coordinated by other DGs or agencies. All of these calls have been successfully implemented.

Attractiveness of the calls

The attractiveness of the DG CONNECT's funded programmes can be measured by the proportion of the proposals received compared to the ones which were effectively selected. For the year 2017 there were on average 9,5 proposals received for each selected proposal. This demonstrates the attractiveness of the programmes managed by DG CONNECT. At the same time, the low probability to obtain a grant when there is a high oversubscription may deter good proposers to participate in calls.

Average time-to-inform

In 2017, DG CONNECT complied with this control effectiveness indicator. In 100 % of the cases, the applicants were informed of the results of the evaluation within the maximum time-to-inform period of 5 months (average time to inform was 121 days in 2017 compared to 107 days in 2016 and 121 days in 2015) and a maximum period of 8 months (average time to sign was 209 days in 2017 compared to 214 days in 2016 and 216 days in 2015) for signing grant agreements, in accordance with Article 128(2) of Regulation (EU, Euratom) No 966/2012. This shows that the evaluation exercises have been carried out in an efficient manner.

Evaluation review procedures

As shown in the table below the number of introduced requests for review (10) is very low compared to the total proposals (1997; 0,6%). The latter is a good indication for the efficiency of the selection process.

	TOTAL (2015)	TOTAL (2016)	TOTAL (2017)*
Number of proposals received	2234	1996	1637*
Number of proposals selected	223	209	150
Number of evaluation review request received	27	14	10
Number of review requests received as % of number of proposals received	1,12%	0,7%	0,61%
Number of review cases leading to a re-evaluation	1	1	1*
Number of reviews leading to a re-evaluation as % of number of proposals received	0,04%	0,05%	0,06%
Number of (successful) evaluation reviews / total number of proposals received	0,04%	0	0*

* This case is still pending a final decision in the second semester of 2018.

Time-to-pay evaluation experts

The average time for paying reviews in 2017 is 14,8 calendar days compared to 13,5 days in 2016²⁰. This is well within the binding deadline of 30 days for payments, imposed by the Financial Regulation.

Cost-benefit analysis:

In 2017, the total costs of the programming, evaluation and selection stage at DG CONNECT are an estimated 3,4 M€ internal costs. Payment of H2020 evaluation experts' costs is directly being done by REA for the whole Research and Innovation Family. The evaluation exercise benefits are the selection of proposals that address the objectives and priorities of the work programmes, that due to their high maturity have the best chances for successful completion within the eligibility period, and that provide the highest EU added value for the completion of the respective policy targets. This and the oversubscription described above underlines the importance of the controls in place at this stage of the grant management process, and why the costs are justified.

Stage two: grant preparation/contracting

After a sound and transparent selection process, the next stage consists of formalizing the contractual side of the proposals. The overall control objective of this stage is translating each of the selected proposals into legally binding grant agreements, allowing for the management of both the scientific and financial aspects of the projects and to ensure the best value for money output of each of the contracted projects.

Proposals under H2020 are expected to be mature and ready to be implemented without the need for substantial adjustments in the scope and repartition of the scientific work,

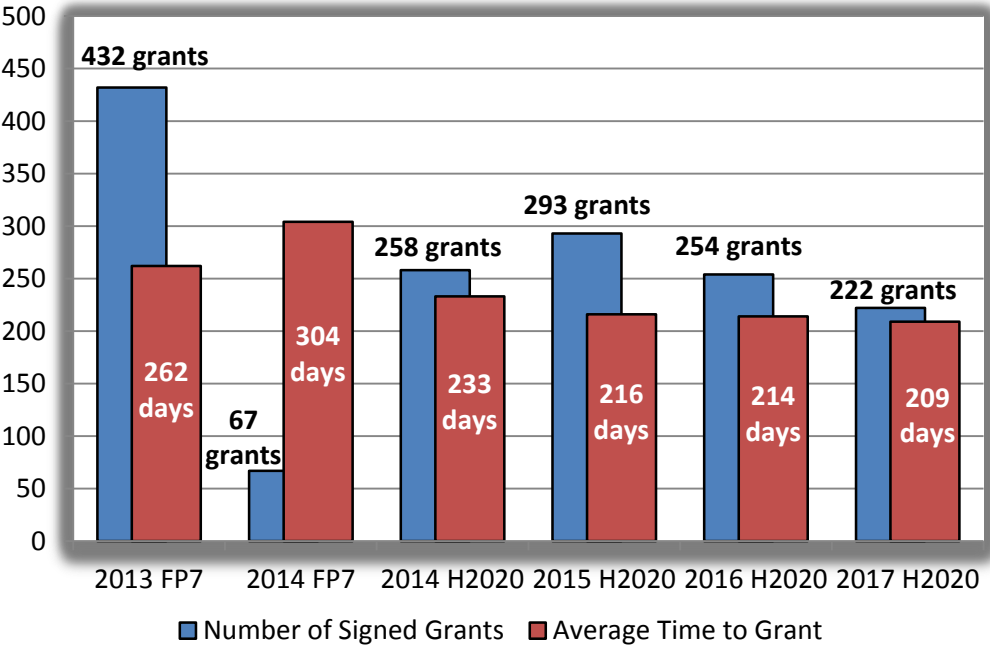
²⁰ Data gathered from the CORDA database.

the duration or the maximum financial contribution for the project. Given that no negotiation phase is foreseen for this programme, the difference between the recommended funding and the final grant awarded is negligible.

The key indicator which can be used to measure the performance of this stage is the time-to-grant.

Time-to-grant (TTG)

The time-to-grant is the length of the time between the closure date of the call for proposals and the date of the signature of the grant agreement. The TTG indicator shows the average period between the calls' closure date and the grants' signature. The evolution of the TTG in the last 2 years of FP7 and the first 4 years of Horizon 2020 is shown in the table below.



In 2017, 222 H2020 projects were signed for a total EC contribution of 981,86 M€ and a total budgeted cost of 1104,90 M€. The average TTG of these projects was 209 days, which forms an improvement compared to previous years²¹. The legal TTG (eight months or 245 calendar days) was complied with in 99% of the grants. Nevertheless, it needs to be noted that a shorter TTG does bring some risks as it reduces the time available for the Commission to carry out extensive checks before signing grants.

Cost-benefit analysis:

The main benefits of the grant preparation/contracting stage consists in translating valuable scientific ideas into legally binding grant agreements in a way that ensures an optimal allocation of EU funds. Notwithstanding the fact that staff carried out multiple tasks across the entire grant management process, the internal costs associated with the contracting process could be quantified to be 2,0 M€ in 2017 (2,3 M€ in 2016).

²¹ Data gathered from the FP7 and H2020 CORDA data warehouse.

Stage three: monitoring the execution

The overall control objective of this stage is to ensure that the projects are performing according to their schedule and that the financial operations comply with regulatory and contractual provisions.

The execution of the projects is monitored through different tools, the ex-ante controls being one of the most important ones at the time of cost claims submitted by the beneficiaries. Other monitoring measures include the assessment of the technical reports, which in some Programmes may have further pre-financing implications and commitments adjustments (only applicable to Multi-Annual Programmes), as well as direct and regular contacts with the beneficiaries and project promoters, technical site visits, project management workshops, among others.

The key indicators which can be used to measure the performance of this stage are the time-to-pay (TTP), which is defined as a percentage of payment made within the binding deadlines and the average project management cost per running project.

The time-to-pay (TTP) indicator:

This indicator gives the percentage of payments made within the binding deadlines. DG CONNECT continued its efforts in 2017 to maintain the low number of late payments, in line with the tighter deadlines imposed by the Financial Regulation. For the year 2017, 97,2% of the total number of payments were paid on time compared to 97,6% in 2016. The average time for payments made on time is 21,6 days. The overall average payment time is 22,4 days.²²

Table: Evolution of the TTP in DG CONNECT (%)

2017	2016	2015	2014
97,2%	97,6%	93,4%	92%

Average project management cost per running project

DG CONNECT estimates that this stage of the process costs around 15,8 M€ for the normal management of the contracts and ex-ante controls over payment claims. The average project management costs (exclusive of financial management) amount to 14.273 € per running project. The average number of projects managed per programme officer was 11,4 in 2017.

Table: Number of running projects in 2017:

2017	Projects	Budget	Programme Officers (FTE)	Average Project	Average Budget
FP7	71	447.623.691		0,73	4.628.994
CIP	10	48.170.792		0,10	498.147
H2020	1.026	4.205.130.392		10,61	43.486.354
Total	1.107	4.700.924.875	96,7	11,4	48.613.494

²² See annex 3 tab 6.

Cost-benefit analysis

The internal costs associated with monitoring the execution of the projects could be quantified to be 15,8 M€ in 2017 (17 M€ in 2016). The real benefits of the ex-ante controls cannot be fully quantified. Indeed, many interactions take place between the consortia and the DG's operational services in order to clean the costs statements from substantial errors still before the official submission of the latter. Therefore, the costs accepted for reimbursement are often very close to the one submitted in the "pre-cleaned" financial statements. As a consequence the difference between the accepted costs and the ones claimed with the latest submission of the financial statements cannot fully measure the "gain" from the ex-ante control measures. Nevertheless, it can be reported that the rejection of the costs as non-eligible amounts in cost claims at the time of ex-ante controls led to a reduction of 9,6 M€ of EU contribution in 2017 out of which 6,9 M€ is related to controls performed in 2017. The remaining difference of 2,7 M€ is related to controls performed during period 2012-2016.²³

Stage four: ex-post controls

The fourth stage includes the ex-post audits as well as the recovery of any amounts found to have been paid in excess of the amount due. This section focuses on the audit work carried out in 2017 and its follow-up actions. The results of the audits, namely the error rates, are detailed in the section dedicated to the control results in terms of effectiveness as regards legality and regularity. Unlike the other stages of the grant management control system, the scope of the audit stage is wider than just DG CONNECT. The Common Audit Service (CAS) is responsible, in FP7, for representative audits for all DGs of the Research Family, and for all audits (including Executive Agencies and Joint Undertakings) in H2020.

Cost-benefit analysis:

As mentioned above, unlike the other stages of the grant management control system, the scope of the audit stage is wider than just DG CONNECT. Indeed, most of the ex-post controls of the Research Family DGs on H2020 and FP7 are performed by the CAS as part of the Common Support Center (CSC). A detailed analysis of the work performed by the CSC can be found in DG RTD's Annual Activity Report. DG CONNECT only manages a few FP7 audits (8 as per 31 December 2017), and CIP ICT PSP audits (11 as per 31 December 2017). The total cost of the audit function in DG CONNECT is estimated to 0,7 M€, composed of internal staff costs within the DG.

The amount of recoveries in 2017 is 8,98 M€ (6,33 M€ for FP7 and 2,65 M€ for CIP). This gives a first estimate of the savings. However, the real benefit of the ex-post controls, including the deterrent and training effect, cannot be fully quantified.

Overall, given the above indicators, it is considered that an efficient control system has been put in place.

Overall assessment of the cost-effectiveness

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. As the CSC is a corporate service which work is crucial to the assurance model for all members of the Research Family, its costs are presented in this report as a whole and not divided or split at DG level. The support services provided by REA to the H2020 implementing bodies is

²³ Data gathered from SAP Business Objects - Recovery context – Non-eligible amounts in cost claims.

part of this family-wide integrated control system as well. The estimated costs of controls of DG CONNECT is given for each of the different grant management stages. The complete picture is shown in the table below.

Table: Overall cost effectiveness of the controls indicator for direct grant management including the shared services costs

Effectiveness indicator in direct grant management	Costs (M€)			Operationnal Payments 2017 H2020 Family Cross-subdelegations excluded (less payments ITER, EIB/EIF, ART 185 and JRC)	Overall rate (total costs/total amount paid)
	Internal costs	External costs	Total	Total amount (M€)	%
Common Support Center					
Common services in legal support, ex-post audits*, IT systems and operations, business processes, programme information and data for all research DGS, executive agencies and joint undertalink implementing H2020	29,45	38,48	67,93	9,743.35	0,70%
<i>(*) part of ex post audits in the total costs of the CSC</i>	10,35	4,26	14,61		0,15%
Evaluation Experts		51,55	51,55	7,743.35	0,63%
REA Support services	18,38	0,00	18,38	8,142.11	0,19%
DG CONNECT costs of controls grant management				Operational payments for grants 2017 DG CONNECT	
Stage 1 – programming and evaluation	3,4	0,0	3,4	1,368.8 (H2020, FP7, CIP etc.)	0,25%
Stage 2 – contracting	2,0	0,0	2,0	1,368.8 (H2020, FP7, CIP etc.)	0,15%
Stage 3 – monitoring the execution (financial circuits)	15,8	0,0	15,8	1,368.8 (H2020, FP7, CIP etc.)	1,15%
Stage 4 – ex-post controls and recoveries	0,7	0,0	0,7	1,368.8 (H2020, FP7, CIP etc.)	0,05%
TOTAL	21,9	0,0	21,9	1,368.8 (H2020, FP7, CIP etc.)	1,60%
DG CONNECT share in the costs REA evaluation experts & support services ²⁴			10,8	1,368.8 (H2020, FP7, CIP etc.)	0,79%
DG CONNECT share in the Costs Common support centre			9,2	1,368.8 (H2020, FP7, CIP etc.)	0,67%
Overall cost effectiveness for grant management in DG CONNECT					3,06%

²⁴ The CNECT cost is calculated on basis of the FP7, H2020 expenditure (0,82*131,73=10,8MEUR and 0,7*131,73=9,22MEUR)

The Research and Innovation DGs have introduced an integrated control system for more efficiency. This means that DG CONNECT relies on the support services provided by the Common Support Centre. For instance, as of 2017, a significant part of the ex-post audit activity relates to FP7 and H2020 and is undertaken by the CAS for the Research and Innovation family as a whole. In addition, the support services provided by REA to the H2020 implementing bodies is also part of this family-wide integrated control system. The shared part of the costs are now included in the calculation of the cost of control of DG CONNECT. This change of methodology in the calculation and reporting of cost of controls renders a comparison with 2016 cost of control results difficult.

As can be read from the table above, the costs of controls can be divided in three main categories of costs:

- Common support services provided by the CSC

The costs of common services²⁵ (in legal support, ex-post audits, IT systems and operations, business processes, programme information and data) represent 0,7 % of the total implemented budget for all research DG's, Executive Agencies and Joint Undertakings implementing H2020 (in terms of payments) in 2017. The part of costs dedicated to ex-post audits represents 0,15%.

- Common support services provided by REA

For more efficiency and the cost-effectiveness of the H2020 programme, REA manages the validation of the beneficiaries and the contracting of the evaluation experts for the whole Research and Innovation Family (except EARCEA). REA also pays the expert evaluators for the Family (except for ERCEA). Both activities are linked to the first control stage.

The costs of REA support services (costs of validation of beneficiaries and contracting of evaluation experts, and, costs of experts evaluators) represent 0,82% of the total budget implemented in 2017 by the Research and Innovation Family (in terms of payments).

- DG CONNECT costs

The cost of control within DG CONNECT can be evaluated for the 4 stages at approximately 21,9 M€. This would correspond to 1,60% of the total operational grant payments made in 2017. With the costs of the common services included, this percentage would go up to 3,06%.

These figures must nevertheless be read with some caution. Some stages are more related to H2020 while others are more related to FP7 and CIP. This decreases the relevance of the general cost-effectiveness calculations and makes comparison with the previous year's results more difficult.

The benefits of the grant management control system are considered here as a whole, as they cannot only be expressed in monetary terms.

The first objective of the control system is to achieve the main policy objective – to create growth and jobs, especially by contributing to more and better science in Europe. 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

²⁵ Human resources and payments 2017

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 has been put in place given

- the achievements of the research policies 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 positive evolution as regards the efficiency of the time-to-pay, time-to-inform and time-to-grant indicators.

In addition, DG CONNECT is using the possibility provided for in Art 66(2) of the Financial Regulation to differentiate the intensity of the DG's controls – in view of the different risk-profiles among its current and future transactions and of the cost-effectiveness of its existing and any alternative controls – by re-directing the control resources towards more stringent controls where needed while having leaner and less burdensome controls where appropriate.

Several control strategies including the FP7 and H2020 control strategy and not an overall control strategy form the framework of DG CONNECT's control system. During the first semester of 2017, a revision of the financial circuits was launched within DG CONNECT. The main modifications resulting from the revision are small adaptations linked to the simplification, harmonisation and clarification of the financial circuits, others are related to changes in the structure of the DG due to the 2016 reorganisation. It was decided to extend the operational verification for "Research"-transactions and the authorisations for "Non Research"-transactions as far as possible to the Heads of Sector in accordance with the Internal Rules for Budget Implementation and internal procedures.

Following the 2016 reorganisation and in collaboration with the Common Support Centre the approval of reimbursement of experts was centralised in Directorate G. The financial circuit for monitor payments has been updated consequently.

The above changes took effect in the second semester of 2017 after validation by senior management. The updated financial circuits were documented and published in November 2017.

Fraud prevention and detection

DG CONNECT has developed and implemented its own anti-fraud strategy since 2009, elaborated on the basis of the methodology provided by OLAF. The last updates were in 2016 and in February 2018 taking into account the Commission's overall anti-fraud strategy and methodology guidelines provided by OLAF²⁶. The updated DG CONNECT anti-fraud strategy includes several actions which were implemented in 2017; those actions of recurrent nature will continue in 2018 together with a number of new actions decided in February 2018. The DG furthermore follows and implements the Common Anti-Fraud Strategy in the Research Family (RAFS) including its action plan which

²⁶ OLAF methodology and guidance for DGs' anti-fraud strategies (February 2016): <https://myintracomm.ec.europa.eu/serv/en/fraud-prevention/ToolBox/Documents/201602%20-%20Updated%20guidelines%20AFS.pdf>

continues all key principles and measures of the previous and updated DG CONNECT strategy. The RAFS was first established in 2012 and has been updated in early 2015 notably to respond to the new challenges, including H2020, of all the Research DGs and Services. The implementation of the RAFS and in particular the action plan accompanying the RAfs is regularly monitored by the governing board of the Common Support Centre (CSC) and the Fraud and Irregularities in Research (FAIR) Committee, in which DG CONNECT actively participates. In November 2017, the FAIR Committee has carried out an updated fraud risk assessment which – together with the review of the Commission Anti-Fraud Strategy in early 2018 - will guide the update of the RAFS foreseen to start in the second half of 2018.

Since 2015 the provision of plagiarism checks and the follow-up of the agreements with the service providers have been transferred to the CSC. At the end of 2017, CSC signed a new contract with a provider of an anti-plagiarism tool.

To raise staff awareness on fraud risks and its mitigation including the use of plagiarism checks, training has been run by DG CONNECT. In 2017, more than 40 CONNECT staff attended anti-fraud training. Furthermore, specific information sessions were provided to all management staff in the DG. In addition, in 2017 a specific work-shop on anti-fraud in open market/ procurement activities was held.

DG CONNECT continued to transmit information to OLAF about suspicions of fraud and other irregularities. In 2017, OLAF opened 10 new investigations having an impact on the DG. DG CONNECT held several meetings with OLAF concerning ongoing and closed investigations and participated in the Fraud Prevention and Detection Network organised by OLAF.

Overall, given the existing anti-fraud strategies and their implementation along with the other points mentioned it is considered that an effective and adequate fraud prevention and detection system is in place.

Objective: Minimisation of the risk of fraud through application of effective anti-fraud measures, integrated in all activities of the DG, based on the DG's anti-fraud strategy (AFS) aimed at the prevention, detection and reparation of fraud.			
Main output in 2017	Indicator	Target	Latest known results
Implementation of the anti-fraud strategies (RAFS, DG CONNECT)	% of implementation of actions planned for 2017 in the anti-fraud strategies	100%	100%
Fraud And Irregularities in Research Committee	Number of meetings	2 by 31.12.2017	Participation in all FAIR Committee meetings (07.02, 13.06 and 19.09.2017)
Anti-fraud awareness raising trainings (Recurrent training courses on grants/procurement targeting specific users)	Number of participants from DG CONNECT	30 in 2017	40 in 2017

Staff survey on fraud awareness	Level of awareness of DG CNECT staff	60% correct replies to the questions of the survey.	82% of correct responses on questions on fraud risk and anti-fraud
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Other control objectives: safeguarding of assets and information

The assets reported by DG CONNECT in the balance sheet 2017 mainly concern short term and long term pre-financing relating to FP7/CIP/H2020 for which the control system is covered in the section covering the management of those programmes.

The items booked under Intangible Assets for an amount of 5.360.322,99 € concern a computer software, which was capitalised in 2015. Total value of the asset is 6.253.710,15 € and its depreciation 893.387,16 €.

A separate control strategy for safeguarding the assets is not deemed necessary for 2017.

Other control objectives: Off balance sheet items

The contingent liabilities reported by DG CONNECT in 2017 (18,8 MEUR) represent the open balance of the guarantee paid to EIB for the project PBI in 2013 (7 MEUR) and 2014 (13 MEUR), later merged and currently called as CEF DI financial instrument.

The 'other significant disclosures' (1813,5 MEUR) reported in 2017 are related to the RAL for FP7 and CIP projects as well as other grants and procurements.

A separate control strategy is not deemed necessary for 2017.

2.1.1.b: Budget implementation tasks entrusted to other DGs and entities

This section reports and assesses the elements that support the assurance on the achievement of the internal control objectives as regards the results of the DG's supervisory controls on the budget implementation tasks carried out by other Commission DGs and entrusted entities distinct from the Commission.

DG CONNECT has entrusted parts of its budget for implementation to other Commission services, a Joint Undertaking, two decentralised agencies, a body linked to Article 185 initiatives, the European Investment Fund and to the executive agencies. No subsidies were paid to the European Investment Bank in the context of the CEF Financial Instrument in 2017.

Entity	Legal form	Purpose	Payments made
Other Commission Services through a number of cross-subdelegations	EU Institution	In the interests of sound budget implementation, the authorising officer by delegation ('the delegator') may, by way of exception, subdelegate 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 subdelegations.	10,20 M€

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.	284,22 M€
BEREC office	Decentralised Agency	BEREC contributes to the development and better functioning of the internal market for electronic communications networks and services.	4,25 M€
ENISA	Decentralised Agency	ENISA seeks to develop a culture of Network and Information Security for the benefit of citizens, consumers, business and public sector organisations in the European Union.	10,57 M€
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 industrial opportunities in the area of information and communication technology (ICT).	6,83 M€
Financial instruments to the EIB established under the CEF Broadband (i.e. Project Bond Initiative)	Financial Instrument	To enable long-term capital market financing of infrastructure projects including, but not limited to, those carried out under project finance structures (which on a risk-sharing basis aims to enable long-term capital market financing of infrastructure projects including, but not limited to, those carried out under project finance structures.	No payments made in 2017
Cultural and Creative Sectors Guarantee Facility (CCS GF) managed by the EIF	Financial Instrument	The CCS GF is a new initiative managed by the EIF on behalf of the Commission and launched in June 2016 in the context of the Creative Europe programme (2014-20). 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 (Member States, Iceland and Norway).	12,99 M€
Education, Audiovisual and Culture Executive Agency (EACEA)	Executive Agency	EACEA is responsible for the management of certain parts of the EU funding programmes in the fields of education, culture, audiovisual, sport, citizenship and volunteering. In 2015 its Delegation Act was revised to include DG CONNECT as partner DG.	106,70 M€
Innovation and Networks Executive Agency (INEA)	Executive Agency	INEA officially started its activities on 1 January 2014. For DG CONNECT it implements the Connecting Europe Facility (CEF) programme.	31,82 M€

Research Executive Agency (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.	132,04 M€
Executive Agency for Small and Medium-sized Enterprises (EASME)	Executive Agency	The Executive Agency for Small and Medium-sized Enterprises (EASME) has been set-up by the European Commission to manage several EU programmes on its behalf.	94,06 M€
TOTAL			693,7 M€

In all cases of indirect management, the supervision arrangements are based on the principle of controlling 'with' the relevant entity. For further details, see the Internal Control Template on indirect management in Annex 5.

Coverage of the Internal Control Objectives and their related main indicators

Control effectiveness as regards legality and regularity

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.

The reservation concerning FP7 includes the DG CONNECT FP7 funds entrusted to the AAL Association and ECSEL.

Expenditure cross-subdelegated

As in previous years, DG CONNECT has cross-subdelegated a number of activities to different services within the Commission, in order to arrange the provision of certain operations more efficiently. Being a Commission service itself, the Authorising Officer by delegation (AOD) of the cross-delegated service is required to implement the appropriations subject to the same rules, responsibilities and accountability arrangements.

Control results

The cross-delegation agreements require the AODs of cross-delegated services to report on the use of these appropriations. The reports on the sub-delegations received from other DGs and offices did not provide any indication of any particular unfavourable observation with regard to the regularity and legality of the transactions concerned. As a result, DG CONNECT considers that the control system over expenditure cross-subdelegated has been efficient and cost-effective in 2017.

Please see annex 10 for the complete list of DG CONNECT activities covered by cross sub-delegations in 2017.

Executive agencies

In 2017, DG CONNECT was a partner DG of the following 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, Audio-visual and Culture Executive Agency (EACEA).

In 2017, the amount of operational appropriations delegated by DG CONNECT to the Executive Agencies was 364,61 M€.

Supervision arrangements

The appropriate monitoring and supervision of the EAs activities are mainly achieved by means of participation of the partner DG(s) in the Steering Committee of the EAs. The Agency's Director ensures that the members and observers of the Steering Committee receive all relevant information and reliable control results needed for the appropriate fulfilment of their mandates.

The annual planning and reporting cycle forms the basis of the monitoring and supervision of the Agencies' activities by the Steering Committee. In particular, the Annual Work Programme contains an obligation of assessment of risks and risk exposure, and provides a number of key performance indicators. These constitute the benchmark against which the performance of the EAs is monitored through its interim reporting and AAR. It is complemented by other relevant sources of information such as the reports from the Discharge Authority, ECA, IAS and OLAF. DG CONNECT uses their reports as an element of the supervision of these bodies.

Since the entry into force of the new Memoranda of Understanding between the executive agencies and their parent DGs, they also report half-yearly to the DG on the use of resources. The preparation of the EAs' budgets and annual work plans is coordinated with the Directorate-General.

Control results

The executive director of EACEA has entered a new reservation in his Annual Activity Report concerning internal control weaknesses relating to the selection process of beneficiaries. This issue was highlighted in an IAS audit carried out in 2017 on the grant management in Erasmus+ and Creative Europe where one critical and eight very important issues were detected. The EACEA reservation and the IAS audit conclusions involve a certain reputational risk for the parent DGs of EACEA.

DG CONNECT is one of the parent DGs of EACEA since it entrusted the agency with the management of the MEDIA part of the Creative Europe programme. As a consequence, DG CONNECT is part of the Steering Committee of the agency and plays as such a supervision role over the agency. This supervision role is framed by a certain number of legal documents and guidance (the Commission Delegation act to EACEA, the Memorandum of Understanding between the DGs and the agency, the Commission Guidelines on Executive Agencies, etc.). However, the parent DGs' supervision of the work of the executive agencies shall not blur the respective responsibilities and, in particular, it shall not result in duplication or overlap with the tasks of the agency.

Extensive actions have been taken by all to ensure the weaknesses are effectively rectified:

- Two Extraordinary meetings of the EACEA Steering Committee with participation of IAS and DG BUDG;
- Rapid revision of the Creative Europe work programme to deal with issues on retroactivity;
- DG-level meetings involving all parent DGs, SG, IAS and DG BUDG;
- Weekly Audit Management Team meetings and Head of Unit group with participation of IAS;
- EACEA Working Group on the update of grant procedures;
- Participation of parent DGs in training courses on selection in March;
- Examination of best practice in other Executive Agencies;
- Multiple technical meetings on legal and compliance matters with DG BUDG.

This has ensured a close follow-up of the critical issues and close supervision will be maintained throughout the current implementation of EACEA's action plan agreed with IAS.

Overall, DG CONNECT considers that its supervision of the executive agency, which is authorising officer receiving delegation directly from the Commission, has been effective and sufficient in 2017. All the reports foreseen in the Memorandum of understanding between EACEA and its parent DGs were provided and enable DG CONNECT to closely monitor the implementation of MEDIA.

Based on the above and based on the fact that the implementation of the action plan by EACEA's Director as AOD in response to the IAS audit shows that appropriate corrective actions have been taken with the parent DGs and therefore, it is not necessary to make an additional reservation at parent DG level. Indeed DG CONNECT considers that the supervision responsibilities were fulfilled and the reputational risk mitigated adequately.

EACEA will also maintain its reservations for the Life Long Learning Programme (2007-13), Culture (2007-13) and Youth in Action (2007-13), showing an error rate above 2%. These legacy programmes are implemented for DG EAC.

INEA did not report any reservations in its Annual Activity Report but referred to a critical risk related to the delegation of the WiFi4EU. The cost-benefit analysis on the delegation of WiFi4EU to INEA which was launched by DG CONNECT in the second half of 2017 and is being finalised, reflects the staffing and cost requirements for the in-house (Commission) and delegation (INEA) scenarios. It appears that the scenario to delegate WiFi4EU to INEA is clearly the most efficient and effective. Based on this the administrative process for the delegation is being launched.

In the 2017 AAR of EASME, the agency reported that for the CIP IEE II and CIP Eco Innovation programmes, the cumulative residual error rates at the year-end are above the materiality threshold of 2%. The Agency maintained the reservation for the CIP IEE II and CIP Eco Innovation programme in its 2017 AAR. However, these reservations concern programmes, which EASME implements for DG ENER and DG ENV respectively.

REA maintains the reservations made in its AAR 2016 as regards the material impact of residual errors in the SME actions financed under the FP7 Capacities Specific Programme and the Space and Security themes financed under the FP7 Cooperation Specific Programme, both exceeding the materiality level of 2%. The first programme is implemented on behalf of DG RTD and the second programme on behalf of DG GROW (Space) and DG HOME (Security themes).

The regular supervision of the executive agencies did not identify any particular events, issues or problems that could have a material impact on assurance or that would need to be included in this report. DG CONNECT is well aware of the reservations made by REA, EASME and EACEA and the critical risk related to WiFi4EU reported by INEA and does not consider that they represent a failure of DG CONNECT supervision. This is also considered in relation to the findings of the IAS regarding the selection process in grant management within EACEA. These findings are addressed by an ambitious action plan of which some actions have already been implemented in 2017 and core actions to be effectively implemented by March 2018.

ECSEL Joint Undertaking

ECSEL is a partnership between the private and the public sectors for electronic components and systems. The ECSEL Joint Undertaking is established within the meaning of Article 187 of the Treaty on the Functioning of the European Union for the implementation of a Joint Technology Initiative on 'Electronic Components and Systems for European Leadership' for a period up to 31 December 2024. It was established by Council Regulation (EU) No 561/2014 of 6 May 2014.

Supervision arrangements

The Commission's Internal Audit Service (IAS) performs ECSEL's internal audit function and ECSEL works to take into account the comments made by the IAS. The European Court of Auditors (ECA) is the external auditor of ECSEL and DG CONNECT receives copies of the reports, for action, if necessary.

Directorate A 'Digital Industry' of DG CONNECT represents the Commission in the Governing Board (GB) and the Public Authorities Board (PAB) of the ECSEL JU. DG CONNECT closely monitors the work of the ECSEL JU²⁷, inter alia by preparing the Commission's position in the GB and in the PAB.

In 2017 ECSEL launched two calls for proposals with a total EU estimated contribution amounting to 160 M€²⁸, leveraging a similar amount from the participating Member States and Associated countries and some 510 M€ in-kind contributions from the private participants.

As was the case in the context of the 2015 discharge, in the Court's opinion, the JU's accounts for the period of 2016 present fairly, in all material respects, its financial position. However, although recognizing the efforts made by the ECSEL JU to assess the national assurance systems, the Court repeats its qualification on the grounds that it is not possible to calculate a reliable weighted error rate nor a residual error rate on the projects launched under ARTEMIS and ENIAC JUs.

The Commission (DG CONNECT as the 'partner DG') recognizes the importance of the Court's observation and at the same time highlights the importance of the outstanding successes of the initiatives obtained, making the JU vital for the digital future of Europe. DG CONNECT will continue to provide its advice and support to the ECSEL JU in its efforts to address all the concerns of the Court and of the budgetary authorities.

The issue highlighted by the Court will not further impact ECSEL JU operations under Horizon 2020 as the JU funding mechanism is no longer linked to the recognition of costs at national level. The audits will be performed by the Commission and the error rates will be calculated on basis of those audits.

It should be noted that in April 2017, the European Parliament granted discharge on the 2015 budget of the ECSEL Joint Undertaking.

In line with the Council Regulation establishing ECSEL, the Commission has carried out, with the assistance of independent experts, an interim evaluation of ECSEL JU. The evaluation report fed into a Commission Staff Working Document which contained evaluation conclusions regarding all Joint Undertakings and was submitted to the European Parliament and the Council by 31 December 2017.

[The ECSEL evaluation report](#) concludes that the combination of EU, national and private investments under a single R&I scheme optimises the leverage of public funding and ensures a strong alignment of effort along a single European strategy. The report also values the progressive integration of related technologies to satisfy the needs of industrial applications as well as of citizen requirements.

²⁷ ENIAC and ARTEMIS Joint Technology Initiatives operated until the 27 June 2014, when ECSEL was established and took over their operations.

²⁸ Of that amount 128.5 M€ represent revenues from the 2017 general Union budget and 31.5 M€ represent estimated revenues from the 2018 general Union budget.

Control results

Overall, DG CONNECT considers that its supervision of the ECSEL JU has been effective and appropriate in 2017. The regular supervision of ECSEL did not identify any particular events, issues or problems that could have a material impact on assurance or that would need to be included in this report. The results of the ECSEL evaluation report supports this conclusion. Also the fact that the EP granted discharge on the 2015 budget of the ECSEL Joint Undertaking is a very positive development for the EC since the discharge for ECSEL in previous year had often been postponed and dealt within an extended procedure. However DG CONNECT follows a prudent approach and includes the related FP7 budget within the scope and exposure of its reservation for FP7.

BEREC Office

BEREC Office

The tasks, organisation and operation of BEREC and the BEREC Office are set out in Regulation (EC) No 1211/2009 of 25 November 2009 establishing the Body of European Regulators for Electronic Communications (BEREC) and the Office.

BEREC consists of the Board of Regulators, a body which is not an EU agency and does not have legal personality. BEREC has the objective of promoting a consistent application of the EU regulatory framework and its tasks are focused on market regulation. It has an advisory role towards the EU institutions and individual national regulatory authorities (NRAs). The Board of Regulators is composed of the head or a high-level representative per each of 28 national regulators. The Commission has an observer role (with no voting rights) in the Board. EEA and candidate countries have also observer status. The Board is chaired on yearly rotating basis by a national regulator.

The BEREC Office is established as an EU agency with legal personality. It has no regulatory powers but a supporting administrative and professional assistance role towards BEREC. With 27 staff, it is currently the smallest EU agency. The BEREC Office is managed by an Administrative Manager under the supervision of a Management Committee composed of the Heads of the 28 national regulators and a representative of the Commission with voting rights (one vote). In October 2016, the Management Committee decided to extend the administrative manager's term of office for 3 years as of 1 April 2017.

Supervision arrangements

In 2017 the Director-General of DG CONNECT and the Director for Electronic Communications Networks & Services represented the Commission in the Management Committee respectively as a member and as alternate member. Arrangements are in place within the DG to ensure that all proposals to the Management Committee are properly assessed and the Commission's position is agreed. The main Commission representative and the alternate sign an annual declaration of interest and commitment.

The Administrative Manager, who is also the authorising officer of the BEREC Office, produces a consolidated annual activity report, which includes information on the management and internal control systems including a summary of internal audits carried out, a summary of the recommendations made and of the actions taken on these recommendations; any observations of the ECA and the actions taken on these observations. The Administrative Manager signs a declaration of assurance in line with the one used in the Commission.

The Commission's Internal Audit Service (IAS) performs the BEREC Office's internal auditing function. In September 2016, the IAS conducted a full risk assessment exercise covering BEREC Office's major operational and administrative processes. Based on its outcome, the IAS prepared the Strategic Audit Plan for 2017–19, which includes audits

on the following topics: a) Procurement, missions, and reimbursement of experts; b) Planning, budgeting, monitoring of activities and reporting. Two sub-processes of the BEREC Office activities were considered as high risk areas, namely personal data protection and fraud prevention. The BEREC Office, being responsible for implementing the action plan in order to minimise the risks, prepared an Anti-Fraud Strategy which was adopted by the Management Committee in February 2017.

The ECA is the external auditor of the BEREC Office, and DG CONNECT receives copies of the reports, for action, if necessary. The BEREC Office received, for its 2016 accounts, an unqualified opinion from the ECA on the legality and regularity of the transactions underlying the accounts. The ECA had some comments on the budgetary management of the office, in particular as regards to the use of negotiated procedures instead of an open procurement procedure in a particular case (for the provision of professional event organisation services) and as regards the level of committed appropriations carried over.

Control results

The reports and other available information did not provide any unfavourable observations with regard to the regularity and legality of the transactions. DG CONNECT has no reason to believe that their reports would be incomplete or unreliable. DG CONNECT concludes from the information available that resources assigned to the activities of BEREC have been used for the purpose of achieving the objectives of the BEREC office and in accordance with the principles of sound financial management.

In 2017 the BEREC Office reach a budget execution rate of 99,94 % (the highest since its establishment of the Agency). A first estimate of the 2017 surplus that should be reimbursed to the EU budget (as assigned revenue) is 23 336 €: budget outturn (surplus) 2017. This amount will be recovered by the Commission in 2018 and will be used to pay the 2019 EU contribution.

Overall, DG CONNECT considers that its supervision of the BEREC and BEREC Office has been effective and appropriate in 2017.

ENISA

The tasks, organisation and operation of ENISA are set out in Regulation (EC) No 526/2013 of 21 May 2013 concerning the European Union Agency for Network and Information Security (ENISA) and repealing regulation (EC) No 460/2004. The Agency is tasked to contributing to a high level of network and information security within the Union and in order to raise awareness of network and information security and to develop and promote a culture, of network and information security in society for the benefits of citizens, consumers, enterprises and public sector organisations in the Union. Its mandate currently runs until June 2020.

In light of the expiry of the ENISA mandate the outcome of an evaluation of the mandate was published as annex (SWD(2017)502) to the Cybersecurity Act Regulation proposal in September 2017 (COM(2017)477). This followed an impact assessment regarding the future of ENISA which included stakeholder consultations. The largely positive outcome of this evaluation was also a key factor in ENISA being proposed to take on a strengthened role within the Cybersecurity Act. The proposal gives it a permanent mandate, a more focused sets of tasks – including new ones in the area of EU-level certification of ICT cybersecurity products and services – and increased resources both in terms of budget and personel. As of October 2017, the Cybersecurity Act is being negotatied within the Council of Ministers and since November 2017 also within the European Parliament. Until the adoption of the Cybersecurity Act, the current ENISA mandate continues to be valid.

Here, ENISA supports the European Institutions, the Member States and the business community in addressing, responding and especially preventing network and information security problems. It does so through a series of activities across five areas identified in its strategy:

- expertise: provision of information and expertise on key network and information security issues.
- policy: support to policy making and implementation in the Union.
- capacity: support to capacity building across the Union (e.g. through trainings, recommendations, awareness raising).
- community: foster the network and information security community [e.g. support to the Computer Emergency Response Teams (CERTs), coordination of cyber exercises].
- enabling (e.g. engagement with the stakeholders and international relations).

ENISA carries out its activities according to an annual and multiannual work programme. It has been granted an autonomous budget financed primarily through a contribution from the Union as well as contributions from third countries participating in the Agency's work. Member States are also allowed to make voluntary contributions to the revenue of the Agency.

Supervision arrangements

The Director for Digital Society, Trust and Cybersecurity, within DG CONNECT, and the Director for IT Security, within DG DIGIT, represent the Commission on the Management Board and the Executive Board.

The Management Board and the Executive Board meet three or four times per year. The cooperation at operational level is ensured via the desk officer for ENISA as well as regular contacts between the operational unit and ENISA's staff (e.g. regular bimonthly phone calls). At managerial level, there are regular meetings between the Executive Director of ENISA and senior members of the Management and the CONNECT's Director responsible. DG CONNECT may request, at any time, any additional information deemed necessary.

DG CONNECT reviews all documents and information which is sent to the Management Board and the Executive Board including KPIs, documents of the board meetings as well as reports that are presented by ENISA. Sometimes, assistance from the support units in Directorate R is requested particularly for human resources and financial matters.

The Executive Director of ENISA, as the authorising officer of ENISA, is required to produce a consolidated annual activity report, which should include information on the management and internal control systems including a summary of internal audits carried out, the recommendations made and the action taken on these recommendations as well as any observations of the ECA and the actions taken on these observations. He signs off a declaration of assurance.

The Commission's Internal Audit Service (IAS) performs ENISA's internal audit function and the ECA is the external auditor of ENISA. DG CONNECT receives copies of the reports, for action, if necessary.

In addition, the Executive Director presents to the Management Board an annual ex post evaluation on the Agency's core activities which is conducted by an independent contractor. The results of the ex post evaluation for the reporting period were positive. In particular, the study findings suggest that there is a need for reinforced network and information security in Europe and the vast majority of stakeholders perceive that the scope and objectives of ENISA's work, as well as its outputs, responds to such needs.

Control results

The reports and other available information did not provide any unfavourable observations with regard to the regularity and legality of the transactions. DG CONNECT has no reason to believe that the reports would be incomplete or unreliable.

DG CONNECT concludes from the information available that resources assigned to the activities of ENISA have been used for the purpose of achieving the objectives of ENISA and in accordance with the principles of sound financial management. Overall, DG CONNECT considers that its supervision of ENISA has been effective and appropriate in 2017.

Active and Assisted Living Joint Programme (AAL JP)

The AAL Association is an international not-for-profit association established under Belgian law and constitutes the dedicated implementation structure created by the participating EU Member States, Canada, Norway and Switzerland (Participating Countries).

The AAL JP is a Member States' initiative for applied research on ICT and ageing well. The budget for calls for proposals is composed of the EC contribution and contributions of Participating Countries and organisations participating in the projects (approximately 25%, 25% and 50% respectively). The new AAL JP is a prolongation of the AAL JP (2008-2013) with the same annual budget and obtained a new mandate for the period 2014-2020 (decision No 554/2014/EU) as a part of the Innovation Investment Package.

The programme is managed by the Participating Countries through an AAL Association. The Commission is part of the governance structure. It has the right to undertake every year an operational review with independent external experts in order to supervise its financial contribution. Furthermore, the EC can veto the work programme of the AAL in the General Assembly. Day-to-day operations are run by the Central Management Unit supervised by the Executive Board.

Supervision arrangements

The General Assembly, which is the decision taking body of the AALA, appoints the members of the Executive Board and supervises the implementation of the AAL Joint Programme, including approval of annual work programmes, allocation of national funding to projects and applications for new memberships. The Commission has an observer status in the meetings of the General Assembly and is also has the right to veto the AAL JP annual work programme.

An ex-ante assessment of the AALA's capacity to administer the funds in the indirect centralised management mode was finalised in October 2014. Its recommendations were reflected in the Delegation and Transfer of Funds Agreements as well as in the ex-post audit strategy concerning the EU contribution to the AAL JP. An action plan for follow-up was agreed with the AAL Association in 2015. In 2017, all the 24 recommendations were addressed and implemented. There are no pending recommendations and the dedicated implementation structure can be confirmed to manage EC funding.

The AAL JP is managed by a dedicated implementation structure, namely the Central Management Unit (CMU) and a network of national contact points (NCPs) responsible for the administrative, financial and contractual management. The Executive Board accomplished a restructuring of the CMU which resulted in the appointment of a new director on 8 February 2017. DG CONNECT undertakes every year an annual operational review with independent external experts to assess the overall performance of the AALA and whether all contractual obligations are met. In 2017, this review has confirmed the good operation of the AAL JP and supports the assurance of DG CONNECT. In addition, there have been programme level evaluations with high level external experts in 2010, 2013 and 2016. The latter interim evaluation addressed the first three years of the AAL2 Programme, from 2014 to 2016. The report of the evaluation was published on 9 October 2017 in the context of the interim evaluation of Horizon 2020 including Article 185 initiatives such as AAL2. The evaluation was undertaken by an expert panel and explored

options for the follow-up of the current programme beyond 2020. The evaluation confirmed that the Programme is being managed effectively with the recommendation that Participating States should take greater ownership to further enhance strategic leadership of the AALA.

Risk management has included verification of financial commitments of Participating Countries before EU financing is allocated as well as for payments, where the EU contribution is subject to a certification of incurred costs by the responsible national public bodies before disbursement of EU funds by the AALA. The AALA has to a) provide information about the audit procedures in each of the Participating Countries and b) to report annually on audits implemented. In addition, the AALA should report as soon as there is a suspicion of fraud or irregularities. The IAS performed an audit on external bodies managing DG CONNECT funds, which recommended establishing a clearer ex-post audit strategy for the AAL JP. According to the recommendation of the Commission's Internal Audit Service, DG CONNECT approved, in early 2015, an ex-post audit strategy providing assurance regarding the mitigation of risks arising from the EC involvement in the AAL JP. The risks are also recorded in the risk register. The Commission conducts an annual review to follow up, among other, the implementation of the ex-post audit strategy. In the last quarter of 2017, the Court of Auditors examined one transaction between the AALA and the national funding authority of Norway but the results are not known yet.

Control results

DG CONNECT concludes from the information available, and there is no reason to believe that this information would not be complete or reliable, that resources assigned to the activities of AAL JP have been used for the purpose of achieving the objectives of AAL JP and in accordance with the principles of sound financial management. In view of the error rate of FP7 calculated for the budget managed directly by DG CONNECT (see 2.1.1 above) and the absence of elements that would justify a lower residual error rate, the scope and exposure of our own reservation for FP7 will include the related FP7 budget.

Financial Instruments - Project Bond Pilot Initiative and CEF Debt Instrument

The European Investment Bank (EIB) manages, on behalf of the Commission (DG ECFIN, DG MOVE, DG ENER, DG CONNECT), the financial instruments established under the Project Bond Pilot Initiative (PBI), which - on a risk-sharing basis - aims to enable long-term capital market financing of infrastructure projects including, but not limited to, those carried out under project finance structures. During the pilot phase of the PBI, the total EU budget contribution for the PBI was limited to 230 M€. The amount committed by DG CONNECT for PBI projects in the sector of ICT and broadband projects is up to 20 M€. This amount was spent on a single transaction, a project concerning extension and renewal investments in 11 already operational broadband Public Initiative Networks throughout France.

The various portfolios related to the total contribution (including the Loan Guarantee Instrument for TEN-Transport projects portfolio) were merged into one CEF Debt Instrument portfolio in 2016 as cost-saving measure.

The CEF Debt Instrument (CEF DI) Delegation Agreement has been signed in July 2015. In 2017, the final date of implementation of DG CONNECT's original commitment of 17.5 M€ has been postponed and is now in line with the end date of the CEF Debt Instrument Delegation Agreement, i.e. 31 December 2020 for approvals, and availabilities for payment are therefore possible until 30 June 2021. In this respect, no payments have been made in 2015, 2016 and 2017 to the EIB in the context of the CEF financial instruments, but early indications from the EIB indicate expected payments in 2020.

Finally, a revised description for project identification and financing has been agreed between DG CONNECT and the EIB for the ICT sector during the last CEF DI Steering Committee held on 30 November 2017: "Possibly one or more CEF eligible projects which are currently in very early stages of development or identification and are still in need for Technical Assistance", with the understanding that "the EIB should also pursue other, more advanced projects" if necessary.

Supervision arrangements

The EIB delivers an annual operational report on the PBI to the Designated Services and to DG ECFIN. The same applies for financial reporting. Additional quarterly reports are being provided informing on the allocation of PBI assets. The Commission has four nominees on the Steering Committee of the PBI. DG ECFIN chairs the Steering Committee and coordinates exchanges of views between Commission members of the Steering Committee before the meeting takes place. DG ECFIN also reports twice yearly to the European Parliament and to the Council on behalf of the Commission with the support of Designated Services.

The EC contribution to the PBI First Loss Piece Portfolio serves as a guarantee for the project. The amounts provided from the EU budget are further invested by the EIB. In case of project default or construction cost overruns, this money provisioned as a guarantee will actually be disbursed to support the reimbursement of the overdue amounts, up to the level of EU budget commitment.

Control results

Overall, DG CONNECT considers that its supervision of PBI has been effective and appropriate in 2017. In particular, DG CONNECT considers that the operational and financial reporting (monthly, quarterly and annual reports) is sufficient and provides relevant information and figures to ensure sound and efficient management of the policy aspects of this financial instrument.

CEF Broadband Fund (Equity Instrument)

The Connecting Europe Broadband Fund ("CEBF" or the "Fund") is an investment fund which will 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. Five public institutions are expected to invest in it, namely the Commission, the EIB and three National Promotional Banks and Institutions (NPBIs), alongside private investors. The Fund should be the first investment platform to support broadband infrastructure under the European Fund for Strategic Investments (EFSI), the heart of the Investment Plan for Europe. Cube Infrastructure Managers S.A., an independent investment firm with extensive experience in infrastructure and ICT projects, has been selected to manage the Fund through a public procurement process carried out by the EIB.

The Fund's target size is 500 M€ – 600 M€. Its investments will be of a size between 1 M€ and 30 M€ (estimated average of 12 M€), for projects representing total costs of 150 M€ or less. Overall, the Fund is expected to unlock additional investments between 1 Bn€ and 1,7 Bn€ in broadband deployment in underserved areas, where very high-capacity networks are not deployed yet. The Fund aims to have invested in 20 countries by 2021.

The operational launch of the Fund is expected to take place in 2018. Delays in launching the Fund resulted mostly from its innovative character. What proved particularly difficult was to reconcile the interests of different groups of investors, which added complexity to the legal structuring of the fund and led to complex negotiations on subordination, remuneration mechanisms and income waterfalls. Additionally, creating a governance structure which would be attractive enough for private investors proved more difficult

than initially foreseen, in particular while maintaining the Fund's characteristics which justify public intervention.

The Commission committed in total 100 M€ to the Fund, via a first 10 M€ legal commitment and a second 90 M€ legal commitment (remaining part of the 2015 global commitment, transformed into an individual commitment in December 2017).

Supervision arrangements

So far, no payment has been made and the total amount of 100 M€ is still a budgetary commitment at this stage. Supervision arrangements are being negotiated between the parties, but already some control mechanisms are already reflected in the latest documents, such as clear investment guidelines for the selection of projects (private placement memorandum), compliance with non-cooperative jurisdictions rules (investment management agreement) and specific reporting obligations imposed on the Fund Manager (European Commission Side Letter). The vehicle, involving EFSI and EIB own capital, is additionally supervised by the EIB.

Control results

Overall, based on the progress made so far, we do not see any particular issue at this stage as to the supervision of the structure.

Financial Instruments - Cultural and Creative Sectors Guarantee Facility

As mentioned in section 1 of the AAR, the implementation of the Cultural and Creative Sectors Guarantee Facility (CCS GF) under Creative Europe programme is entrusted to the European Investment Fund (EIF) 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 on the 30 June 2016, which was amended on 12 December 2017. Full reporting on control results (effectiveness as regards legality and regularity, efficiency and cost effectiveness and Fraud prevention and detection) is part of the Delegation Agreement in force.

Supervision arrangements

The Delegation Agreement provides for detailed supervision arrangements, listed in Article 7 (Governance), Article 13 (Operational and Financial Reporting), Article 14 (Controls and Monitoring) and Article 15 (Audit) as well as in the relevant Annexes (Annex 6a on Operational Reporting, Annex 6b on Financial Reporting, Annex 6c on Pipeline Reporting, Annex 7 on Monitoring, control and audit obligations of the EIF and the Financial Intermediaries and control and monitoring rights of the Commission). Those provisions require the EIF to undertake comprehensive and timely monitoring of CCS GF Transactions under the CCS GF, covering financial intermediaries, financial sub-intermediaries and final recipients, and to report on the monitoring activities to the Designated Service. In line with the provisions of the Delegation Agreement, the reports are delivered on annual or quarterly basis.

Based on its own controls, the EIF shall:

- a) monitor the compliance of the operations with this Delegation Agreement;
- b) assess the eligibility of financial intermediaries;
- c) monitor the eligibility of the final recipients;
- d) monitor the proper execution by the financial intermediaries of their contractual obligations, including their reporting obligations

The EIF shall require the financial intermediary to:

- a) monitor the contractual compliance of the agreements with final recipients; and
- b) where applicable, assess the eligibility of financial sub-intermediaries
- c) monitor the eligibility of final recipients.

The Commission may exercise further controls to validate the operational and financial reporting received from the EIF. The Commission may request the EIF to transmit representative and/or risk-based samples of transactions.

The Commission appointed four members (from DGs CONNECT, EAC, ECFIN and BUDG) to the governance body (called the Steering Committee) that supervises the implementation of this financial instrument.

Control results

Overall, DG CONNECT's supervision of this financial instrument did not identify particular issues that would need to be included in this report, which is the reason why DG CONNECT considers that its supervision of the CCS GF was effective and appropriate. DG CONNECT considers in particular that the operational and financial reporting (monthly, quarterly and annual reports) provided sufficient and relevant information and figures to ensure sound and efficient management of the policy aspects of this financial instrument.

Efficiency and Cost Effectiveness of controls

Based on an assessment of the most relevant key indicators and control results, DG CONNECT has assessed the cost-effectiveness and the efficiency of the control system and reached a positive conclusion.

DG CONNECT's costs for the monitoring and supervision of the entities entrusted with budget implementation tasks accumulate to approx. 2,17 M€. These costs include primarily personnel costs (in total 16 FTEs) and mission costs to attend supervisory board meetings for entities not based in Brussels. Personnel costs relate in particular to the monitoring activities (via the supervisory Committees), the preparation of budgets (for executive agencies), the assessment of the annual activity reports and other periodic reports as well as the annual work programmes.

Overall assessment of the cost effectiveness at Commission level and at entity level

The average cost of the monitoring and supervision of the executive agencies, ECSEL, AAL Association, BEREC/BEREC Office, ENISA, the Financial Instruments and payments made under cross subdelegations represent 0,31% of the operational payments made to these entities, compared to 0,33% in 2016. This includes the cost of control related to the Financial Instruments which could be estimated at 2,21%.

Table: Evolution cost of controls Indirect Management at DG/Commission level:

Year	Payments made	Estimated costs of control	Ratio
2015	179,79 M€	1,757 M€	0,98%
2016	580,1 M€	1,905 M€	0,33%
2017	693,7 M€	2,17 M€	0,31%

The table below provides a more detailed overview of the supervision and monitoring cost per entity in 2017:

Entity	Payments made	(estimated) Costs of Control	Ratio
EC services through cross-subdelegations ²⁹	10,20 M€	0,043 M€	0,42%
Executive agencies ³⁰	364,61 M€	0,593 M€	0,16%
ECSEL	284,22 M€	0,360 M€	0,13%
BEREC Office	4,25 M€	0,429 M€	10,09 %
ENISA	10,57 M€	0,372 M€	3,52 %
Active and Assisted Living Association	6,83 M€	0,089 M€	1,30%
Financial Instrument (CCS GF)	12,99 M€	0,215 M€	2,21%
Financial Instrument (CEF)	0 M€	0,072 M€	
TOTAL	693,7 M€	2,17 M€	0,31%

The estimated costs of control has also been calculated at entrusted entity level. The cost of controls at entity level has been estimated on the basis of the management or other remuneration fees paid to them by the DG in 2017.

²⁹ For the '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.

³⁰ Operational payments transferred: EACEA: 106,7 M€, INEA: 31,8 M€, REA: 132 M€ and EASME: 94,1 M€.

The table below provides a detailed overview of the cost of control for indirect management at entity level in 2017:

Entity	Payments made	Management/Remuneration fees paid	Ratio
EC services through cross-subdelegations	10,20 M€	0 M€	N/A
EACEA	106,7 M€	0 M€	N/A
INEA	31,8 M€	0 M€	N/A
REA	132 M€	0 M€	N/A
EASME	94,1 M€	0 M€	N/A ³¹
ECSEL	284,22 M€	1,41 M€	0,50 %
BEREC Office	4,25 M€	2,80 M€ ³²	65,88 %
ENISA	10,57 M€	7,57 M€ ³²	71,62 %
Active and Assisted Living Association	6,83 M€	0,57 M€	8,35 %
Financial Instrument (CCS GF)	12,99 M€	1,57 M€	12,09 %
Financial Instrument (CEF)	0 M€	0 M€	N/A
TOTAL	318,9 M€	13,92 M€	4,37 %

Conclusion on efficiency and cost effectiveness of controls

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 efficiency and cost effectiveness of controls. In terms of supervision by the DG, efficiency and cost-effectiveness is considered adequate. Although it can be seen that there are variations in the cost of controls ratios on entity level, it is considered that the overall cost of control ratio is cost effective.

For some of the entrusted entities the cost of control is relatively high:

BEREC Office and ENISA: As indicated in the tables above, the BEREC office and ENISA have relatively small annual budgets. Those agencies do not manage call for proposals, and the EU funds serve mainly for staff remuneration and administration purposes. Those agencies 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.

Financial instruments: For the CCS GF financial instrument, the payments are rather insignificant in comparison to the commitments. The fee structure (capped at 6% annual based on commitments) is based on the commitments and not on payments. In 2017, approx. 100M€ were committed.

³¹ DG CONNECT did not pay management fees for cross-subdelegations and to the executive agencies as it was not the lead parent DG. The payments made to those entities were removed from DG CONNECT's budget a priori, without any link to specific type of expenditure.

³² Title 1 and Title 2 expenditure has been considered as Management expenses paid.

Fraud prevention and detection

DG CONNECT in its supervisory role ensured 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 (RAFS). For details on the RAFS please refer to the Fraud prevention and detection section of part 2.1.1. The ECSEL Government Board adopted the Common Anti-Fraud Strategy in the Research Family (RAFS) in May 2015. ECSEL is represented in the Fraud and Irregularities in Research Committee and the majority of its staff members has participated in anti-fraud trainings since 2015.

The ENISA Management Board adopted an agency's Anti-Fraud Strategy and an action plan in October 2014. ENISA was involved in an OLAF Workshop "Train the trainers" and nominated an anti-fraud correspondent.

As regards the BEREC Office, anti-fraud rules and principles are built into the financial manual, in the internal instructions on ethical behaviour and in the information package to newcomers. The BEREC Office adopted an anti-fraud strategy in the first quarter of 2017. The overall objective of the Anti-fraud Strategy of the BEREC Office is to improve prevention, detection and investigation of fraud, and to pursue adequate deterrence and reparation, with proportionate and dissuasive sanctions. The main rules and anti-fraud measures are linked to the anti-fraud Strategy of DG CONNECT.

The Strategy sets three objectives:

- Enhance fraud awareness within the organisation through targeted communication and training (prevention of fraud) and establish and maintain a high level of general ethics culture at the BEREC Office;
- Clarify roles in the process of detection, reporting and handling of fraud (detection and investigation of fraud);
- Implement practical arrangements to ensure protection of whistle-blowers.

The Strategy shall be valid for three years and will be updated in the course of its implementation if necessary, or after its assessment at the end of the implementation period.

DG CONNECT held an ethics and anti-fraud training for all BEREC Office staff in March 2017.

As regards the AAL Association, fraud is addressed in the Risk Management and Ex-post audit strategy for 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 (and any changes) allowing the AAL Association to centrally assess control risks. In particular, they provide the AAL Association - and in turn the Commission - information concerning the audit and control procedures to prevent fraud and irregularities, as well as the audit strategy to be deployed by the national funding bodies, including the methodology to select the grant agreements and the contract to be audited. Where necessary, based on this information, the Commission and the AAL Association may block further payments.

For the PBI financial instrument the asset management has been performed by the EIB. The main principles of fraud prevention are agreed between the Commission and the EIB. Since project bond financing has already been executed and bonds are transparently traded on the Paris stock exchange, this transparency is considered the central fraud prevention measure.

Conclusion on fraud prevention and detection for expenditure

Overall, given the anti-fraud measures put in place by the entrusted entities along with the other above mentioned points, it is considered that the entities have put in place an effective and adequate fraud prevention and detection system.

Other control objectives: Reliability of reporting

The DG involvement in the governance of the various entrusted entities did not show any events, issues or problems in the reporting process.

As regards ECSEL, the European Court of Auditors issued a qualified opinion on the accounts of ECSEL for the financial years 2013 to 2016 on the grounds of not being able to conclude if the ex-post audit strategy provides sufficient assurance with respect to the legality and regularity of underlying transactions. For more details please refer to sections 2.1.3 (sub-section: effectiveness as regards legality and regularity - ECSEL) and section 2.2 of this report.

Conclusion on reliability of reporting for expenditure

DG CONNECT considers that, overall, the reporting process of the various entities has been effective and appropriate in 2016. DG CONNECT nevertheless recognizes the importance of the Court's observation concerning ECSEL and will continue to provide its advice and support to the ECSEL JU in its efforts to address all the concerns of the European Court of Auditors and of the budgetary authorities. As explained in the section on effectiveness as regards legality and regularity (2.1.3), the scope and exposure of the FP7 reservation includes the CONNECT FP7 funds entrusted to AAL JP and ECSEL. No further legality and regularity issues that would impact DG CONNECT's assurance were reported.

2.1.1.C Estimated overall amount at risk "at closure"

In the context of the protection of the EU budget, at the Commission's corporate level, the DGs' estimated overall amounts at risk and their estimated future corrections are consolidated.

For DG CONNECT, the estimated overall amount at risk *at payment*³³ for the 2017 expenditure is between 66,98 and 67,43 M€. This is the AOD's best, conservative estimation of the amount of relevant expenditure³⁴ during the year (1710,27 M€) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.

This expenditure will be subsequently subject to ex-post controls and a sizeable proportion of the underlying error will be detected and corrected in successive years. The conservatively estimated future corrections³⁵ for the 2017 expenditure are 20,69 M€. 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 amount at risk *at closure* between 46,3 and 46,7 M€.

³³ In order to calculate the weighted average error rate (AER) for the total *relevant expenditure* in the reporting year, the *detected*, estimated or other equivalent error rates have been used.

³⁴ "*relevant expenditure*" during the year = payments made, minus new pre-financing paid out, plus previously paid pre-financing which was cleared in the reporting year.

³⁵ Even though to some extent based on the 7 years historic average of recoveries and financial corrections (ARC), which amounts to 1,6% for 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 expected corrective capacity average to be applied to the reporting year's relevant expenditure for the current programmes in order to get the related estimated future corrections. 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 other research DGs following a recommendation from the European Court of Auditors and the Internal Audit Service. Where no recoveries are expected (for the administrative expenditure, procurement) a 0% rate was used.

Table X - Estimated overall amount at risk at closure

DG CONNECT	"payments made" (FY; m€) ^f	minus new ^a prefinancing [plus retentions made ^b](in FY; m€) ^f	plus cleared ^c prefinancing [minus retentions released ^b and deductions of expenditure made by MS] (in FY; m€) ^f	= "relevant expenditure" ^d (for the FY; m€)	Average Error Rate (weighted AER; %) Between ... and .. ^f		estimated overall amount at risk at payment (FY; €) Between ... and ...		Average Recoveries and Corrections ^h (adjusted ARC; %) ^f	estimated future corrections[and deductions] (for FY; m€)	estimated overall amount at risk at closure ^e (m€) Between ... and ...	
					-6	-7	-8	-9			-10	
Budget implemented by DG CNECT												
1- Programmes implemented by CNECT												
H2020	1160,82	730,12	169,19	599,89	2,82%	2,82%	16,92	16,92	0,58%	3,48	13,44	13,44
FP7	156,46	0,00	473,78	630,24	4,95%	4,95%	31,20	31,20	1,99%	12,54	18,66	18,66
CIP	12,41	0,00	45,30	57,71	9,41%	9,41%	5,43	5,43	0,91%	0,53	4,91	4,91
CEF (procurement)	10,66	0,00	0,00	10,66	0,50%	0,50%	0,05	0,05	0,00%	0,00	0,05	0,05
CEF (grants)	4,84	1,10	6,80	10,54	9,41%	9,41%	0,99	0,99	1,60%	0,17	0,82	0,82
Creative Europe	22,32	1,95	0,00	20,37	1,60%	2,00%	0,33	0,41	1,60%	0,33	0,00	0,08
Other	11,98	3,82	2,33	10,49	2,00%	3,00%	0,21	0,31	0,00%	0,00	0,21	0,31
Administrative expenditure	12,39	0,00	0,00	12,39	0,50%	0,50%	0,06	0,06	0,00%	0,00	0,06	0,06
Budget implementation tasks entrusted to other DGs and entities												
2- Implementing Bodies												
EIB - Project Bond Pilot Initiative (PBI)	0,00	0,00	0,00									
EIF - CCSGF	12,99	0,00	5,98	18,97	0,00%	0,50%	0,00	0,09	0,00%	0,00	0,00	0,09
ECSEL (H2020)	183,92	0,00	0,00	183,92	2,82%	2,82%	5,19	5,19	0,58%	1,07	4,12	4,12
ECSEL (FP7)	100,30	0,00	0,00	100,30	4,95%	4,95%	4,96	4,96	1,99%	2,00	2,97	2,97
AAL (H2020)	3,57	3,57	1,06	1,06	2,82%	2,82%	0,03	0,03	0,58%	0,01	0,02	0,02
AAL (FP7)	3,26	3,56	29,44	29,14	4,95%	4,95%	1,44	1,44	1,99%	0,58	0,86	0,86
Berec office	4,25	4,25	4,04	4,04	0,50%	1,00%	0,02	0,04	0,00%	0,00	0,02	0,04
ENISA	10,57	10,57	10,36	10,36	0,50%	1,00%	0,05	0,10	0,00%	0,00	0,05	0,10
3- Cross-subdelegation												
DGs and Offices	9,76	0,00	0,00	9,76	1,00%	2,00%	0,10	0,20	0,00%	0,00	0,10	0,20
Administrative expenditure	0,44	0,00	0,00	0,44	0,50%	0,50%	0,00	0,00	0,00%	0,00	0,00	0,00
Overall, total	1720,94	758,94	748,27	1710,27	3,92%	3,94%	66,98	67,43	1,21%	20,69	46,29	46,74

^a New PF actually paid by out the DG itself during the FY (i.e. excluding any PF received as transfer from another DG)

^b In Cohesion, the (10%) retention made, which is later released or (partially) withheld by the Commission

^c PF actually having been cleared during the FY (i.e. their 'delta' in FY 'actuals', not their 'cut-off' based estimated 'consumption')

^d For the purpose of equivalence with the ECA's scope of the EC funds with potential exposure to L&R errors (*see the ECA's AR methodological Annex 1.1 point 10*), also 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 those (partially) withheld; and any deductions of expenditure made by MS in the annual accounts*] during the FY. This is a separate and 'hybrid' concept, intentionally combining elements from the budgetary accounting and from the general ledger accounting.

^e For some programmes with no set closure point (e.g. EAGF) and for some multiannual programmes for which corrections are still possible afterwards (e.g. EAFRD and ESIF), all corrections that remain possible are considered for this estimate

^f Differentiated for the relevant portfolio segments at a level which is lower than the DG total

^g In Shared Management, e.g.: "validated/adjusted error rates", "residual error rates at MS-level, as reported by the MS Audit Authorities and applied/adjusted/projected by the DG", etc.

^h Even though to some extent based on the 7 years historic average of recoveries and financial corrections (ARC), which amounts to 1,6% for 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 expected corrective capacity average to be applied to the reporting year's relevant expenditure for the current programmes in order to get the related estimated future corrections. 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 other research DGs following a recommendation from the European Court of Auditors and the Internal Audit Service. Where no recoveries are expected (for the administrative expenditure, procurement) a 0% rate was used.

2.1.2 Audit observations and recommendations

This section reports and assesses the observations, opinions and conclusions reported by auditors in their reports as well as the opinion of the Internal Auditor on the state of control, which could have a material impact on the achievement of the internal control objectives, and therefore on assurance, together with any management measures taken in response to the audit recommendations.

Internal Audit Service (IAS)

During 2017, the IAS closed three audits and started one audit in DG CONNECT:

(1) IAS audit on H2020 project management in DG CONNECT

The final report was received on 24 July 2017 and concluded that although DG CONNECT has put in place a project management process that ensures that its beneficiaries effectively implement the H2020 projects in line with the grant agreement, the IAS concludes that a significant weakness exists in effectively detecting and managing the risk of plagiarism. In this context, the IAS has identified one very important issue related to addressing the risk of irregularities and fraud and an important issue related to project monitoring.

The IAS reported that there is lack of effective checks to identify potential plagiarism cases, a delayed notification of a new EDES (Early Detection and Exclusion System) flag to all Project Officers concerned (which may prevent them from timely re-assessing the risks of the projects under their responsibility and promptly implementing appropriate mitigating actions) and a lack of procedures to be followed when a beneficiary, participating in several projects, is flagged in EDES. The actions related to this recommendation have been implemented.

In terms of project monitoring, the IAS found that Project Officers are not systematically monitoring the status of the deliverables (i.e. whether they are delivered according to the established deadlines) and the update of the milestones defined in the Description of the Action. The actions to address this issue have all been implemented in 2017.

(2) IAS audit on Management of recovery orders

The final report was received on 14 September 2017 and did not identify any high risks. Nevertheless, it revealed certain areas where improvement is needed. These relate to the need for strengthened controls over the encoding of the recovery context in ABAC and an improved monitoring of the process including setting a limited number of objectives and key performance indicators to tackle delays in processing recovery orders.

Two of the six actions of the action plan to address the important recommendation related to the encoding of the recovery context in ABAC (Rec. 1) have already been implemented in 2017. Four remaining actions are foreseen to be implemented by the second quarter of 2018.

Three of the five actions to address the important recommendation related to the monitoring of the recovery order process (Rec. 2) have already been implemented in 2017. Two remaining actions are foreseen to be implemented by the first & second quarter of 2018.

(3) IAS audit on Procurement in DG CONNECT

The final report was received on 12 December 2017 and concluded that the internal control system in place provides reasonable assurance regarding the achievement of the business objectives set up for the procurement process.

While the audit did not result in the identification of any critical or very important issues, the IAS considers that there is room for further improvement in specifying the financing decision covering the procurement, regarding the completeness of checks before contract signature and in restricting the access to sensitive procurement documents.

Based on an analysis of the actions envisaged the IAS concluded that the action plan DG CONNECT established is deemed to be satisfactory to mitigate the risks identified.

(4) IAS audit on ex-ante controls on H2020 grant payments

This IAS audit started in October 2017 in DG CONNECT. The audit results are expected in the first half of 2018.

In line with the 2017 IAS Audit Plan, the IAS performed a follow-up audit on a number of open recommendations from the following IAS audit engagements:

1. IAS audit on the closure of projects of legacy programmes in DG CONNECT
2. IAS Audit on human resources management

Based on the results of the follow-up audits, IAS assessed that the recommendations reported as 'ready for review' by DG CONNECT have been adequately and effectively implemented

Limited conclusion of the Internal Auditor on the state of Internal Control in DG CONNECT

In its contribution to the 2017 AAR process, IAS concludes that "the internal control systems audited are partially effective since one 'very important' recommendation remains to be addressed, in line with the agreed action plan". This statement is based on all work undertaken by the IAS in the period 2015-2017.

In addition, the statement takes into account that:

- management has adopted action plans to implement recommendations made by the IAS in 2015-2017 and accepted by management and which the IAS considers adequate to address the residual risks identified by the auditors,
- the implementation of these plans is monitored through reports by management and follow-up audits by the IAS,
- management has not rejected any 'critical' and/or 'very important' recommendations.

It has to be noted that the actions to address the above mentioned very important recommendation related to the IAS audit on H2020 Project Management have in the meantime already been implemented.

The state of play of the implementation of IAS recommendations

The 2017 final overview report on the state of implementation of IAS recommendations lists four IAS audits with ongoing recommendations. Implementation of two important recommendations are overdue (see hereunder).

The recommendations which are ongoing relate to four audits:

a) IAS audit on Management of Recovery Orders

- Recommendation No 1 – Encoding of the Recovery Context in ABAC, with a planned implementation date of 30 June 2018.
- Recommendation No 2 – Monitoring of and reporting on the uncashed recovery orders, with a planned implementation date of 31 March 2019.

b) IAS audit on Human Resources Management

- Recommendation No 1 (overdue) - HR forward planning. The HR multi annual strategy is planned to be finalised in March 2018. The delay is due to the extension of the pilots of the new HR Delivery Model from end of June 2017 until end of 2017. A revised deadline has been foreseen for 31 March 2018.
- Recommendation No 3 (overdue) - Skills mapping and workload indicators. A revised deadline has been foreseen for 31 March 2018. The delay is linked to the skills mapping tool currently being developed and which is not expected to be ready before March 2018.

c) IAS audit on H2020 Project Management

- Recommendation No 1 - Addressing the Risk of Irregularities and Fraud, with a planned implementation date of 31 March 2018. This is the only remaining very important recommendation that remains to be implemented. Two out of the four planned actions have been implemented. The outstanding actions concern the establishment of a Standard Operation Procedure (SOP) about the use of anti-plagiarism tools and the revision of the Anti-Fraud Strategy action plan to cover the plagiarism risk. These are planned to be implemented in early March 2018.

d) IAS audit on Procurement in DG CONNECT

- Recommendation No 1 - Financing decisions covering procurement commitments, with a planned implementation date of 30 September 2018.
- Recommendation No 2 - Procurement procedures and controls, with a planned implementation date of 31 March 2018.

Conclusion

As a result of the assessment of the risks underlying the auditors' observations together with the management measures taken or planned in response, the management of DG CONNECT believes that the recommendations issued do not have any major impact on the declaration of assurance. The action plan to address the two important recommendations of the IAS audit on Recovery Orders, the action plan to address the very important recommendation of the IAS audit on H2020 Project Management in DG CONNECT and the action plan to address the two important recommendations of the IAS audit on Procurement in DG CONNECT are being implemented as part of continuous efforts in terms of further improvements. As regards the two important recommendations which are overdue (IAS audit on HR management), a new deadline for implementation has been defined by DG CONNECT with a planned implementation by 31 March 2018.

All recommendations issued by the IAS are subject to a systematic follow-up and their status of implementation is closely monitored. Regular updates on the state of implementation of the recommendations were provided to the Audit, Control and Budgetary (ABC) Committee of DG CONNECT chaired by the Director-General.

European Court of Auditors (ECA)

Highlights from the Annual report of the European Court of Auditors for the financial year 2016

The annual European Court of Auditors report was issued in September 2017.

DG CONNECT is mostly concerned by Chapter 5 of the report, "Competitiveness for growth and jobs".

The error rate for the chapter 5 is 4,1% compared to 4,4% in 2015 and 5,6% in the year before. As usual most errors that occurred in research and innovation projects are due to ineligible direct personnel costs.

Besides the error rate, the Court states that "Had the Commission or independent auditors made proper use of all info at their disposal, the estimated level of error would have been 1,2 percentage points lower" – this is needs to be compared to 0,6% last year and 2,8% in the year before.

The Court acknowledges that Horizon 2020 was set up with simpler funding rules than the Seventh Research Framework Programme. However, it recommends to pursue the effort and to reduce legal uncertainty by further taking into account the simplified cost options in the revised Financial Regulation such as unit costs, lump sums, flat-rate financing and prizes.

The Court mentioned that the AAR gave a fair assessment of the DGs' financial management in relation to the regularity of underlying transactions but found different approaches in the presentation of error rates and amounts at risk.

The Court also highlighted that efforts were needed to improve H2020 planning, monitoring and reporting processes in the Common Audit Service.

Ongoing ECA audits with involvement of DG CONNECT

1) Audit on Fraud Management in the European Commission

In April 2017 the Court launched an audit on Fraud Management in the European Commission. This audit aims to assess the question: "Does the Commission properly manage fraud risks in EU spending?". Though the main auditee is the entire Commission notably the central services (OLAF, DG BUDG), DG CONNECT is one of seven DGs in the sample of this audit and received the clearing letter in November 2017.

The indicative time table foresees publication of the Special Report in the second quarter of 2018.

2) Audit on Broadband targets: are the European Commission and Member States on-track to achieve the Europe 2020 broadband objectives?

The audit is considering whether the Member States have developed and implemented appropriate strategies to achieve the broadband objectives set by the Commission and how likely they are to achieve them. It is looking at the use of multiple sources of EU and national funding for broadband and the degree to which the Commission has supported and monitored the Member States in achieving the broadband objectives.

To test this, the auditors have selected a sample of five Member States: Ireland, Germany, Hungary, Poland and Italy. They have set the audit scope and approach, and identified the areas of risk to sound financial management.

The audit covers the period from 2010 to 2016, i.e. from the adoption of the Communication of the Digital Agenda for Europe (May 2010) to the end of 2016. Therefore both the 2007-2013 and the 2014-2020 programme periods are within the audit scope.

The Court published an Audit Brief on the EU's plans for the provision of broadband services in Europe. Audit Briefs are a new type of publication, which provide background information based on preparatory work undertaken before the start of an ongoing audit task and are published following the announcement of the audit. They are designed as a source of information for those interested in the policy and/or programmes being audited.

In this audit brief, the auditors identified the following risks:

- Difficulties for the Member States to put in place the necessary technological and regulatory changes to create a competitive environment which can attract sufficient private sector investments in broadband;
- overall public funding available for the implementation of Member States' broadband plans being insufficient to connect the not commercially-viable areas;
- weaknesses in the Commission's broadband strategy and Member States' broadband plans in terms of target setting and timing to reach these targets;
- poor monitoring by the Commission of the Member States' progress in the implementation of the broadband plan.

The contradictory procedure between the Court and the Commission takes place in March 2018; the report is expected to be adopted in the second quarter of 2018.

3) ECA Survey on the use of performance information for decision-making

The purpose of this survey is to gather data on the manner in which performance information in relation to programmes or policies is used to help decision-making in the Commission. The survey is carried out in different DGs and will provide input for chapter 2 (on performance) of the 2017 annual report (to be published in 2018).

4) Survey on EC oversight of the application of the European Union's law by Member States:

This is a landscape survey on how the Commission monitors the implementation of EU law in Member States. Some 15 DGs have been asked to fill in the questionnaire.

The ECA is expected to publish a report in early summer 2018.

5) Other audits : An audit of systems on the reliability of the accounts and an audit on the H2020 simplification started in early 2018.

ECSEL Joint Undertaking

In April 2017, the European Parliament granted discharge on the 2015 budget of the ECSEL Joint Undertaking which is a very positive development for the EC since the discharge for ECSEL in previous year had often been postponed and dealt within an extended procedure.

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 do not raise any critical assurance implications and are being implemented as part of the on-going continuous efforts in terms of further improvements.

All recommendations issued by the European Court of Auditors and the Internal Audit Service are subject to a systematic follow-up and their status of implementation is closely monitored and reported to senior management.

2.1.3 Assessment of the effectiveness of the internal control systems

The Commission has adopted an Internal Control Framework based on international good practice, aimed to ensure the achievement of policy and operational objectives. In addition, as regards financial management, compliance with the internal control framework is a compulsory requirement.

DG CONNECT has put in place the organisational structure and the internal control systems suited to the achievement of the policy and control objectives, in accordance with the standards and having due regard to the risks associated with the environment in which it operates.

DG CONNECT assesses on a continuous basis the effectiveness of the 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. In addition, DG CONNECT performs specific assessments to ascertain whether the internal control systems and their components are present and functioning.

The purpose of these management assessments is to provide reasonable assurance that the internal control standards adopted by the Commission are implemented and functioning in the DG, that the assessment findings are evaluated and that any deficiencies are communicated and corrected in a timely manner, with serious matters reported as appropriate. The assessment relies on a number of monitoring measures and sources of information including a survey-based self-assessment on compliance with the internal control standards, an analysis of the entries in the register of deviations, relevant IAS and ECA audit findings and observations and the annual risk assessment process.

Effective implementation of the Internal Control Standards

The DG's annual review of its implementation of the Internal Control Standards has been conducted between January and February 2018. Lead units responsible for ensuring compliance with the Internal Control Standards (ICS) were asked to provide a contribution on the implementation and effectiveness of the ICS, followed by a quality review by the Compliance & Planning Unit. Where needed lead services were contacted for further details with respect to both the compliance and effectiveness of the control arrangements in place. This led to a 'top-down' assessment of the DG's internal control status, with respect to both the ICS compliance and the effectiveness of the control arrangements. Furthermore, the 'bottom-up' information on internal control issues received through the AOSDs' Management Reports has been checked for confirmation or any counter-indications. Finally, the IAS's opinion has been taken into account as well.

This analysis enabled the Director in charge of Risk Management and Internal Control to report the state of internal control to the Director-General. The effectiveness review carried out concluded that all Internal Control Standards were effectively implemented in DG CONNECT in 2017. We are well aware that the error rates for FP7 and ICT PSP exceed the materiality threshold and that therefore reservations are made. We are not of the opinion that the error rates result from a weakness in the effective implementation of the internal control standards as those error rates reflect what is achievable with the current legal framework for FP7 and CIP ICT PSP taking into consideration an appropriate balance between trust and control.

Horizon 2020 includes a radical simplification of the legal framework for the Framework Programme for Research and Innovation (2014-2020). The first audit results suggest that the detected (and in future representative) error rate will remain within the established range (2-5%). Together with the experience in FP7, they also suggest that the objective for the residual error rate will be respected.

Progress made with the revision of the Internal Control Framework in 2017

In April 2017 the Commission adopted the Communication on the revised Internal Control Framework (ICF), which consists of 5 internal control components and 17 internal control principles based on the 2013 COSO³⁶ Internal Control-Integrated Framework which is considered being the benchmark in this field. The 17 internal control principles are further subdivided in 50 characteristics, which assist management in implementing and assessing the functioning of the internal control system.

These 17 internal control principles more or less replace the current 16 internal control standards. However, the core element of this revision is to move away from the current rather compliance-centred approach in the implementation of the ICF and to reinforce the annual assessment of the (effective) functioning of the internal control system.

DG CONNECT established its Internal Control Monitoring Criteria (ICMC) in the context of the 2018 Management Plan exercise. The definition of meaningful indicators is key to allow the DG to effectively monitor and assess its internal control system and, on that basis, to build on its strengths and address its weaknesses. After discussion by senior management, the list of proposed ICMC has been brought to the attention of Commissioner Gabriel. DG CONNECT also nominated a Director in charge of Risk Management and Internal Control in 2017. The new Internal Control Framework is fully applicable since 1 January 2018.

Deviations reporting

The functioning of the internal control systems is also assessed throughout the year by means of a systematic registration of exceptions and non-compliance events (under ICS 8) and internal control weaknesses (ICS 12). The DG has a system in place to ensure the recording of exceptions or non-compliance to procedures/rules through a process of justification by the initiating service, approval by the Director and the maintenance of a central register. The DG's procedure for reporting deviations is available on the DG's intranet providing guidance to all staff concerned.

During the year, a total number of 67 deviations were reported. The analysis of the underlying reasons of the reported deviations and internal control weaknesses concluded that they were not considered material enough to merit a reservation in the Declaration of Assurance.

Audit recommendations

DG CONNECT continued its pro-active supervision and frequent reporting, ensuring a timely implementation of all ECA and IAS audit recommendations. The state of implementation of the IAS recommendations is regularly reported to senior management in the Audit, Budget & Control (ABC) Committee chaired by the Director-General as well as to the IAS through feedback given in TeamCentral, the new audit implementation tracking tool. For further details see chapter 2.1.2.

³⁶ The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a joint initiative of the five private sector organizations listed on the left and is dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management, internal control and fraud deterrence.

Risk Management

Each year, DGs are required to conduct a risk management exercise as part of the Management Plan process. The exercise is designed to alert managers to possible problems in delivering their mission and objectives and encourage early action in order to anticipate and overcome potential pitfalls. The outcome of this exercise is a risk register containing the most significant risks at DG level. Senior management identified no critical or cross cutting risk related to its specific or organisational management objectives for 2017.

Conclusion

DG CONNECT has assessed the internal control systems during the reporting year and has concluded that the internal control standards are implemented and functioning as intended. The DGs annual review showed that the internal control standards are effectively implemented and functioning. The error rates for FP7 and CIP ICT PSP exceed the materiality threshold. We are not of the opinion that the error rates result from a weakness in the effective implementation of the internal control standards as those error rates reflect what is achievable with the current legal framework for FP7 and CIP ICT PSP taking into consideration an appropriate balance between trust and control. The DG maintains a central register of deviations and performs regularly an analysis of the reported cases. DG CONNECT's main risks are reported in the central risk register and regularly monitored. Senior Management did not identify any critical or cross cutting risks related to its specific or organisational management objectives. The implementation of IAS and ECA audit recommendations is monitored ensuring a timely implementation. Furthermore the DG has taken a pro-active approach to anticipate as much as possible the adaption to the new revised Internal Control Framework in the course of 2017 and a Director in charge of Risk Management and Internal Control has been formally appointed.

2.1.4 Conclusions as regards assurance

This section reviews the assessment of the elements reported above (in Sections 2.1.1, 2.1.2 and 2.1.3) and draws conclusions supporting 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 full compliance with the Internal Control Standards 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 for the FP7 and CIP ICT PSP programmes return a level of detected error which appears to be "persistently high" over the years.

Concerning the financial operations under FP7, as the estimated residual error rate is above 2%, which is the materiality criterion for this programme, DG CONNECT, in accordance with the other members of the Research Family will maintain a reservation for FP7 expenditure.

For the financial operations under CIP ICT PSP, the results of the ex-post audits show that the detected error rates remain high. As the 2% residual error rate target at the end of the programming period for CIP ICT PSP will not be attained, a reservation is made.

In its 2016 annual report, the Court of Auditors concludes on an error rate of 4,1% for the entire 2016 spending in the MFF chapter 'Competitiveness for growth and jobs' (compared to 4,4% in the 2015 report). This error rate is almost entirely due to audit findings concerning cost declarations under FP7 and CIP.

FP7 reservation

The audit work for FP7 is almost completed. The last Common Representative Audit Sample was launched in 2016. By the end of 2017, just 21 audits of the Common representative audit sample remained open.

The Common Representative Error Rate, based on 461 costs statements for which the audit is completed (95 % out of a sample of 486), is 4,95%. The residual error rate for DG CONNECT amounts to 2,96% with a corresponding amount at risk of 22,49 M€.

By the end of the programming period the Residual Error Rate will not be below the materiality threshold defined in Annex 4 'Materiality Criteria'. For that reason, DG CONNECT maintains the reservation for FP7.

Action plan to address the reservation for FP7

The possibilities to simplify the FP7 rules have been exhausted. The programme is now in its final stage of implementation: the total amount paid per year will be decreasing, and therefore the financial impact too. Audits may continue at a low level in case of the identification of potential irregularities in projects. However, no further actions are programmed.

CIP ICT PSP reservation

The results of the ex-post audits performed on CIP ICT PSP projects show a detected error rate of 9,41% for 2017 and a cumulated residual error rate of 8,50%, which is above the 2% materiality threshold. This residual error rate leads to an amount at risk of 4,91 M€.

These error rates should nevertheless be considered with caution given the limited number of audits that have been performed and the fact that the 10 audits with the highest adjustments account for 59% of the total amount adjusted.

However, given that the residual error rate calculated for the CIP ICT PSP programme is higher than 2% and that the 2% residual error rate target at the end of the programming period for CIP ICT PSP will not be attained, a reservation on CIP is maintained for the reporting period.

Action plan to address the reservation for CIP ICT PSP

As for FP7, it should be noted that the first projects for Horizon 2020 are already up and running and that all CIP contracts have already been signed, so further modification of the legal framework is no longer an option.

The programme is now in its final stage of implementation: the total amount paid per year will be decreasing, and therefore the financial impact too. The audit strategy will be completed and audits will be organised in case of the identification of potential irregularities in projects. However, no further actions are programmed.

Horizon 2020

The Financial statement accompanying the Commission's proposal to the legislative authority 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 project. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, correction and recovery measures will have been taken into account is to achieve a level as close as possible to 2 %."*

The detected error rate based on 110 out of 142 participations selected in the first CRS is 1,6%. However, if we take into account the draft audit reports then the expected representative error rate for the full sample will be around 2,82% .

The Residual Error Rate for the research family is 1,44 % and is expected to rise to around 2,24% when taking into account the draft audit reports.

The first audit results and above mentioned error rates (detected and residual error rates) must be considered with care given the limited number of audits that have been finalised and the early stage of the programme. However, they suggest that the detected (and in future 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.

In conclusion, DG/service still considers that the error rate will fall within the range established in the Financial Statement, so it does not consider that a reserve is needed for Horizon 2020 expenditure.

Overall amount at risk at closure

For DG CONNECT, the estimated overall amount at risk at payment for the 2017 expenditure is between 66,98 and 67,43 M€. This is the AOD's best, conservative estimation of the amount of relevant expenditure during the year (1722,33 M€) not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.

The conservatively estimated future corrections for the 2017 expenditure amounts to 20,69 M€. 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 amount at risk at closure between 46,3 and 46,7 M€.

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 qualified by a reservation concerning the rate of the residual errors with regard to the accuracy of cost claims in the Seventh Research Framework Programme (FP7) and a reservation concerning the rate of the residual errors with regard to the accuracy of cost claims in the ICT Policy Support Programme of the Competitiveness and Innovation framework Programme (CIP ICT PSP).

2.1.5 Declaration of Assurance and reservations

I, the undersigned, Roberto Viola

Director-General of the Communications Networks, Content & Technology Directorate-General

In my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view³⁷.

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 limited conclusion of the Internal Auditor on the state of control, the observations 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 Commission.

However the following reservations should be noted:

Reservations concerning the rate of residual errors with regard to the accuracy of costs claims for grants in the 7th Research Framework Programme and the ICT Policy Support Programme of the Competitiveness and Innovation framework Programme (CIP ICT PSP).

Brussels, 28 March 2018

Signed

Roberto Viola

³⁷ True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

Reservation 1. Concerning the rate of the residual errors with regard to the accuracy of cost claims in the Seventh Research Framework Programme (FP7).

DG	DG CONNECT
Title of the reservation, including its scope	Reservation concerning the rate of the residual error within cost claims in the Seventh Research Framework Programme (FP7).
Domain	Grants in the Seventh Research Framework Programme.
Programme and amount affected ("scope")	FP7 payments made by DG CONNECT in 2017 including the FP7 budget of DG CONNECT entrusted to ECSEL and the AAL Association: 260,02 M€ from the 1.627,18 M€ total for ABB 09.04.
Reason for the reservation	At the end of 2017, the residual error rate is not below the materiality threshold foreseen for the multi-annual period.
Materiality criterion/criteria	<p>The materiality criterion is the residual error rate, i.e. the level of errors that remain undetected and uncorrected, by the end of the management cycle.</p> <p>The control objective is to ensure that the residual error rate on the overall population is below 2% at the end of the management cycle. As long as the residual error rate is not below 2% at the end of a reporting year within the FP's management lifecycle, a reservation would be made.</p>
Quantification of the impact (= actual exposure")	The maximum impact is calculated by multiplying the residual error rate in favour of the Commission by the amount of FP7 interim and final payments based on cost statements authorised in 2017 by DG CONNECT plus the amount of the pre-financing expenditure cleared in 2017. The Representative Error Rate for 2017 is 4,95%. The Residual Error Rate is 2,96%. The estimated amount at risk is 22,49 M€. (22,49 M€=2,96%*759,68 M€)
Impact on the assurance	Legality and regularity of the affected transactions, i.e. exclusively payments made against cost claims (interim payments and final payments). The assurance is affected within the scope of the quantified budgetary impact (the net amount at risk estimated at 22,49 M€)
Responsibility for the weakness	<p>The main reason for errors is :</p> <ul style="list-style-type: none"> - the complexity of the eligibility rules as laid down in the basic acts decided by the Legislative Authorities, based on the reimbursement of actual eligible costs declared by the beneficiaries; - the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled. <p>The different control provisions set out by the Commission services, along with the audit certificates on financial statements and ex-post audits, can mitigate these risks to a certain extent, but can never be carried out on 100% of the cost claims received.</p>
Responsibility for the corrective action	The possibilities to simplify the FP7 rules have been exhausted. The programme is now in its final stage of implementation: the total amount paid per year will be decreasing, and therefore the financial impact too. Audits may continue at a low level in case of the identification of potential irregularities in projects. However, no further actions are programmed.

Reservation 2. Concerning the rate of the residual errors with regard to the accuracy of cost claims in the ICT Policy Support Programme (PSP) of the Competitiveness and Innovation framework Programme (CIP).

DG	DG CONNECT
Title of the reservation, including its scope	Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims in the ICT Policy Support Programme (PSP) of the Competitiveness and Innovation framework Programme (CIP).
Domain	Direct management grants in the Competitiveness and Innovation framework Programme (CIP)
ABB activity and amount affected (= "scope")	CIP ICT PSP payments made by DG CONNECT in 2017 (12,41 M€ from the 1.627,18 M€ total for ABB 09.04.
Reason for the reservation	At the end of 2017, the residual error rate is not below the materiality threshold foreseen for the multi-annual period.
Materiality criterion/criteria	<p>The materiality criterion is the residual error rate, i.e. the level of errors that remains undetected and uncorrected, by the end of the management cycle.</p> <p>The control objective is to ensure that the residual error rate on the overall population is below 2% at the end of the management cycle. As long as the residual error rate is not (yet) below 2% at the end of a reporting year within the FP's management lifecycle, a reservation would be made.</p>
Quantification of the impact (= actual exposure)	<p>The maximum impact is calculated by multiplying the residual error rate in favour of the Commission by the amount of interim and final payments based on cost statements authorised in 2017 by DG CONNECT plus the amount of the pre-financing expenditure cleared in 2017. The Cumulative Error Rate for 2017 is 9,41%, while the Residual Error Rate is 8,5%. The estimated amount at risk for 2017 payments is 4,91 M€. (4,91 M€=8,5%*57,7 M€)</p> <p>However, given the low number of audits used to determine the cumulative and the residual error rates, the above mentioned error rates should be considered with caution.</p> <p>It is nevertheless expected that the 2% residual error rate target at the end of the programming period for CIP ICT PSP will not be attained.</p>
Impact on the assurance	Legality and regularity of the affected transactions, i.e. exclusively payments made against cost claims (interim payments and final payments). The assurance is affected within the scope of the quantified budgetary impact (the net amount at risk estimated at 4,91 M€).
Responsibility for the weakness	The Legislative Authorities for the funding rules in the basic acts which are complex, the beneficiaries and the certifying auditors for the incorrectness of cost claims and audit certificates, and the Commission services for the management and control systems in place.
Responsibility for the corrective action	The possibilities to simplify the CIP rules have been exhausted. The programme is now in its final stage of implementation: the total amount paid per year will be decreasing, and therefore the financial impact too. The audit strategy will be finalised and new audits launched in case of the identification of potential irregularities in projects. However, no further actions are programmed.

2.2 Other organisational management dimensions

2.2.1 Human resource management

During 2017, the main challenges for DG CONNECT in the area of HR management have been the overall human resources reduction, the reduction in support levels and the increase of DG CONNECT presence in Luxembourg. Within this context, DG CONNECT further explored new ways of working in search of further efficiency gains.

HR Modernisation

The way HR services are being delivered to DG CONNECT staff has significantly changed as a result of DG CONNECT's participation as of 16.2.2017 to the second wave pilot of the HR modernisation stemming from the Synergies and Efficiencies Review. 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 regarding DG CONNECT has been delegated to the Account Management Centre 3 ("AMC3") Unit of DG HR, located in Beaulieu. The majority of the former HR staff of DG CONNECT has been transferred to DG HR by end of 2017 while the second wave pilot has been extended until June 2018.

Resources allocation

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.



The Digital Pole in Luxembourg

As a result of the renewed political agreement between the Commission and the Luxembourg authorities, the Commission committed to further increase the presence of its services and staff in Luxembourg within the legal, financial and digital areas. Within this context, DG CONNECT is requested to contribute – together with DG DIGIT - to the build-up of a "Digital Pole" by gradually transferring activities and staff from Brussels to Luxembourg, in accordance with yearly targets set out by DG HR. The DG CONNECT activities being gradually transferred concern mainly eInfrastructure & Science Cloud, High Performance Computing & Quantum Technology, eHealth and eGovernment & Trust.

40% women in management

In order to contribute to the 40% target of women in management positions at Commission level, DG CONNECT provided pre-management opportunities to talented AD women which were also supported in their career aspirations along 2017. DG CONNECT put in place several specific initiatives to help them to prepare for a middle or senior management position. For example, through reactivated women in pre-management network, sponsoring/mentoring, feedback by Director of Resources to female candidates who were not selected for Heads of Unit posts and training for interview preparation. These continuous efforts have allowed in 2017, 1 first-time senior management and 4 middle management appointments of women, which have largely contributed to the 40% target at Commission level. Out of DG CONNECT quantitative target of 6 first female appointments at middle management level as of 1.5.2017 -as set out in the decision

SEC(2017)359 adopted by the College - 2 were already reached as of 16.12.2017 and 4 as of 1.1.2018. The remaining DG CONNECT effort due by November 2019 therefore amounts to 2.

Learning & Development

In order to properly equip DG CONNECT staff with the necessary skills/competences/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, which was implemented in close cooperation with the AMC3 Unit of DG HR.

Staff survey action plan

DG CONNECT continued during 2017 to care for maintaining a high level of staff satisfaction within the DG. An internal staff satisfaction survey was launched in October 2017 and reflected an increase in DG CONNECT employee engagement score from 60% to 72%, presumably as a result of the specific actions – implemented throughout 2017 - taken by the Management Team in follow-up to the 2016 Commission staff satisfaction survey.

DG CONNECT will carefully monitor the outcome of the staff satisfaction survey that will be launched by DG HR in the course of 2018.

2.2.2 Better Regulation

In 2017, the main changes for DG CONNECT in the Better Regulation (BR) area were:

- the entry into force of the revised Better Regulation guidelines and toolbox (July 2017), helping to strengthen guidance on Digital/ICT issues (key to modernising EU legislation);
- within the Interinstitutional Unit D2 of DG CONNECT, turning the small "Better Regulation" team into a BR sector of similar size/scope (responsible for implementing the Better regulation guidelines/toolbox requirement within the DG - including coordinating policy/strategic planning activities as well as REFIT reporting and REFIT Platform input - and for supporting all impact assessments and all public consultations developed within the DG).

BR support activities thus gained greater internal and external visibility, helping to further mainstream the better policy-making principles and methods in the DG's culture.

Workflow and new internal procedures were introduced to clarify and streamline complex inter-departmental processes and numerous validation levels.

The Digital Economy & Skills Unit of DG CONNECT continued to provide complementary BR support regarding retrospective evaluations. This support primarily concerns the design of evaluations carried out by the competent operational units (e.g. assistance with roadmap preparation, development of an intervention logic and choice of analytical tools). It is generally focused on the early stages of the evaluation process, although punctual methodological support is also provided. In addition to acting as DG CONNECT's lead unit in the context of the mid-term evaluation of both Horizon 2020 and the Connecting Europe Facility, the Unit provided methodological support to evaluation, among others, of the European Union Agency for Network and Information Security Agency, the Orphan Works Directive, and Europeana.

2.2.3 Information management aspects

During the reporting year, DG CONNECT managed to improve its performance in the volume of filed documents with only 0,57% of registered documents which are not filed. The number of files shared with other DGs (15,01%) is still below the targeted indicator of 95% because there is insufficient certainty that security markings are used properly in Eurolook and ARES.

In order to mitigate the risk of unauthorized access to sensitive documents, DG CONNECT decided to limit access to its internal files based on strict need-to-know principles.



DG CONNECT has set a knowledge management strategy to improve operational efficiency and organisational intelligence. A Deputy Director-General of DG CONNECT is member of the Information Management Steering Board (IMSB), which steers the implementation of the Communication on Data, Information and Knowledge Management.

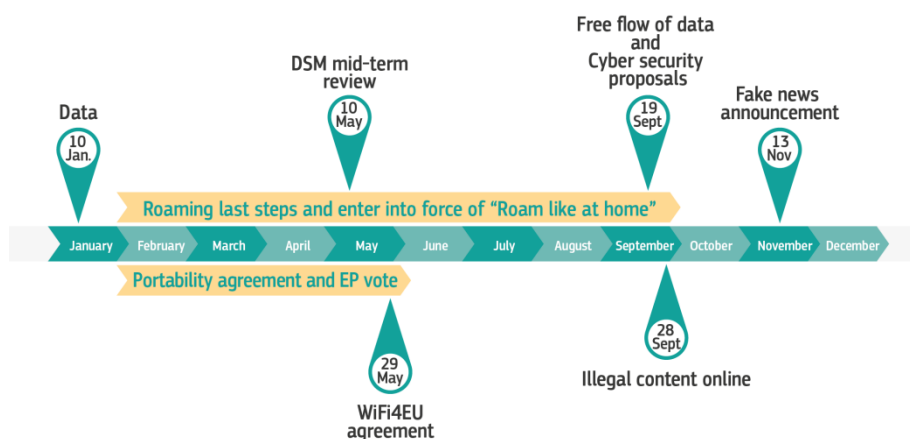
80% of the units have received training on document registration and filing.

As part of the IMSB work programme, the DORIS data analytics tool developed by DG CONNECT has been consolidated and integrated within the Better Regulation Portal in collaboration with DIGIT and SecGen. We have also created a single access point for data analytics services within the DG's intranet "Connected".

The Connected platform has been handed over to JRC (business ownership) and to DIGIT (system supplier). We reviewed the DG's Standard Operation Procedures and created a single access point. We started to roll out the Stakeholder Relations Management (SRM) tool to enhance the management of stakeholder's data and reporting.

2.2.4 External communication activities

In 2017 we saw a lot of progress on many DSM files:



DG CONNECT subjects often made the headlines and accounted for **16% of all the Commission-related stories** in print and online media. Out of all the coverage related to digital society topics (non-EC stories), the share referencing **DG CONNECT** accounted for approximately **5% across the EU**. The top stories regarded the end of roaming surcharges, introduction of portability for online content and agreement on WiFi4EU. DG CONNECT topics featured also prominently in September's State of the Union address and in the Conclusion of the September Summit in Tallinn.

The **Digital Single Market website was revamped** to adopt the corporate look and feel. We took this opportunity to reorganise the content in order to improve the user experience, and to highlight the main policies from the strategy, working constantly on Search Engine Optimisation of our website.

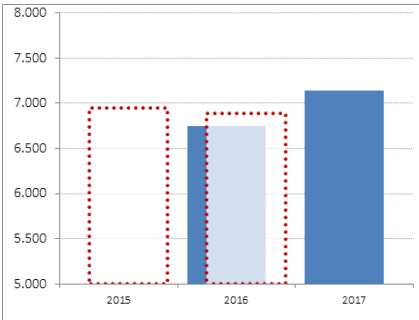
OUR IMPACT IN 2017

The top DG CONNECT (and Commission) story of the year was the end of roaming. The roaming communication campaign reached several million people through media, web and social media. **Roaming** featured in almost **2.800 press articles**, **several million people** saw Facebook posts and tweets ([Ansip's top tweet](#): reached 99.000 users, [FB Live Chat](#) – streamed via EC central account – reached 372.000 users), several hundred thousand people saw our relevant webpages, around 50.000 people watched the roaming video and some 2.5 million saw the adds at the airports. Other DG CONNECT topics with major media impact were the following: **ePrivacy/Data Protection, E-Commerce, Cybersecurity and Broadband/WiFi4EU** (see full report here³⁸)

Spanish, Italian and German media outlets produced the highest share of DG CONNECT stories, followed by coverage from **France, UK, Belgium and Poland**. Top media writing on digital was by far Brussels-centred politico.eu. However we also had good coverage in several big national media, who follow our topics regularly, such as Les Echos, Daily Mail, Financial Times, El Economista, FAZ and Il Sole 24 Ore. Vice-President Ansip was the most mentioned College member in media outlets with reference to our topics, followed by President Juncker and commissioners Vestager and Gabriel.

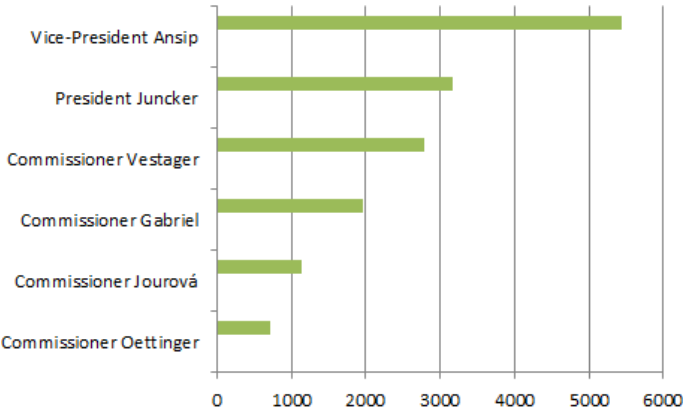
³⁸ Full media report <https://connected.cnect.cec.eu.int/docs/DOC-150008> and full social media report: <https://connected.cnect.cec.eu.int/docs/DOC-150009>

In 2017 the readership on the DSM website has **grown by 6%**. We had 7,139 readers (unique browsers) daily which corresponds to a total of 2.7M readers in 2017. The most read topics were: DSM in general, roaming (the most read pages FAQ, tariffs and general description), DESI, privacy and electronic communications, the NIS Directive, ICT Proposers' Day 2017, ePrivacy Regulation, WiFi4EU, cybersecurity and DG CONNECT.



DG CONNECT was also very visible and active on **social media**. Most active social media followers of our accounts came from **Italy, Germany, Spain, France, UK, Belgium** and **the Netherlands**. With nearly **80 thousand followers**, our [@DSMeu](#) Twitter account is the **4th biggest** non-personal account of the Commission (after [@EU Commission](#) central, [@EU eeas](#) and [@EU Eurostat](#)).

Social media were the most active and quickest to pick up sensitive topics and boost up the debate around them, spreading to mainstream media – **Net Neutrality** can be an example when our quick reaction made us relevant in the discussion (after US FCC decision on Net Neutrality in December, three top tweets influenced the debate: [VP Ansip's tweet](#) with 257.120 reach, [DSMeu's tweet](#) with 147.845 reach and [Roberto Viola's](#) tweet with 57.000 reach).



3. The examples of economy and efficiency

Examples of initiatives to improve economy and efficiency of financial and non-financial activities of the DG

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 2017, 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 full time equivalents working in support functions:**

- (i) internal redeployment of support functions in order to strive towards a more balanced and reasonable level of support functions, in accordance with the targets agreed with DG HR;
- (ii) Support the discussion - under the steer of the Diversity Network - to see how to adapt our working methods (and culture) to cope with the workload in times of reduced support levels.

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 has participated to the launch of the second pilot phase that started in February 2017 and was extended until June 2018. More specifically, DG CONNECT discussed proposals and made recommendations on the new processes and HR governance structure, contributing to synergies and efficiencies in the areas of HR management across the Commission.

ANNEXES

ANNEX 1: Statement of the Resources Director

I declare that in accordance with the Commission's communication on clarification of the responsibilities of the key actors in the domain of internal audit and internal control in the Commission³⁹, I have reported my advice and recommendations to the Director-General on the overall state of internal control in the DG.

I hereby certify that the information provided in Section 2 of the present AAR and in its annexes is, to the best of my knowledge, accurate and complete.

Brussels, 28 March 2018

Signed

Ingrid Marien-Dusak

Acting Director in charge of risk management and internal control

³⁹ Communication to the Commission: Clarification of the responsibilities of the key actors in the domain of internal audit and internal control in the Commission; SEC(2003)59 of 21.01.2003.

ANNEX 2: Reporting – Human Resources, Better Regulation, Information Management and External Communication

Human resources

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

Indicator: Percentage of female representation in middle management.

Source of data: HR Reporting

Baseline 1.1.2016	Target 2019	Latest known results
28,9%	40%	30% on 16.12.2017

Indicator 2: Percentage of staff who feel that the Commission cares about their well-being⁴⁰.

Source of data: Commission staff survey.

Baseline 2014	Target 2019	Latest known results
33,5%	50% by end 2019 This target is in line with the DG CONNECT results in the 2013 staff satisfaction survey and slightly above the current EC average.	32% (2016)

Indicator 3: Staff engagement index.

Source of data: Commission staff survey.

Baseline 2014	Target 2019	Latest known results
62	70 by end 2019 This target is in line with the DG CONNECT results in the 2013 staff satisfaction survey and with the current EC average.	60% (2016)

⁴⁰ This indicator may be replaced by a fit@work index on which DG HR is currently working.

Main outputs in 2017:			
Description	Indicator	Target	Latest known results
<p>Follow-up on the Women Development programme which included 360 degree feedback + coaching sessions, planned actions for 2017: close monitoring of all females in pre-management positions, reviving the women in pre-management network, feedback by Director of Resources to female candidates who were not selected for HoU posts, training for interview preparation.</p>	<p>Number of female applicants in pre/middle-management selection procedures.</p>	<p>At least 1.</p>	<p>Results of 7 Heads of Unit recruitment procedures: 1) 4 female applicants out of 14 eligible applicants. Female appointment. 2) 3 female applicants out of 21 eligible applicants. Male appointment. 3) 3 female applicants out of 23 eligible applicants. Female appointment. 4) 6 female applicants out of 15 eligible applicants. Female appointment. 5) 2 female applicants out of 5 eligible applicants. Male appointment. 6) 4 female applicants out of 8 eligible applicants. Female appointment. 7) 6 female applicants out of 25 eligible applicants. Selection ongoing.</p>
<p>Close monitoring and management of job quotas / budget and careful assessment of replacements for every departure, in light of the operational and political priorities</p>	<p>Taxation targets met within the deadlines set by the budgetary authority.</p>	<p>Staff reduction laid down in the 2017 allocation of establishment plan posts (-4%) and the appropriations for external personnel.</p>	<p>All taxations due by 1.1.2017 reimbursed to DG HR. HR S&E tax (3) paid with the help of 1 surcharge. All taxations due by 1.1.2018 reimbursed to DG HR. Monthly monitoring of consumptions of appropriations for external personnel at HRC led to controlled 2017 consumption within the budgetary ceiling</p>

<p>Learning & Development Strategy tailored to the skills/competences/knowledge required for the completion of our operational and political priorities.</p>	<p>L&D priorities to be adopted as part of the overall HR strategy for the DG.</p>	<p>Complete curriculum reflecting newly identified requirements.</p>	<p>2017 L&D priorities adopted on MT of 10.1.2017 - 2017 L&D budget fully executed. Request for input for DG CONNECT's L&D Priorities for 2018 sent to MT on 19.9.2017. The input from the consultations was taken into account in the final L&D priorities which were adopted by the MT on 18.12.17.</p>
<p>Reduction of support functions to focus resources on operational activities.</p>	<p>Reduction of FTEs in support functions under scrutiny by DG HR.</p>	<p>FTE reduction in support functions in accordance with targets (-35) agreed with central services.</p>	<p>Monthly monitoring of reduction of support functions at HRC. 2017 target met.</p>
<p>Increase of DG CONNECT presence in Luxembourg within the Digital Pole.</p>	<p>Increase of FTEs in Luxembourg.</p>	<p>FTE increase in accordance with targets (+20) agreed with central services.</p>	<p>Monthly monitoring of increase of DG CONNECT presence in Luxembourg at HRC: 2017 target met. As of 18.12.2017, 37 recruitment procedures already closed (17 officials and 20 external staff). 23 recruitments (17 officials and 6 external staff) already decided by the HRC, but not yet closed.</p>
<p>Develop and monitor the implementation of the DG action plan as a follow-up to the 2016 Commission staff satisfaction survey.</p>	<p>Staff Engagement Index within the 2016 Commission staff satisfaction survey.</p>	<p>Staff Engagement Index of 65.</p>	<p>Action Plan as a result of: - the outcome of the 2016 staff survey as well as units discussions within the context of the Diversity and Inclusion Days - the outcome of the reflection steered by DG CONNECT AST network on how to adapt our working methods and culture within the context of reduced resources and support levels already adopted by MT</p>

			<p>on 19.12.2016</p> <p>The Action Plan was communicated to DG HR by 31.3.2017 and has been implemented throughout 2017.</p> <p>Internal staff satisfaction survey has been launched in October 2017. Staff engagement index has improved to 72.</p> <p>Diversity & Inclusions Days on 19-20.10.2017 addressing internal culture with view of capitalizing on cognitive diversity</p>
<p>Well-being activities organised at DG CONNECT within the context of the Fit@Work Programme.</p>	<p>Number of well-being activities organised within DG CONNECT.</p>	<ul style="list-style-type: none"> - 2 series of well-being trainings per year - 3 blood donation sessions - weekly well-being activities - ad hoc workshops to build resilience depending on staff needs (based on staff survey and unit discussions) 	<p>Ongoing cooperation with AMC on well-being activities, largely extended on Beaulieu site, within the context of the corporate Fit@work programme.</p> <p>Active participation in the VeloMay initiative and Sports Week.</p> <p>Mindfulness training programme organised</p> <p>2 trainings on resilience + coaching offered in autumn 2017</p> <p>2 trainings on managing change and staying fit took place in context of D&I days</p> <p>Absence and sickness 2016 report discussed by Management Team on 29.5.2017.</p> <p>3 blood donation sessions on.</p>

Better regulation

Objective: Prepare new policy initiatives and manage the EU's acquis in line with better regulation practices to ensure that EU policy objectives are achieved effectively and efficiently.

Indicator 1: Percentage of Impact assessments submitted by DG CONNECT to the Regulatory Scrutiny Board that received a favourable opinion on first submission.

Source of data: DG CONNECT⁴¹

Baseline 2015	Interim milestone 2016	Target 2020	Latest known results 2017
68% = Commission average in 2014: We use the percentage of 2014, as the CONNECT value for 2015 is 100 % (2 out of the 2 IA submitted) because this figure has limited significance as DG CONNECT had very few IAs in 2015.	Positive trend compared to the DG's 2014 situation.	Positive trend compared to the DG's 2016 situation.	3 IAs submitted to the RSB, 2 with favourable opinion.
<p>The 2017 IA indicator reflects that out of three IAs submitted in 2017, two received a positive opinion (though with reservations) and one IA awaiting a decision of the RSB. Note that in years in which few IAs are submitted to the RSB (such as in 2017 and 2018), this BR indicator has quite limited significance (e.g. out of only 3 IAs, any positive opinion has a 33% share) - whilst the DG CONNECT 2016 IA result of 55% had a higher level of significance (as it resulted from 5 IAs which received a positive opinion out of 9 IAs first submitted that year).</p> <p>Note also that the DG CONNECT IA 2017 indicator does not reflect the change in how the RSB formulates its opinions (which now includes the "positive with reservations" status, meaning that the initiative may only be submitted to formal interservice consultation after the Interservice Steering Group checks if the revised IA has sufficiently addressed the RSB reservations).</p>			

⁴¹ Previous data was drawn from IA Board (IAB) reports. In its 2016 report, the newly established Regulatory Scrutiny Board (RSB) did not provide details per DG. So DG CONNECT included in its 2016 IA indicator one IA which it submitted in Dec. 2016, but for which the RSB gave its opinion in February 2017.

Indicator 2: Percentage of the DG's primary regulatory acquis covered by evaluations and Fitness Checks not older than five years.

Source of data: DG CONNECT

Baseline 2015	Interim milestone 2016	Target 2020	Latest known results 2017
Percentage of the DG's primary regulatory acquis covered by retrospective evaluations and Fitness Checks not older than five years: 67%.	Positive trend compared to baseline	Positive trend compared to interim milestone	2017: 67% (6 pp. increase compared to 2016)

This indicator's value for 2016 has been recalculated to ensure comparability (by means of streamlining and removal of acquis items being less than 5 years old unless they have already undergone an evaluation or fitness check). The recalculated 2016 value is 61% (instead of 75%).

Main outputs in 2017:

The main planned outputs linked to the Better Regulation objective in the Strategic Plan are listed in Part 1 under the relevant specific objective. They are presented in the tables under the headings "All new initiatives and REFIT initiatives from the Commission Work Programme" and "Other important items".

Description	Indicator	Target	Latest known results
Legislative proposal on the review of the ePrivacy Directive (REFIT).	Adoption by the Commission.	Q1 2017 (2016/CNECT/007), (2016/CNECT/013)	Commission adopted a proposal for a Regulation on privacy and electronic communications on 10.01.2017. Inter-institutional negotiations ongoing with a view to reaching political agreement in early 2018.
Evaluation and review of the ENISA (European Union Agency for Network and Information Security) Regulation (REFIT).	Adoption by the Commission.	Q3 2017 (2017/CNECT/002) Q4 2017 (2017/CNECT/005)	Evaluation of ENISA concluded in July 2017. New legislative proposal adopted in September 2017.
Legislative proposals for a revision of Regulation (EC) 733/2002 establishing the ".eu" TLD and Regulation (EC) 874/2004 laying down public policy rules concerning the implementation and functions of the ".eu" TLD.	Adoption by the Commission.	Q4 2017 (2017/CNECT/006)	Adoption of the proposals was postponed to April 2018.

Information Management

Objective: Information and knowledge in DG CONNECT is shared and reusable by other DGs. Important documents are registered, filed and retrievable		
Indicator 1: Percentage of registered documents that are not filed⁴² (ratio)		
Source of data: Hermes-Ares-Nomcom (HAN)⁴³ statistics		
Baseline 2015	Target 2016	Latest known results 2017
3,07 %	0 %	0,57 %
Indicator 2: Number of HAN files readable/accessible by all units in the DG		
Source of data: HAN statistics		
Baseline 2015	Target 2016	Latest known results 2017
98,63 %	95% ⁴⁴	93,69 %
Indicator 3: Number of HAN files shared with other DGs		
Source of data: HAN statistics		
Baseline 2015	Target 2016	Latest known results 2017
22,55 %	95% ⁴⁵	15,01% ⁴⁶
Indicator 4: Percentage of units using collaborative tools to manage their activities		
Source of data: CONNECTED + SharePoint		
Baseline 2015	Target 2016	Latest known results 2017
95% ⁴⁷	100% ⁴⁸	100% for CONNECTED 100% for SharePoint

⁴² Each registered document must be filed in at least one official file of the Chef de file, as required by the e-Domec policy rules (and by ICS 11 requirements). The indicator is to be measured via reporting tools available in Ares.

⁴³ Suite of tools designed to implement the e-Domec policy rules.

⁴⁴ HR and OLAF files remain restricted, this is why 100% is not the target. A renewed file sharing policy will be investigated in the course of 2018 as soon as a new marking policy prepared by HR/DS will be in place.

⁴⁵ Same comment as in footnote 41.

⁴⁶ In addition to "Staff Matter" and OLAF files, further restrictions were recommended by IAS, e.g. on procurement files, which resulted in an overall decrease of the shared files ratio.

⁴⁷ According to the most recent figures, 95% of staff are at least "readers", while 70% are "contributing".

⁴⁸ All units are encouraged to use collaborative tools but, some categories of personnel (e.g. ushers) are not concerned.

Main outputs in 2017:			
Description	Indicator	Target	Latest known results
Provide training and coaching on document registration and filing	Training/coaching of unit secretariat and DMO correspondent	100% of units trained/coached	80 %
Awareness and compliance campaigns	2 campaigns (1 for Areslook and 1 for CONNECTED documents)	Q4 2017	Postponed to Q1 2018 (Note of the Director-General to Heads of Units + implementation campaign)
Awareness and training campaigns for the DORIS service	Training and coaching of programme and policy officers (max 3 per unit)	Q2 2017	Done. The DG organised a Connected University session and coached users on-demand.
Roll-out of the SRM	Training and coaching of staff, alongside the work to promote SharePoint	Q4 2017	The system has been rolled out gradually. Its use and benefits will be monitored during 2018.

External Communication

Objective: Citizens perceive that the EU is working to improve their lives and engage with the EU. They feel that their concerns are taken into consideration in European decision making and they know about their rights in the EU.

Indicator 1: Percentage of EU citizens having a positive image of the EU

Definition: Eurobarometer measures the state of public opinion in the EU Member States. This global indicator is influenced by many factors, including the work of other EU institutions and national governments, as well as political and economic factors, not just the communication actions of the Commission. It is relevant as a proxy for the overall perception of the EU citizens. Positive visibility for the EU is the desirable corporate outcome of Commission communication, even if individual DGs' actions may only make a small contribution.

Source of data: Standard Eurobarometer (DG COMM budget) [*monitored by DG COMM [here](#)*].

Baseline Q4 2014	Target 2020	Latest known results
Total "Positive": 39% Neutral: 37 % Total "Negative": 22%	Positive image of the EU \geq 50%	Positive: 40% Neutral: 37% Negative: 21% (Do not know: 2%) Based on the Eurobarometer 2017 – page 15

Main outputs in 2017:

Description	Indicator	Target	Latest known results
How many people we have reached through our communication activities	1) People reading the Digital Single Market website	Yearly median 6,922 Unique browsers per day (base line 6,922) (keep at least stable)	Yearly median 7 139 unique browsers per day
	2) People using DSM website services	Total of the DSM website accounts 19,500 (base line 15,253) increase 28%	15 053 accounts. Taking into consideration that the communities /comments are now closed in the DSM website, this indicator is less relevant.
	3) People participating in events	Total of Event in the Box accounts 79,000 (base line 70.174) increase 12%	75 514 accounts.
	4) People reading any of the DSM Newsletters	Total of Newsroom subscription for newsletters 250,000 (base line 230,270) increase 9% increase 21%	243 771 newsletter subscriptions

	5) People following DSM Facebook page	Total of DSM Facebook likes 23,000 Likes (+20%)	24.838 Likes on Facebook on 31.12.2017
	6) People following DSM Twitter account	Total of DSM Twitter followers 80,000 (+20%) increase	78.592 followers on Twitter on 31.12.2017
	7) People following the DSM Youtube Channel	Total of DSM Youtube Channel Subscriptions 3,000 (baseline 2,462) increase 22%	3 100 Subscribers on 31.12.2017
How people interacted with us on the base of our communication activities	1) Engagement with DSM Facebook page	Cumulative monthly average 1,163 points engagement (+2%)	1 417 points 1.10.2017 (source of data was Engagor, a central service provided by DG COMM but discontinued as from September 2017)
	2) Engagement with DSM Twitter account	Cumulative monthly average 8,617 points engagement (+2%)	7 819 points 1.10.2017 (source of data was Engagor, a central service provided by DG COMM but discontinued as from September 2017)
DSM mid-term review			
Update of DESI 24.2.2017 Adoption of the communication – Q2 2017 (including EDPR). State of play of the transformation towards a digital economy and society (including where Europe stands in the global digital context).	People we reach and engage with us via our communication in the different channels: web content, press material, social media, infographics and videos.	Timely preparation of all content; Overall targets appearing on the table above in each channel; Dedicated media monitoring report analysis by a contractor will show the result of our communication effort.	DESI and EDPR were timely published. All reports were of high quality and there was extensive press coverage on all channels. Press coverage occurred not only at the time of the publication but throughout the year.

Connectivity			
<p>WiFi4EU call – Q2 2018</p> <p>End of Roaming – 15.6.2017</p> <p>Digital Assembly event 15-16 June (under the Maltese presidency)</p>	<p>People we reach and engage with us via our communication in the different channels: web content, press material, social media, infographics and videos;</p> <p>Proactive campaign on SoMe to promote the WiFi4EU call and what changes on roaming as of 15.6.2017.</p>	<p>Timely preparation of all content;</p> <p>Overall targets appearing on the table above in each channel;</p> <p>Dedicated media monitoring report analysis by our contractor will show the result of our communication effort;</p> <p>For Digital Assembly additional target on audience: +/- 1000 participants.</p>	<p>The first call for WiFi4EU is well on track to happen in Q2. With the opening of the WiFi4EU competition portal in mid March several communication activities are planned, including via EC representations in Member States.</p> <p>The so called "End of Roaming" was widely and successfully communicated inter alia with a banner on the Berlaymont, information campaigns in Member States and a live Facebook chat with citizens.</p> <p>The Digital Assembly reached an audience of 1100 participants.</p>
Digitising European Industry (DEI)			
<p>Road to Rome digital event:</p> <ul style="list-style-type: none"> • Launch of the European Platform of national initiatives on DEI • HPC, etc. 	<p>People we reach and engage with us via our communication in the different channels: web content, press material, social media, infographics and videos.</p>	<p>Timely preparation of all content;</p> <p>Overall targets appearing on the table above in each channel;</p> <p>Dedicated media monitoring report analysis by a contractor will show the result of our communication effort.</p>	<p>Press coverage: 85 media items, including major newspapers. The topic registered some media presence throughout the week, with a peak on the day of the event, March 23, with a further high on March 24 and coverage of <i>major newspapers</i>.</p> <p>Social media: On Twitter there were 1210 original posts related to the event and 4030 retweets. 2022 users actively participated in the Twitter debate. Tweets from VP Ansip and Roberto Viola got more than 150 interactions.</p>

			<p>On Facebook: DSM account made 15 live chats with key participants (EC, ministers, digital leaders). The most successful was the morning video live chat with VP Ansip. The full reach of the post was 73.000 and it triggered 176 interactions and 1120 clicks on the posts.</p> <p>36 short Youtube videos/testimonials were prepared and collected lots of material future use. The streams on YouTube got 1745 views (number likely to grow).</p> <p>The post on the launch of national initiatives on digitising industry was also the top post on DSM Facebook page, with almost 15.000 users reached and 258 interactions.</p>
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Annual communication spending (based on estimated commitments):

Baseline (2016)	Target (2017)	Total amount spent	Total of FTEs working on external communication
3 M€	5,4 M€	6.061.770,46 €	26

ANNEX 3: Draft annual accounts and financial reports

Annex 3 Financial Reports - DG CONNECT - Financial Year 2017

Table 1 : Commitments

Table 2 : Payments

Table 3 : Commitments to be settled

Table 4 : Balance Sheet

Table 5 : Statement of Financial Performance

Table 5 Bis: Off Balance Sheet

Table 6 : Average Payment Times

Table 7 : Income

Table 8 : Recovery of undue Payments

Table 9 : Ageing Balance of Recovery Orders

Table 10 : Waivers of Recovery Orders

Table 11 : Negotiated Procedures (excluding Building Contracts)

Table 12 : Summary of Procedures (excluding Building Contracts)

Table 13 : Building Contracts

Table 14 : Contracts declared Secret

TABLE 1: OUTTURN ON COMMITMENT APPROPRIATIONS IN 2017 (in M€)					
			Commitment appropriations authorised	Commitments made	%
			1	2	3=2/1
Title 09 Communications networks, content and technology					
09	09 01	Administrative expenditure of the 'Communications networks, content and technology' policy area	64,36419841	64,24027441	99,81 %
	09 02	Digital single market	20,73096	20,52373241	99,00 %
	09 03	Connecting Europe Facility (CEF) - Telecommunications networks	43,59237458	39,31441576	90,19 %
	09 04	Horizon 2020	1582,617886	1402,437004	88,62 %
	09 05	Creative Europe	25,60096579	25,57262	99,89 %
Total Title 09			1736,906385	1552,088047	89,36%
Title 15 Education and culture					
15	15 04	Creative Europe	25,07128208	25,07122957	100,00 %
Total Title 15			25,07128208	25,07122957	100,00%
Total DG CONNECT			1761,977667	1577,159276	89,51 %

* Commitment appropriations authorised include, in addition to the budget voted by the legislative authority, appropriations carried over from the previous exercise, budget amendments as well as miscellaneous commitment appropriations for the period (e.g. internal and external assigned revenue).

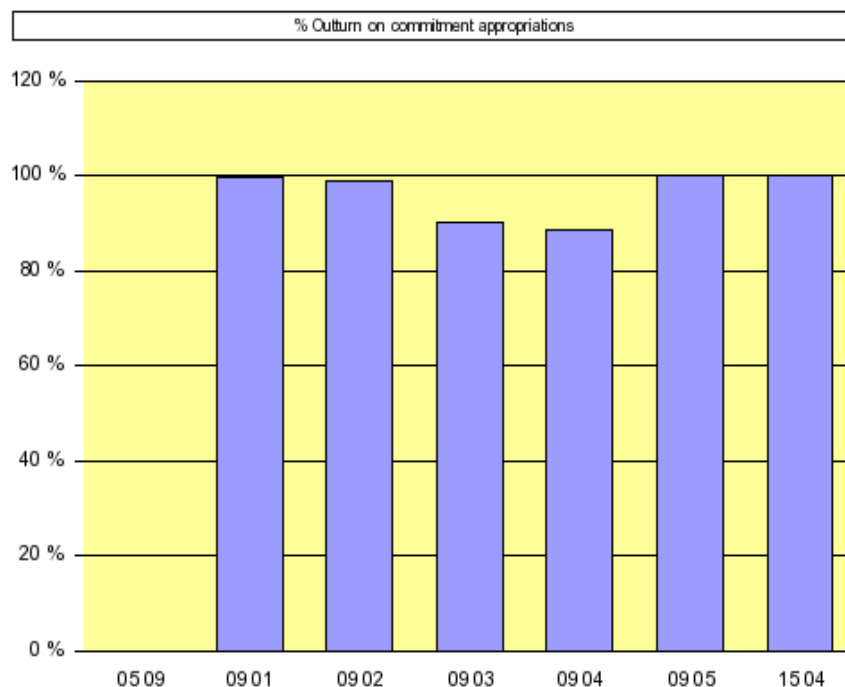


TABLE 2: OUTTURN ON PAYMENT APPROPRIATIONS IN 2017 (in M€)					
Chapter			Payment appropriations authorised *	Payments made	%
			1	2	3=2/1
Title 09 Communications networks, content and technology					
09	09 01	Administrative expenditure of the 'Communications networks, content and technology' policy area	22,17641621	12,82867736	57,85 %
	09 02	Digital single market	19,08415462	18,87692699	98,91 %
	09 03	Connecting Europe Facility (CEF) - Telecommunications networks	21,74232498	21,71519227	99,88 %
	09 04	Horizon 2020	1850,912388	1627,175373	87,91 %
	09 05	Creative Europe	26,64942283	26,04657045	97,74 %
Total Title 09			1940,564707	1706,64274	87,95%
Title 15 Education and culture					
15	15 04	Creative Europe	14,29407735	14,29407735	100,00%
Total Title 15			14,29407735	14,29407735	100,00%
Total DG CONNECT			1954,858784	1720,936817	88,03 %

* Payment appropriations authorised include, in addition to the budget voted by the legislative authority, appropriations carried over from the previous exercise, budget amendments as well as miscellaneous payment appropriations for the period (e.g. internal and external assigned revenue).

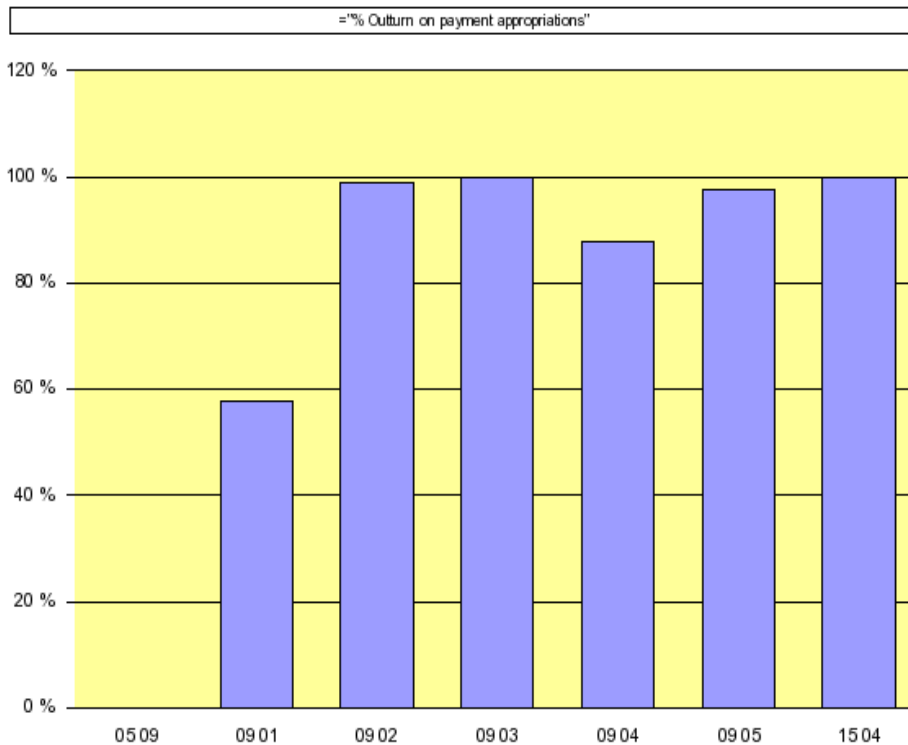


TABLE 3 : BREAKDOWN OF COMMITMENTS TO BE SETTLED AT 31.12.2017 (in M€)

			2017 Commitments to be settled				Commitments to be settled from financial years previous to 2017	Total of commitments to be settled at end of financial year 2017	Total of commitments to be settled at end of financial year 2016
Chapter			Commitments 2017	Payments 2017	RAL 2017	% to be settled			
			1	2	3=1-2	4=1-2/1	5	6=3+5	7
Title 05 : Agriculture and rural development									
05	05 09	Horizon 2020 - Research and innovation related to agriculture	0	0,00	0	0,00 %	7,00	7,00	7,00
Total Title 05			0	0,00	0	0,00%	6,99996238	6,99996238	6,99996238
Title 09 : Communications networks, content and technology									
09	09 01	Administrative expenditure of the 'Communications networks, content and technology' policy area	64,24027441	54,69	9,54931708	14,87 %	0,00	9,55	11,28
	09 02	Digital single market Connecting Europe Facility (CEF) - Telecommunications networks	20,52373241	16,08	4,44238879	21,65 %	2,54	6,98	5,94
	09 03	Horizon 2020	39,31441576	0,41	38,89984835	98,95 %	149,50	188,40	170,83
	09 04	Creative Europe	1402,437004	638,17	764,2650912	54,50 %	1.075,20	1.839,46	2079,60
	09 05		25,57262	2,03	23,54357	92,07 %	7,70	31,25	32,12
Total Title 09			1552,088047	711,39	840,7002154	54,17%	1234,939735	2075,639951	2299,77189
Title 15 : Education and culture									
15	15 04	Creative Europe	25,07122957	5,05	20,02136066	79,86 %	1,54	21,57	11,08
Total Title 15			25,07122957	5,05	20,02136066	79,86%	1,54461214	21,5659728	11,0841433
Total DG CONNECT			1577,159276	716,44	860,721576	54,57 %	1243,48431	2104,205886	2317,85599

"Breakdown of Commitments remaining to be settled (in Mio EUR)"

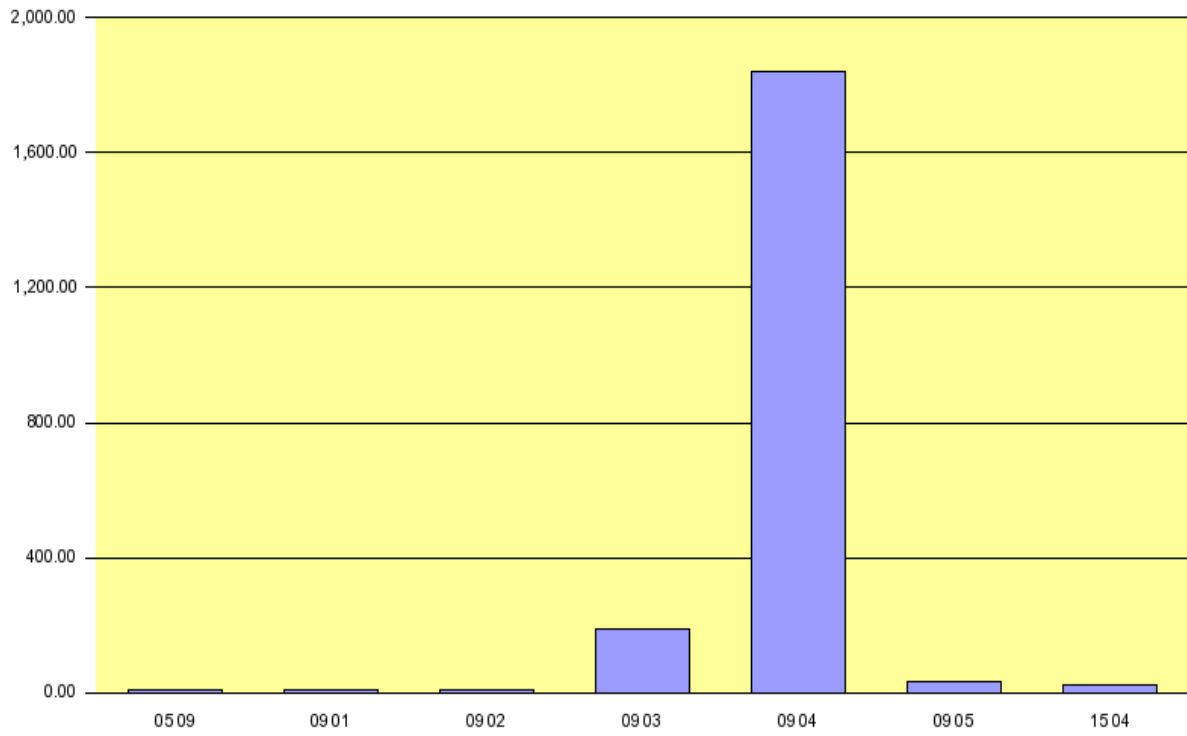


TABLE 4 : BALANCE SHEET CONNECT

BALANCE SHEET	2017	2016
A.I. NON CURRENT ASSETS	378.786.798,57	298.720.414,18
A.I.1. Intangible Assets	5.360.322,99	5.360.322,99
A.I.3. Invstmnts Acctnd For Using Equity Meth	-	-
A.I.4. Non-Current Financial Assets	16.970.980,00	16.935.222,00
A.I.5. Non-Current Pre-Financing	356.455.495,58	276.424.869,19
A.I.6. Non-Cur Exch Receiv & Non-Ex Recoverab	-	-
A.II. CURRENT ASSETS	830.167.214,26	782.036.637,53
A.II.1. Current Financial Assets	1.521.146,46	2.471.010,46
A.II.2. Current Pre-Financing	756.532.132,60	725.222.934,13
A.II.3. Curr Exch Receiv & Non-Ex Recoverables	53.777.545,20	48.666.333,94
A.II.6. Cash and Cash Equivalents	18.336.390,00	5.676.359,00
ASSETS	1.208.954.012,83	1.080.757.051,71
P.I. NON CURRENT LIABILITIES	(2.562.303,00)	
P.I.2. Non-Current Provisions	(2.562.303,00)	
P.III. NET ASSETS/LIABILITIES	(155.644,00)	(218.965,00)
P.III.1. Reserves	(155.644,00)	(218.965,00)
P.II. CURRENT LIABILITIES	(283.755.827,95)	(266.634.184,48)
P.II.2. Current Provisions	(163.983,24)	(507.000,00)
P.II.4. Current Payables	(76.874.904,05)	(114.437.026,03)
P.II.5. Current Accrued Charges & Defrd Income	(206.716.940,66)	(151.690.158,45)
LIABILITIES	(286.473.774,95)	(266.853.149,48)
NET ASSETS (ASSETS less LIABILITIES)	922.480.237,88	813.903.902,23

P.III.2. Accumulated Surplus/Deficit	6.317.629.692,32	4.707.322.087,87
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Non-allocated central (surplus)/deficit*	(7.240.109.930,20)	(5.521.225.990,10)
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TOTAL	0,00	0,00
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TABLE 5 : STATEMENT OF FINANCIAL PERFORMANCE CONNECT

STATEMENT OF FINANCIAL PERFORMANCE	2017	2016
II.1 REVENUES	(21.073.580,33)	(11.945.915,70)
II.1.1. NON-EXCHANGE REVENUES	(19.536.826,65)	(14.098.684,63)
II.1.1.5. RECOVERY OF EXPENSES	(18.660.304,27)	(13.915.797,11)
II.1.1.6. OTHER NON-EXCHANGE REVENUES	(876.522,38)	(182.887,52)
II.1.2. EXCHANGE REVENUES	(1.536.753,68)	2.152.768,93
II.1.2.1. FINANCIAL INCOME	(128.297,00)	(273.873,52)
II.1.2.2. OTHER EXCHANGE REVENUE	(1.408.456,68)	2.426.642,45
II.2. EXPENSES	1.606.983.056,11	1.622.253.520,15
II.2. EXPENSES	1.606.983.056,11	1.622.253.520,15
II.2.10. OTHER EXPENSES	19.182.140,45	11.557.566,90
II.2.2. EXP IMPL BY COMMISS&EX.AGENC. (DM)	1.272.789.454,96	1.320.828.680,40
II.2.3. EXP IMPL BY OTH EU AGENC&BODIES (IM)	298.933.111,65	277.978.011,05
II.2.4. EXP IMPL BY 3RD CNTR & INT ORG (IM)	146.456,88	
II.2.5. EXP IMPL BY OTHER ENTITIES (IM)	15.920.291,96	11.898.464,65
II.2.8. FINANCE COSTS	11.600,21	(9.202,85)
STATEMENT OF FINANCIAL PERFORMANCE	1.585.909.475,78	1.610.307.604,45

It should be noted that the balance sheet and statement of financial performance presented in Annex 3 to this Annual Activity Report, represent only the assets, liabilities, expenses and revenues that are under the control of this Directorate General. Significant amounts such as own resource revenues and cash held in Commission bank accounts are not included in this Directorate General's accounts since they are managed centrally by DG Budget, on whose balance sheet and statement of financial performance they appear. Furthermore, since the accumulated result of the Commission is not split amongst the various Directorates General, it can be seen that the balance sheet presented here is not in equilibrium.

TABLE 5bis : OFF BALANCE SHEET CONNECT

OFF BALANCE	2017	2016
OB.1. Contingent Assets	2.239.349,79	4.760.587,29
GR for pre-financing	2.239.349,79	4.760.587,29
OB.2. Contingent Liabilities ⁴⁹	(18.804.386,00)	(18.796.637,00)
OB.2.1. Guarantees given for EU FI ⁵⁰	(18.804.386,00)	(18.789.137,00)
OB.2.7. CL Amounts relating to legal cases	-	(7.500,00)
OB.3. Other Significant Disclosures	(1.813.490.644,38)	- (2.047.206.587,22)
OB.3.2. Comm against app. not yet consumed ⁵¹	(1.813.490.644,38)	(2.047.206.587,22)
OB.4. Balancing Accounts	1.830.055.680,59	2.061.242.636,93
OB.4. Balancing Accounts	1.830.055.680,59	2.061.242.636,93
OFF BALANCE	0,00	0,00

⁴⁹ OB.2. Contigent Liabilities are related to the financial instrument (CEF DI EIB).

⁵⁰ OB.2.1., the amount 18 804 386 € represents the open balance of the guarantee paid for the project PBI to EIB in 2013 (7 MEUR) and 2014 (13 MEUR), later merged and currently called as CEF DI financial instrument.

⁵¹ OB.3.2 amount is related to the RAL open for FP7 and CIP projects and other grants and procurements.

TABLE 6: AVERAGE PAYMENT TIMES FOR 2017 - DG CONNECT

Legal Times							
Maximum Payment Time (Days)	Total Number of Payments	Nbr of Payments within Time Limit	Percentage	Average Payment Times (Days)	Nbr of Late Payments	Percentage	Average Payment Times (Days)
4	1				1	100,00 %	5
25	1	1	100,00 %	7			
26	1	1	100,00 %	15			
29	1	1	100,00 %	6			
30	4601	4459	96,91 %	14,5283696	142	3,09 %	48,23943662
41	2	2	100,00 %	14,5			
42	1	1	100,00 %	12			
43	1	1	100,00 %	8			
44	1	1	100,00 %	6			
45	18	17	94,44 %	28,5294118	1	5,56 %	48
47	1	1	100,00 %	9			
50	3	3	100,00 %	20,33333333			
60	145	145	100,00 %	24,4758621			
90	965	948	98,24 %	53,5727848	17	1,76 %	99,17647059
105	1	1	100,00 %	38			
120	51	51	100,00 %	29,6470588			
200	3	3	100,00 %	75			

Total Number of Payments	5797	5636	97,22 %		161	2,78 %	
Average Net Payment Time	22,446093			21,56334			53,34782609
Average Gross Payment Time	34,476281			33,85007			56,39751553

Suspensions

Average Report Approval Suspension Days	Average Payment Suspension Days	Number of Suspended Payments	% of Total Number	Total Number of Payments	Amount of Suspended Payments	% of Total Amount	Total Paid Amount
1	42	1674	28,88 %	5797	514.824.072,78	31,06 %	1.657.269.850,31

Late Interest paid in 2017

DG	GL Account	Description	Amount (€)
CONNECT	65010100	Interest on late payment of charges New FR	14 813,22
			14 813,22

TABLE 7 : SITUATION ON REVENUE AND INCOME IN 2017

Chapter	Revenue and income recognized			Revenue and income cashed from			Outstanding balance	
	Current year RO	Carried over RO	Total	Current Year RO	Carried over RO	Total		
	1	2	3=1+2	4	5	6=4+5	7=3-6	
52	REVENUE FROM INVESTMENTS OR LOANS GRANTED, BANK AND OTHER INTEREST	9.900,00	216.832,13	226.732,13	9.900,00	216.770,13	226.670,13	62,00
57	OTHER CONTRIBUTIONS AND REFUNDS IN CONNECTION WITH THE ADMINISTRATIVE OPERATION OF THE INSTITUTION	138,00	-	138,00	138,00	-	138,00	-
59	OTHER REVENUE ARISING FROM ADMINISTRATIVE MANAGEMENT	256.087,98	-	256.087,98	256.087,98	-	256.087,98	-
66	OTHER CONTRIBUTIONS AND REFUNDS	25.364.500,26	36.125.404,01	61.489.904,27	17.410.955,46	3.139.444,57	20.550.400,03	40.939.504,24
71	FINES AND PENALTIES	-	580.000,00	580.000,00	-	580.000,00	580.000,00	-
90	MISCELLANEOUS REVENUE	856.917,71	1.884.536,97	2.741.454,68	406.570,27	20.440,17	427.010,44	2.314.444,24
Total DG CONNECT		26.487.543,95	38.806.773,11	65.294.317,06	18.083.651,71	3.956.654,87	22.040.306,58	43.254.010,48

**TABLE 8 : RECOVERY OF PAYMENTS
(Number of Recovery Contexts and corresponding Transaction Amount)**

INCOME BUDGET RECOVERY ORDERS ISSUED IN 2017	Irregularity		OLAF notified		Total undue payments recovered		Total transactions in recovery context (incl. non-qualified)		% Qualified/Total RC	
	Year of Origin (commitment)	Nbr	RO Amount	Nbr	RO Amount	Nbr	RO Amount	Nbr	RO Amount	Nbr
2004	1	409.398,50			1	409.398,50	2	450.338,35	50,00%	90,91%
2005	3	612.045,53	1	334.822,15	4	946.867,68	7	1.034.312,85	57,14%	91,55%
2006	1	22.942,77	1	309.747,10	2	332.689,87	4	387.989,19	50,00%	85,75%
2007	29	810.067,29	6	1.155.103,49	35	1.965.170,78	53	2.163.443,87	66,04%	90,84%
2008	32	1.807.140,91	3	135.174,00	35	1.942.314,91	54	2.057.074,97	64,81%	94,42%
2009	39	1.461.793,86	4	310.159,99	43	1.771.953,85	58	1.896.671,82	74,14%	93,42%
2010	53	1.444.339,33	6	304.921,00	59	1.749.260,33	79	2.102.115,81	74,68%	83,21%
2011	55	5.554.312,55	2	187.114,95	57	5.741.427,50	69	6.088.582,53	82,61%	94,30%
2012	36	1.111.832,02	5	406.261,75	41	1.518.093,77	48	1.605.315,83	85,42%	94,57%
2013	16	901.673,59	6	472.157,00	22	1.373.830,59	39	5.079.952,19	56,41%	27,04%
2014	7	181.136,19	1	4.104,68	8	185.240,87	12	393.003,27	66,67%	47,13%
2015	1	4.284,79	2	26.290,78	3	30.575,57	3	30.575,57	100,00%	100,00%
2016	1	50,00			1	50,00	3	245.150,03	33,33%	0,02%
2017	1	138,00			1	138,00	1	138,00	100,00%	100,00%
No Link	2	366.596,34	1	197.517,76	3	564.114,10	6	3.403.483,51	50,00%	16,57%
Sub-Total	277	14.687.751,67	38	3.843.374,65	315	18.531.126,32	438	26.938.147,79	71,92%	68,79%

EXPENSES BUDGET	Error		Irregularity		OLAF Notified		Total undue payments recovered		Total transactions in recovery context (incl. non-qualified)		% Qualified/Total RC	
	Nbr	Amount	Nbr	Amount	Nbr	Amount	Nbr	Amount	Nbr	Amount	Nbr	Amount
INCOME LINES IN INVOICES			35	607.630,00	5	112.706,00	40	720.336,00	40	720.336,00	100,00%	100,00%
NON ELIGIBLE IN COST CLAIMS			144	10.037.003,05	7	353.236,27	151	10.390.239,32	487	47.433.707,79	31,01%	21,90%
CREDIT NOTES	21	321.644,62	1	99.828,09			22	421.472,71	27	458.930,51	81,48%	91,84%
Sub-Total	21	321.644,62	180	10.744.461,14	12	465.942,27	213	11.532.048,03	554	48.612.974,30	38,45%	23,72%
GRAND TOTAL	21	321.644,62	457	25.432.212,81	50	4.309.316,92	528	30.063.174,35	992	75.551.122,09	53,23%	39,79%

TABLE 9: AGEING BALANCE OF RECOVERY ORDERS AT 1.1.2018 FOR CONNECT

	Number at 1.1.17	Number at 1.1.18	Evolution	Open Amount (€) at 1.1.2017	Open Amount (€) at 1.1.2018	Evolution
2002	2	2	0,00 %	737.418,19	737.418,19	0,00 %
2003	1	1	0,00 %	350.703,53	350.703,53	0,00 %
2004	4	4	0,00 %	459.123,69	455.707,50	-0,74 %
2005	1	1	0,00 %	126.071,93	126.071,93	0,00 %
2006	5	5	0,00 %	504.054,93	504.054,93	0,00 %
2007	1	1	0,00 %	57.116,87	32.796,68	-42,58 %
2008	11	11	0,00 %	1.655.788,71	1.655.788,71	0,00 %
2009	26	25	-3,85 %	4.091.241,27	4.069.558,09	-0,53 %
2010	34	31	-8,82 %	3.707.909,09	3.348.885,80	-9,68 %
2011	62	61	-1,61 %	8.171.599,15	8.164.443,09	-0,09 %
2012	39	37	-5,13 %	2.142.095,69	1.906.396,88	-11,00 %
2013	32	31	-3,13 %	2.206.047,16	2.164.951,47	-1,86 %
2014	38	34	-10,53 %	4.799.437,59	4.539.736,21	-5,41 %
2015	30	28	-6,67 %	1.560.908,79	970.842,20	-37,80 %
2016	68	37	-45,59 %	8.389.868,79	5.968.746,21	-28,86 %
2017		77			8.404.391,87	
	354	386	9,04 %	38.959.385,38	43.400.493,29	11,40 %

TABLE 10 : RECOVERY ORDER WAIVERS IN 2017 >= 100.000 €

	Waiver Central Key	Linked RO Central Key	RO Accepted Amount (€)	LE Account Group	Commission Decision	Comments
1	3233170081	3241209365	(140.792,06)	Private Companies		

Total DG CONNECT	(140.792,06)
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Number of RO waivers	1
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TABLE 11 : CENSUS OF NEGOTIATED PROCEDURES - DG CONNECT - 2017

Internal Procedures > 60,000 €

Negotiated Procedure Legal base	Number of Procedures	Amount (€)
Art. 134.1(b) (Without prior publication) Work of art, technical reasons or protection of exclusive rights	4	8.362.454,23
Total	4	8.362.454,23

TABLE 12 : SUMMARY OF PROCEDURES OF DG CONNECT EXCLUDING BUILDING CONTRACTS

Internal Procedures > 60,000 €

Procedure Legal base	Number of Procedures	Amount (€)
Exceptional Negotiated Procedure without publication of a contract notice (Art. 134 RAP)	4	8.362.454,23
Negotiated Procedure with at least five candidates below Directive thresholds (Art. 136a RAP)	7	792.767,97
Open Procedure (Art. 104(1) (a) FR)	15	9.834.997,90
Total	26	18.990.220,10

TABLE 13 : BUILDING CONTRACTS

Legal base	Contract Number	Contractor Name	Description	Amount (€)

TABLE 14 : CONTRACTS DECLARED SECRET

Legal base	Contract Number	Contractor Name	Description	Amount (€)

ANNEX 4: Materiality criteria

The present document details the way DG CONNECT assesses the level of errors in its annual financial statements and the definition of the level of misstatement that is considered as quantitatively material.

DG CONNECT managed in 2017 financial operations under H2020, FP7 and other programmes such as CIP ICT PSP/SI.

The Research Framework programmes H2020, FP7 (common aspects)

Effectiveness of controls

The starting point to determine the effectiveness of the controls in place is the cumulative level of error expressed as the percentage of errors in favour of the EC, detected by ex-post audits, measured with respect to the amounts accepted after ex-ante controls.

However, to take into account the impact of the ex-post controls, this error level is to be adjusted by subtracting:

- Errors detected corrected as a result of the implementation of audit conclusions.
- Errors corrected as a result of the extrapolation of audit results to non-audited contracts with the same beneficiary.

For FP7, this results in a residual error rate, which is calculated in accordance with the following formula:

$$\text{ResER}\% = \frac{(\text{RepER}\% * (P - A)) - (\text{RepERSys}\% * E)}{P}$$

Where:

ResER% residual error rate, expressed as a percentage.

RepER% representative error rate, or error rate detected in the common representative sample, expressed as a percentage. For FP 7 this rate is the same for all Research services.

RepERSys% portion of the RepER% representing (negative) systematic errors, expressed as a percentage. The RepER% is composed of two complementary portions reflecting the proportion of negative systematic and non-systematic errors detected.

P total aggregated amount in € of EC share of funding in the auditable population. In FP7, the population is that of all received cost statements, and the € amounts those that reflect the EC share included in the costs claimed in each cost statement.

A total EC share of all audited amounts, expressed in €. This will be collected from audit results.

E total non-audited amounts of all audited beneficiaries. In FP7, this consists of the total EC share, expressed in €, of all non-audited received cost statements for all

audited beneficiaries (excluding those beneficiaries for which an extrapolation is ongoing).

The Common Representative Audit Sample (CRAS) is the starting point for the calculation of the residual error rate. It is representative of the expenditure of each FP as a whole. Nevertheless, the Director-General (or Director for the Executive Agencies) must also take into account other information when considering if the overall residual error rate is a sufficient basis on which to draw a conclusion on assurance (or make a reservation) for specific segment(s) of FP7/Horizon 2020. This may include the results of other ex-post audits, ex-ante controls, risk assessments, audit reports from external or internal auditors, etc. All this information may be used in assessing the overall impact of a weakness and considering whether to make a reservation or not.

If the CRAS results are not used as the basis for calculating the residual error rate this must be clearly disclosed in the AAR, along with details of why and how the final judgement was made.

In case a calculation of the residual error rate based on a representative sample is not possible for a FP for reasons not involving control deficiencies,⁵² the consequences are to be assessed quantitatively by making a best estimate of the likely exposure for the reporting year based on all available information. The relative impact on the Declaration of Assurance would be then considered by analysing the available information on qualitative grounds and considering evidence from other sources and areas. This should be clearly explained in the AAR.

Multiannual approach

The Commission's central services' guidance relating to the quantitative materiality threshold refers to a percentage of the authorised payments of the reporting year of the ABB expenditure. However, the Guidance on AARs also allows a multi-annual approach, especially for budget areas (e.g. programmes) for which a multi-annual control system is more effective. In such cases, the calculation of errors, corrections and materiality of the residual amount at risk should be done on a "cumulative basis" on the basis of the totals over the entire programme lifecycle.

Because of its multiannual nature, the effectiveness of the Research services' control strategy can only be fully measured and assessed at the final stages in the life of the framework programme, once the ex-post audit strategy has been fully implemented and systematic errors have been detected and corrected.

In addition, basing materiality solely on ABB expenditure for one year may not provide the most appropriate basis for judgements, as ABB expenditure often includes significant levels of pre-financing expenditure (e.g. during the initial years of a new generation of programmes), as well as reimbursements (interim and final payments) based on cost claims that 'clear' those pre-financings. Pre-financing expenditure is very low risk, being paid automatically after the signing of the contract with the beneficiary.

Notwithstanding the multiannual span of their control strategy, the Director-Generals of the Research DGs (and the Directors of ERCEA, REA, and, for Horizon 2020, EASME and INEA) are required to sign a statement of assurance for each financial reporting year. In order to determine whether to qualify this statement of assurance with a reservation, the

52 Such as, for instance, when the number of results from a statistically-representative sample collected at a given point in time is not sufficient to calculate a reliable error rate.

effectiveness of the control systems in place needs to be assessed not only for the year of reference but also with a multiannual perspective, to determine whether it is possible to reasonably conclude that the control objectives will be met in the future as planned.

In view of the crucial role of ex-post audits defined in the respective common audit strategies, this assessment needs to check in particular whether the scope and results of the ex-post audits carried out until the end of the reporting period are sufficient and adequate to meet the multiannual control strategy goals.

The criteria for making a decision on whether there is material error in the expenditure of the DG or service, and so on whether to make a reservation in the AAR, will therefore be principally, though not necessarily exclusively, based on the level of error identified in ex-post audits of cost claims on a multi-annual basis.

Adequacy of the audit scope

The quantity of the (cumulative) audit effort carried out until the end of each year is to be measured by the actual volume of audits completed. The data is to be shown per year and cumulated, in line with the current AAR presentation of error rates. The multiannual planning and results should be reported in sufficient detail to allow the reader to form an opinion on whether the strategy is on course as foreseen.

The Director-General (or Director for the Executive Agencies) should form a qualitative opinion to determine whether deviations from the multiannual plan are of such significance that they seriously endanger the achievement of the internal control objective. In such case, she or he would be expected to qualify his annual statement of assurance with a reservation.

Research Framework programmes – specific aspects

The control system of each framework programme is designed in order to achieve the operational and financial control objectives set in their respective legislative base and legal framework. If the effectiveness of those control systems does not reach the expected level, a reservation must be issued in the annual activity report and corrective measures should be taken.

Each programme having a different control system, the following section details the considerations leading to the establishment of their respective materiality threshold and the conclusions to draw with regard to the declaration of assurance.

Seventh Framework programme

For the Seventh Framework programme, the general control objective, following the standard quantitative materiality threshold proposed in the Standing Instructions for AAR, is to ensure that the residual error rate, i.e. the level of errors which remain undetected and uncorrected, does not exceed 2% by the end of the programmes' management cycle.

The question of being on track towards this objective is to be (re)assessed annually, in view of the results of the implementation of the ex-post audit strategy and taking into account both the frequency and importance of the errors found as well as a cost-benefit analysis of the effort needed to detect and correct them.

Horizon 2020 Framework Programme

The Commission's proposal for the Regulation establishing the H2020 framework programme⁵³ states that

"It remains the ultimate objective of the Commission to achieve a residual error rate of less than 2% of total expenditure over the lifetime of the programme, and to that end, it has introduced a number of simplification measures. However, other objectives such as the attractiveness and the success of the EU research policy, international competitiveness, scientific excellence and in particular the costs of controls need to be considered.

Taking these elements in balance, it is proposed that the Directorates General charged with the implementation of the research and innovation budget will establish a cost-effective internal control system that will give reasonable assurance that the risk of error over the course of the multiannual expenditure period is, on an annual basis, within a range of 2-5 %, with the ultimate aim to achieve a residual level of error as close as possible to 2 % at the closure of the multi-annual programmes, once the financial impact of all audits, correction and recovery measures have been taken into account."

Further, it explains also that

"Horizon 2020 introduces a significant number of important simplification measures that will lower the error rate in all the categories of error. However, [...] the continuation of a funding model based on the reimbursement of actual costs is the favoured option. A systematic resort to output based funding, flat rates or lump sums appears premature at this stage [...]. Retaining a system based on the reimbursement of actual costs does however mean that errors will continue to occur.

An analysis of errors identified during audits of FP7 suggests that around 25-35 % of them would be avoided by the simplification measures proposed. The error rate can then be expected to fall by 1,5 %, i.e. from close to 5 % to around 3,5 %, a figure that is referred to in the Commission Communication striking the right balance between the administrative costs of control and the risk of error.

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 project. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, correction and recovery measures will have been taken into account is to achieve a level as close as possible to 2 %."

In summary, the control system established for Horizon 2020 is designed to achieve a control result in a range of 2-5% detected error rate, which should be as close as possible to 2%, after corrections. Consequently, this range has been considered in the legislation as the control objective set for the framework programme.

The question of being on track towards this objective is to be (re)assessed annually, in view of the results of the implementation of the ex-post audit strategy and taking into

⁵³ COM(2011) 809/3 Proposal for a Regulation of the European Parliament and of the Council establishing Horizon 2020 – the Framework programme for Research and Innovation (2014-2020), see point 2.2, pp 98-102.

account both the frequency and importance of the errors found as well as a cost-benefit analysis of the effort needed to detect and correct them.

CIP ICT PSP

For the CIP ICT PSP, the calculation of the residual error rate is done according to the same principles as for the FP7 error rate, as follows:

$$REsER\% = \frac{CumER\% * (P - A) - Ex}{P}$$

Where:

- ResER%** residual error rate, expressed as a percentage.
- CumER%** cumulative error rate detected in the non-risk based audit sample.
- P** The P represents the requested EU contribution until the moment when the error rate is calculated.
- A** The value of the EU contribution of all audited amounts, expressed in Euros.
- Ex** The value of the implemented extrapolations in the CIP programme in DG CONNECT.

If the residual error rate is not (yet) below 2% at the end of a reporting, a reservation must be considered.

Nevertheless, the Director-General must also take into account other information when considering if the overall residual error rate is a sufficient basis on which to draw a conclusion on assurance (or make a reservation). This may include the results of other ex-post audits, ex-ante controls, risk assessments, audit reports from external or internal auditors, etc. All this information may be used in assessing the overall impact of a weakness and considering whether to make a reservation or not.

In case a calculation of the residual error rate based on a representative sample is not possible for a programme for reasons not involving control deficiencies⁵⁴, the consequences are to be assessed quantitatively by making a best estimate of the likely exposure for the reporting year based on all available information. The relative impact on the Declaration of Assurance would be then considered by analysing the available information on qualitative grounds and considering evidence from other sources and areas. This should be clearly explained in the AAR.

Adequacy of the audit scope

The quantity of the (cumulative) audit effort carried out until the end of each year is to be measured by the actual volume of audits completed. The data is to be shown per year and cumulated, in line with the current AAR presentation of error rates. The multiannual planning and results should be reported in sufficient detail to allow the reader to form an opinion on whether the strategy is on course as foreseen.

The Director-General should form a qualitative opinion to determine whether deviations from the multiannual plan are of such significance that they seriously endanger the achievement of the internal control objective. In such case, she or he would be expected to qualify his annual statement of assurance with a reservation.

⁵⁴ Such as, for instance, when the number of results from a statistically-representative sample collected at a given point in time is not sufficient to calculate a reliable error rate.

ANNEX 5: Internal Control Templates for budget implementation (ICTs)

Grants direct management – FP7 and H2020

Stage 1: Programming, evaluation and selection of proposals

A - Preparation, adoption and publication of the Annual Work Programme and Calls for proposals

Main control objectives: Ensuring that the most promising projects for meeting the policy objectives are among the proposals submitted; Compliance; Prevention of fraud

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The work programme and the subsequent calls for proposals do not adequately reflect the policy objectives, priorities, are incoherent and/or the essential eligibility, selection and award criteria are not adequate to ensure the evaluation of the proposals.</p> <p>The annual work programmes are not consistent within the Research family and with the 7 years' framework</p> <p>The programme H2020 implementation (procedures, monitoring arrangements, communication with beneficiaries, budget planning, etc.) is not consistent within the Research family and with the 7 years'</p>	<p>Hierarchical validation within the authorising department Inter-service consultation, including all relevant services Adoption by the Commission Explicit allocation of responsibility.</p> <p>The Common Support Centre in DG RTD provides all the members of the Family with harmonised procedures, guidance and IT tools. DG RTD centralises the budget planning and the</p>	<p>Coverage / Frequency: 100%</p> <p>Depth: All work programmes are thoroughly reviewed at all levels, including for operational and legal aspects.</p> <p>Coverage/ Frequency: 100%</p> <p>Depth All the underlying implementation tools are defined et developed at family level.</p>	<p>Costs: estimation of cost of staff involved in the preparation and validation of the annual work programme and calls.</p> <p>Benefits: Only qualitative benefits. A good Work Programme and well publicised calls should generate a large number of good quality projects, from which the most excellent can be chosen. There will therefore be real competition for funds.</p> <p>Costs: costs of the staff involved in Family coordination activities</p>	<p>% of "over-subscription" proposals received/selected</p>

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
framework	monitoring of the H2020's budget implementation		Benefits: Qualitative benefits: Optimised procedures, common approach on multiple issues (audits, fraud, legal aspects, reporting...); better reporting on the whole programme – better management of the programme. ⁵⁵	

B - Selecting and awarding: Evaluation, ranking and selection of proposals

Main control objectives: Ensuring that the most promising projects for meeting the policy objectives are among the proposals selected; Compliance; Prevention of fraud

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
The evaluation, ranking and selection of proposals is not carried out in accordance with the established procedures, the policy objectives, priorities and/or the essential eligibility, or with the selection and award criteria	Selection and appointment of expert evaluators Assessment by independent experts Comprehensive IT system supporting the stage and allowing better monitoring	100% vetting (including selecting) of experts for technical expertise and independence (e.g. conflicts of interests, nationality bias, ex-employer bias, collusion)	Costs: estimation of cost of staff involved in the evaluation and selection of proposals. Cost of the appointment of experts and of the logistics of the evaluation.	% of number of (successful) redress challenges / total number of proposals received Average time to publication of selection results (FR 128.2 and/or

⁵⁵ The mutualisation of the support services represents a quantitative benefit which is certain but not accurately quantifiable in the context of reorganisations, new programme's setting up, general HR offsetting through the Commission.

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>defined in the annual work programme and subsequent calls for proposals.</p>	<p>of the process</p> <p>Validation by the AOSD of ranked list of proposals. In addition, if applicable: opinion of advisory bodies; comitology; inter-service consultation and adoption by the Commission; publication</p> <p>Systematic checks on operational and legal aspects performed before signature of the grant agreement</p> <p>Evaluation review procedure</p>	<p>100% of proposals are evaluated.</p> <p>Coverage: 100% of ranked list of proposals. Supervision of work of evaluators.</p> <p>100% of contested decisions are analysed by redress committee</p>	<p>Benefits:</p> <p>Qualitative benefits</p> <p>Expert evaluators from outside the Commission bring independence, state of the art knowledge in the field and a range of different opinions. This will have an impact on the whole project cycle : better planned, better implemented projects</p>	<p>Horizon 2020 limits)</p> <p>% of time-to-inform on time</p> <p>cost of evaluating + selecting grants / value of grants contracted</p> <p>% of budget "over-subscription" from proposals received</p>

Stage 2: Contracting

Main control objectives: : Ensuring that the most promising projects for meeting the policy objectives are among the proposals contracted; SFM (optimal allocation of the budget available); Compliance; Prevention of fraud

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The description of the action in the grant agreement includes tasks which do not contribute to the achievement of the programme objectives. and/or that the budget foreseen overestimates the costs necessary to carry out the action.</p> <p>The beneficiary lacks operational and/or financial capacity to carry out the actions.</p> <p>Procedures do not comply with regulatory framework.</p> <p>The evaluation stage hasn't detected a potentially fraudulent proposal/beneficiary.</p>	<p>Project Officers implement evaluators' recommendations.</p> <p>Hierarchical validation of proposed adjustments.</p> <p>Validation of beneficiaries (operational and financial viability).</p> <p>Systematic checks on operational and legal aspects performed before signature of the GA</p> <p>Ad hoc anti-fraud checks for riskier beneficiaries</p> <p>Signature of the grant agreement by the AO.</p> <p>Financial verification where necessary</p> <p>Participant Guarantee Fund.</p>	<p>100% of the selected proposals and beneficiaries are scrutinised.</p> <p>Coverage: 100% of draft grant agreements.</p> <p>Depth may be differentiated; determined after considering the type or nature of the beneficiary (e.g. SMEs, joint-ventures) and/or of the modalities (e.g. substantial subcontracting) and/or the total value of the grant.</p> <p>Note that, given the constraints on the time to grant set out in the H2020 legislation, "negotiation" of projects is kept to a minimum, as far as possible the positively evaluated projects are accepted without modification.</p>	<p>Costs: estimation of cost of staff involved in the contracting process.</p> <p>Benefits: Qualitative benefits: The whole committed budget checked for quality (prevention of later errors). This stage should lead to a higher assurance on the achievement of the projects – and policy objectives.</p>	<p>Average Time to Sign (FR 128.2)</p> <p>% of Time-to-Sign on time</p> <p>Average time to grant (FR 128.2)</p> <p>% of Time-to-grant on time</p> <p>% cost over annual amount contracted</p>

Stage 3: Monitoring the implementation

Main control objectives: ensuring that the operational results (deliverables) from the projects are of good value and meet the objectives and conditions; ensuring that the related financial operations comply with regulatory and contractual provisions; prevention of fraud; ensuring appropriate accounting of the operations

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The actions foreseen are not, totally or partially, carried out in accordance with the technical description and requirements foreseen in the grant agreement.</p> <p>The amounts paid exceed what is due in accordance with the applicable contractual and regulatory provisions.</p> <p>The cost claims are irregular or fraudulent .</p> <p>Lack of harmonised approach within the family with the consequence of unequal treatment of the beneficiaries</p>	<p>Kick-off meetings and "launch events" involving the beneficiaries in order to avoid project management and reporting errors</p> <p>Effective external communication about guidance to the beneficiaries</p> <p>Anti-fraud awareness raising training for the project officers</p> <p>Enhanced family approach (anti-fraud cooperation; common legal and audit service; comprehensive and common IT system for all the family)</p> <p>Operational and financial checks in accordance with</p>	<p>100% of the projects are controlled, including only value-adding checks. Riskier operations subject to more in-depth controls.</p> <p>The depth depends on risk criteria. However, as a deliberate policy to reduce administrative burden, and to ensure a good balance between trust and control, the level of control at this stage is reduced to a minimum</p> <p>High risk operations identified by risk criteria. Red flags: suspicions raised by staff, audit results, EDES, individual or "population" risk assessment</p> <p>Audit certificates required</p>	<p>Costs: estimation of cost of staff involved in the actual management of running projects.</p> <p>Benefits: budget value of the costs claimed by the beneficiary, but rejected by staff</p> <p>Reductions in error rates identified by audit certificates.</p> <p>Benefits due to operational review of projects and consequent corrective actions imposed on projects</p>	<p>Average number & value of running projects managed 'per' staff FTE</p> <p>Time-to-pay: % of payments made on time</p> <p>Time-to pay: Average nb days net/gross + suspension days</p> <p>cost of control from contracting and monitoring the execution up to payment included/ amount paid (%)</p> <p>Average project mngt cost (staff FTE * standard staff cost) per running* project</p>

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
	<p>the financial circuits. Operation authorisation by the AO For riskier operations, more in-depth ex-ante controls</p> <p>Selection and appointment of expert for scientific reviews of intermediate and/or final reporting</p> <p>If needed: application of Suspension/interruption of payments, Penalties or liquidated damages. Referring case to OLAF</p>	<p>for any beneficiary claiming more than 375,000 € (FP7)/ 325,000 € (H2020).</p>		

Stage 4: Ex-post controls

A - Reviews, audits and monitoring

Main control objectives: Measuring the level of error in the population after ex-ante controls have been undertaken; detect and correct any error or fraud remaining undetected after the implementation ex-ante controls; identifying possible systemic weaknesses in the ex-ante controls, or weaknesses in the rules

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The ex-ante controls (as such) do not prevent, detect and correct erroneous payments or attempted fraud to an extent going beyond a tolerable rate of error.</p> <p>Lack of consistency in the audit strategy within the family.</p> <p>Lack of efficiency for absence of coordination: multiple audits on the same beneficiary, same programme: reputational risk and high administrative burden on the beneficiaries' side.</p>	<p>Common Ex-post control strategy for the entire Research family (H2020), implemented by a central service (Common Support Centre, DG RTD):</p> <ul style="list-style-type: none"> - At intervals carry out audits of a representative sample of operations to measure the level of error in the population after ex-ante controls have been performed - Additional sample to address specific risks - when relevant, joint audits with the Court of Auditors <p>Multi-annual basis (programme's lifecycle) and coordination with other AOs concerned</p> <p>Validate audit results with beneficiary</p> <p>In case of systemic error detected, extrapolation to all the projects run by the audited beneficiary</p> <p>If needed: referring the case to OLAF</p>	<ul style="list-style-type: none"> - Common Representative audit Sample (CRaS): MUS sample across the programme to draw valid management conclusions on the error rate in the population. - risk-based sample, determined in accordance with the selected risk criteria, aimed to maximise deterrent effect and prevention of fraud or serious error 	<p>Costs: estimation of cost of staff involved in the coordination and execution of the audit strategy. Cost of the appointment of audit firms for the outsourced audits.</p> <p>Benefits: budget value of the errors detected by the auditors.</p> <p>Non quantifiable benefits: Deterrent effect. Learning effect for beneficiaries. Improvement of ex-ante controls or risk approach in ex-ante controls by feeding back findings from audit. Improvement in rules and guidance from feedback from audit.</p>	<p>Representative error rate.</p> <p>Residual error rate in comparison to the materiality threshold.</p> <p>Amount of errors and corrections concerned.</p> <p>Number of audits finalised (+ % of beneficiaries & value coverage)</p> <p>cost of control ex post audits/ value of grants audited</p>

B - Implementing results from ex-post audits/controls

Main control objectives: Ensuring that the (audit) results from the ex-post controls lead to effective recoveries; Ensuring appropriate accounting of the recoveries made

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The errors, irregularities and cases of fraud detected are not addressed or not addressed in a timely manner</p>	<p>Systematic registration of audit / control results to be implemented and actual implementation. Validation of recovery in accordance with financial circuits. Authorisation by AO</p> <p>Notification to OLAF and regular follow up of detected fraud.</p>	<p>Coverage: 100% of final audit results <i>with a financial impact</i>. Depth: All audit results are examined in-depth in making the final recoveries. Systemic errors are extrapolated to all the non-audited projects of the same beneficiary</p>	<p>Costs: estimation of cost of staff involved in the implementation of the audit results.</p> <p>Benefits: budget value of the errors, detected by ex-post controls, which have actually been corrected (offset or recovered).</p> <p>Loss: budget value of recovery orders which are 'waived' or have to be cancelled.</p>	<p>Amounts being recovered and offset</p> <p>Number/value/% of audit results pending implementation</p> <p>Number/value/% of audit results implemented.</p>

ANNEX 5b: Internal Control Templates for budget implementation (ICTs)

Indirect entrusted management DG CONNECT

The ICT covers: (1) the executive agencies EACEA, INEA, REA and EASME (the two latter for H2020)⁵⁶ (2) cross delegations to other Commission services (3) the ESCEL Joint Undertaking (4) Active and Assisted Living (AAL) Association, (5) Decentralised Agencies (BEREC Office & ENISA).

Stage 1: Establishment (or prolongation) of the mandate to the entrusted entity (“delegation act”/ “contribution agreement” / etc).

Main control objectives: Ensuring that the legal framework is fully compliant and regular (legality & regularity), delegated to an appropriate entity (best value for public money, economy, efficiency), without any conflicts of interests (anti-fraud strategy), and gives all the references necessary for a smooth running of the new entity.

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The establishment (or prolongation) act of the mandate of the entrusted entity lacks clear references regarding the responsibilities of each involved actor.</p> <p>For PPPs: the evaluation method of the in-kind contributions provided by the industry partners is not clear.</p>	<p>Ex-ante evaluation Widespread consultation, internally and with external stakeholders. Hierarchical validation within the authorising department Inter-service consultation, including all relevant DG. Adoption by the Commission.</p>	<p>Coverage/Frequency: 100%/once for the establishment and partial for amendments or extensions.</p>	<p>Costs: This stage implies several DGs, doesn't happen regularly and can be very different for each entity. A systematic cost calculation wouldn't give exploitable data Benefits: Benefits cannot be calculated in terms of budget.</p>	<p>Overall supervision cost per (type of) entrusted entity (%)</p>

⁵⁶ The contribution of DG CONNECT to the administrative budget of the executive agencies is removed from the financial programming at the beginning of the Multi-annual Financial Framework. The operational budget is directly allocated to the Agency on a yearly basis – DG CONNECT does not strictly have a financial responsibility, but does still have a responsibility to supervise the agency in terms of the achievement of results.

Stage 2: Assessment and supervision of the entrusted entity’s financial and control framework (towards “budget autonomy”; “financial rules”).

Main control objectives: Ensuring that the entrusted entity is fully prepared to start/continue implementing the delegated funds autonomously with respect of all 5 ICOs.

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
The financial and control framework deployed by the entrusted entity is not fully mature to guarantee achieving all 5 ICOs	Ex-ante assessment, conditional to granting budget autonomy Hierarchical validation within the authorising department Use of Model- or Framework- financial rules (MFR or FFR) Standard business processes and IT tools (EAs and JUs) Secondment or selection of key staff Continuous cooperation within the Research family (IC network, FAIR...) in order to harmonize the IC framework Review of audit reports (IAS, ECA)	Coverage/frequency: 100% of entrusted entities/once at the beginning and partial (problem focussed) for amendments or work arrangements Depth is determined after considering the type or nature of the entrusted entity, its form and/or the value of the budget concerned.	Costs: estimation of cost of staff involved in the ex-ante assessment process (which may include missions, if applicable). Benefits: The total budget amount entrusted to the entity,	Overall supervision cost per (type of) entrusted entity (%)

Stage 3: Operations: monitoring, supervision, reporting.

Main control objectives: Ensuring that the Commission is fully and timely informed of any relevant management issues encountered by the entrusted entity, in order to possibly mitigate any potential financial and/or reputational impacts (legality & regularity, achievement of scientific objectives, sound financial management, true and fair view reporting, anti-fraud strategy).

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
<p>The Commission is not informed of relevant management issues encountered by the entrusted entity in a timely manner</p> <p>The Commission does not react upon and mitigate notified issues in a timely manner which may reflect negatively on the Commission's governance reputation and quality of accountability reporting.</p> <p>The programme H2020 implementation (procedures, monitoring arrangements, communication with beneficiaries, budget planning, etc.) is not consistent within the Research family and with the 7 years' framework</p>	<p>Delegation Act/ Contribution agreement/etc specifying the control, accounting, audit, publication, etc related requirements – incl. the modalities on reporting back relevant and reliable control results</p> <p>Membership of the Governing Boards (ECSEL – the Commission holds 1/3 of voting rights) or the Steering Committee (Executive Agencies)</p> <p>Monitoring or supervision of the entrusted entity e.g. 'regular' monitoring meetings at operational level to review progress in achieving operational results; review of reported control results and any underlying management/audit reports; scrutiny of annual report, etc.</p> <p>Management review of the supervision results.</p> <p>If appropriate/needed:</p> <ul style="list-style-type: none"> - reinforced monitoring of operational and/or financial aspects of the entity - potential escalation of any major governance-related issues with entrusted entities 	<p>Coverage: 100% of the entities are monitored/supervised.</p> <p>Frequency: key KPI's reported on a monthly basis, regular steering committee or Governing Board meetings), annual reports (AAR and operational reporting), evaluation reports.</p> <p>In case of operational and/or financial issues, appropriate mitigating measures are available and should be used</p> <p>Coverage/ Frequency: 100%</p> <p>Depth All the underlying implementation tools</p>	<p>Costs: estimation of cost of staff involved in the actual (regular or reinforced) monitoring of the entrusted entities.</p> <p>Benefits: The average annual budget amount entrusted to the entity.</p> <p>Costs: costs of the staff involved in Family coordination activities</p> <p>Benefits: Qualitative benefits: Optimised procedures, harmonised approach to beneficiaries on multiple issues (audits, fraud, legal)</p>	<p>Overall supervision cost per (type of) entrusted entity (%)</p>

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
	The Common Support Centre provides all the members of the Research Family with harmonised procedures, guidance and IT tools. DG RTD centralises the budget planning and the monitoring of the H2020's budget implementation.	are defined et developed at family level.		

Stage 4: Commission contribution: payment or suspension/interruption.

Main control objectives: Ensuring that the Commission adequately assesses the management situation at the entrusted entity, before either paying out the (next) contribution for the operational and/or operating budget of the entity, or deciding to suspend/interrupt the (next) contribution. This is very closely linked to stage 3 above

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
The Commission pays out the (next) contribution to the entrusted entity, while not being aware of the management issues that may lead to financial and/or reputational damage. Bad cash forecast leading to the Commission paying too much compared to the EE's needs In times of shortage of	Delegation Act/ Contribution agreement/etc specifying the control, accounting, audit, publication, etc related requirements – including reporting Management review of the supervision results. Standard procedures for the validation of all payments and recovery of non-used operating budget subsidy Good internal communication to ensure that issues are known and dealt with (see stage 3)	Coverage: 100% of the contribution payments. Frequency: following the rhythm of the payments There is a review before each payment is made. However, the depth will depend on identified issues and on the body involved.	Costs: estimation of cost of staff involved (part of the general supervision costs also linked to stage 3 above) Benefits: The average annual budget amount entrusted to the entity Qualitative benefit: optimised credit implementation	Overall supervision cost per (type of) entrusted entity (%)

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
credits, the budget appropriations are not optimised with the current needs within the family	Family level budget coordination			

Stage 5: Audit and evaluation, Discharge for Joint Undertakings

Main control objectives: Ensuring that assurance building information on the entrusted entity's activities is being provided through independent sources as well, which may confirm or contradict the management reporting received from the entrusted entity itself (on the 5 ICOs).

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
The Commission has not sufficient information from independent sources on the entrusted entity's management achievements, which prevents drawing conclusions on the assurance for the budget entrusted to the entity – which may reflect negatively on the Commission's governance reputation and quality of accountability reporting.	Delegation Act/Contribution agreement/etc specifying the control, accounting, audit, publication, etc related requirements – including independent audit function (where appropriate) and cooperation with IAS and ECA. The IAS is the internal auditor for all EAs and JUs. The ECA has access to all bodies for which recourse to new management modes has been done and gives a separate opinion (leading to separate discharge) for JUs and EAs for their administrative budget. Harmonised ex-post audits (common audit strategy for H2020), common audit service-	Coverage: sample as needed (e.g. random/representative, value-targeted, risk-based). Frequency: whenever necessary. The depth depends on the type of entity and the level of risks assessed.,	Costs: estimation of cost of (DG CONNECT) staff involved in the supervision of this stage (goes together with the costs of supervision in stages 3 and 4).	Assurance being provided (via management/audit reporting); representative error rate, residual error rate within a tolerable range; Situation confirmed by audit opinions. Overall supervision cost per (type of) entrusted entity (%)

Main risks It may happen (again) that...	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Control indicators
	<p>potential escalation of any major governance-related issues with entrusted entities</p> <p>- Exchange of relevant anti-fraud information about shared beneficiaries within the Research family</p> <p>Interim evaluations by independent experts of achievement of policy objectives</p>	<p>Annual report of the ECA on all JUs.</p>		

ANNEX 5c: Internal Control Templates for budget implementation (ICTs)

ICT for Financial Instruments: Cultural and Creative Sectors Guarantee Facility

IFI = (entrusted) International Financial Institution (eg EIB/EIF, etc); **FI** = (further entrusted) Financial Intermediaries; **"sub"-FI** = (further) sub-delegated FI; **FR** = Final Recipient

Stage 1 – Set-up/design of the Financial Instrument and designation of International Financial Institution (IFI)

Main control objectives:

- Ensuring that the Financial Instrument is adequate for meeting the policy or programme objectives (effectiveness); Compliance (legality & regularity); Prevention of fraud (anti-fraud strategy)
- Ensuring that the most promising International Financial Institution (IFI) is pre-determined or selected to ensure that the Financial Instrument is implemented effectively and efficiently; Sound financial management; Legality and regularity; Fraud prevention and detection

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
<p>a) The actions supported through the Financial Instrument do not adequately reflect the policy objectives</p>	<p>a) Hierarchical validation (incl. at DG level) of the:</p> <ol style="list-style-type: none"> 1) Regulation (approved by the Legislative Authority); 2) Delegation agreement, including notably an ex-ante evaluation (required by RAP art. 224); 3) Annual work programme for "Access to risk finance" (part of the H2020 WP) with an annual budget <p>Inter-service consultation of relevant DGs (horizontal and operational)</p> <p>Consultation of the H2020 Advisory Group</p>	<p>If risk materialises, the Financial Instrument would be irregular. Theoretical impact 100% of the funds involved and significant reputational consequences.</p> <p><u>Coverage /frequency: 100%</u></p>	<p><u>Costs:</u> Estimation of the total cost of monitoring and supervision by DG CONNECT</p> <p><u>Benefits:</u> The total value of the Financial Instrument (this is our maximum risk exposure if the basic acts are inadequate)</p>	<p><u>Effectiveness:</u></p> <p>Where applicable, opinions by advisory bodies (recommendations, actions taken)</p>

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
	on Access to Risk Finance Formal adoption by the Legislative Authority (for the Regulation), by Commission decision (for the DA), and by the Budgetary Authority (for the WP and the annual budget). Regular evaluations (see Stage 3)			
b) The Delegation Agreement is inadequate in coverage of operational and management provisions (RAP art. 217 & 222-225)	b) The main principles were agreed with the IFI in the FAFAs (managed by ECFIN)			
c) The selection of the IFI is not in line with FR & RAP criteria, especially re: 'alignment of interests' (FR art 140.2e)	c) EIF was pre-determined in accordance with FR art. 58.1c.	<i>(see above)</i>		Findings in audit reports

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
d) The IFI (and the (sub)FI) does not have the experience and financial capacity / administrative & control capacity to ensure an effective & sound implementation of the Financial Instrument (FR art 60.2)	d) The Council asked the Commission to work with EIF.			
e) The RSM (Risk-Sharing Mechanism) is too generous to the IFI (risk of unbalanced risks)	e) <i>Same controls as for a) above</i> The EU's risk share is defined in the Delegation agreement. The risk sharing model was agreed in line with horizontal guidance for Financial instruments from DG BUDG and ECFIN. It was also subject to a formal Commission decision.			

Stage 2 – Implementation of the Financial Instrument by the International Financial Institution (IFI), via Financial Intermediaries (FIs)

Main control objectives:

- Ensuring that the funds allocation is optimal (best value for public money; effectiveness, economy, efficiency); ensuring that the most promising Financial Intermediaries (FI), Final Recipients (FR) are selected to meet the policy objectives (effectiveness)
- Ensuring that the remuneration paid to the IFI is adequate (cost-effectiveness)
- Compliance (legality & regularity); Prevention of fraud (anti-fraud strategy); Safeguarding of assets and information; Reliable reporting (true and fair view)

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
<p>a) The call for and selection of the <u>contracted FIs and FRs</u> is not in line with FR & RAP criteria for eligibility or exclusion, especially 'alignment of interests' and 'no relations with offshore banking and tax havens'</p>	<p>a) Responsibility for the call, for evaluating, proposing and selecting FIs, lies with the IFI (the FIs do not perform calls).</p> <p>Due diligence by the IFI, which checks as part of the evaluation that banks are not registered in tax havens etc.</p> <p>Redress procedure for FIs not selected (part of EIF's evaluation procedure)</p> <p>Implementation of various controls by the IFI/FIs in accordance with the FAFA and Delegation agreement</p> <p>EIF's control strategy is presented to the Commission</p> <p>Ex-ante controls by IFIs at "contracting" stage – EIF has a large department who check ex-ante that the proposed projects are eligible, excellent</p>	<p><u>Coverage / frequency</u>: determined by the IFI/FIs in accordance with the Delegation agreement</p> <p><u>Depth</u>: determined by the IFI/FIs in accordance with the Delegation agreement</p>		<p><u>Effectiveness</u>:</p> <p>Number of appeals to the selection decision (redress procedure)</p> <p>Number of cases obtaining redress</p> <p><u>Efficiency</u>:</p> <p>Time to publication of selection results</p> <p>Time to contract</p> <p><u>Cost-effectiveness</u>:</p> <p>Total cost of monitoring</p>

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
<p>b) The design of the accounting and reporting arrangements would not provide a True & Fair View</p> <p>c) the remuneration (structure and/or level) of the IFI⁵⁷, the reimbursement of any exceptional costs and costs for technical assistance or additional tasks would not be in line with the SFM objective (e.g. admin fees unjustifiably high)</p>	<p>science and financially viable.</p> <p>On-the-spot verifications by IFIs – a "monitoring team" visits FIs and FRs before project and after project finalisation</p> <p>b) Separate records per Financial Instrument are to be kept by the IFI; and harmonised reporting has been required by the Commission.</p> <p>c) Fees and incentives are defined in the FAFA and the Delegation agreement, including an overall cap.</p>	<p>c) In-depth assessment of the statement of expenses</p>		<p>and supervision by DG CONNECT</p> <p>c) Remuneration and costs for actually managed funds (compared to benchmark)</p>

⁵⁷ Remuneration may include administrative fees, treasury management fees and incentives as well as exceptional and unforeseen expenses.

Stage 3 - Monitoring and supervision of the Financial Instrument by the Commission, incl. ex-post control and assurance building

Main control objectives:

- Ensuring that the operational results (deliverables) from the Financial Instrument are of good value and meet the objectives and conditions (effectiveness & efficiency); ensuring that the related financial operations comply with regulatory and contractual provisions (legality & regularity); prevention of fraud (anti-fraud strategy); ensuring appropriate accounting of the operations (reliability of reporting, safeguarding of assets and information)
- Ensuring appropriate accounting of the repayments and assigned revenue made (reliability of reporting)
- Ensuring that the (audit) results from the ex-post controls lead to assurance for the accountable AOD (5 ICOs)

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
<p>a) The IFI (and the (sub)FI) provide support to activities which are not contributing to achieving the policy objectives and the implementation is not in compliance with applicable regulations and is not in accordance with the principle of sound financial management</p> <p>b) Internal control weaknesses, irregularities, errors</p>	<p>a, b) Monitoring and supervision of the IFI/FIs is organised formally through the Steering Committee.</p> <p>Regular reporting (quarterly, annually and ad hoc) by the IFI to the Commission "Designated Service" on operational and financial performance and administrative costs.</p> <p><u>Annual reporting:</u> Financial statements; Management declaration; Summary report of audits and controls; independent (external) audit opinion.</p> <p><u>In case of a key issue (weak reporting, negative audit opinion, high risk operations, etc):</u></p> <p>Reinforced monitoring and supervision, <i>If needed:</i> The Commission has the right to suspend or interrupt payments, or even</p>	<p><u>Coverage:</u> 100% of the funding payments to the entrusted entity are controlled</p>	<p><u>Costs:</u> Estimation of the total cost of monitoring and supervision by DG CONNECT (+ cost of contracted services, if any)</p> <p><u>Benefits:</u> value of the funding provided and leverage, as well as scientific excellence (innovation)</p> <p><u>Losses:</u> e.g. write-offs of guarantees called</p>	<p><u>Effectiveness:</u></p> <p>Success ratios and KPIs for policy objectives (e.g. "leverage", "co-risk taking", number of FRs supported by the Financial Instrument, disbursement rate)</p> <p>Internal control, auditing and monitoring "issues"; interventions; issues under reinforced internal control, auditing and monitoring; critical audit findings</p> <p><u>Cost-Effectiveness:</u></p>

Main risks <i>It may happen (again) that...</i>	Mitigating controls	How to determine coverage, frequency and depth	How to estimate the costs and benefits of controls	Possible control indicators
<p>and fraud are not detected and corrected by the IFI (and the (sub)FI), resulting in the EU funds not achieving the policy objectives and not complying with applicable regulations</p> <p>c) The IFI does not report information that DG CONNECT considers crucial</p> <p>d) The Financial Instrument transactions lead to contingent liabilities for the EU budget</p>	<p>apply the exit strategy (winding-up)</p> <p>Referring IFI/FI to OLAF</p> <p>c) Annual report has to be audited by an independent auditor, who also reports on the control system</p> <p>d) The legal base stipulates that the EU's liability (i.e. financial risk) is limited to the contribution it has paid, so there can be no contingent or off-balance sheet liabilities over this amount.</p>			<p>Total cost of monitoring and supervision by CNECT over value delegated</p> <p>Management fees over value delegated</p> <p>The sum of the total cost of monitoring/supervision by CNECT and management fees, over value delegated</p>

ANNEX 6: Implementation through national or international public-sector bodies and bodies governed by private law with a public sector mission

This annex, which *applies only to indirect management*, includes information about implementing tasks entrusted to national or international public sector bodies and bodies governed by private law with a public sector mission. In practice, this includes "national agencies" and bodies governed by private law with a public sector mission including PPPs such as Joint Undertakings (but not executive agencies, regulatory agencies, EIB and EIF).

ECSEL Joint Undertaking

1. Programmes concerned:	Horizon 2020 - the Framework Programme for RTD (2014-2020) - PART II. PRIORITY Industrial leadership, under specific objective - Leadership in enabling and industrial technologies
2. Annual budgetary amount entrusted / payments made	174,49 M€ / 284,22 M€
3. Duration of the delegation:	27 June 2014 - 31 December 2024
4. Justification of recourse to indirect centralised management:	Required by the Council Regulation establishing ECSEL Joint Undertaking to implement a Joint Technology Initiative on Electronic Components and Systems for European Leadership ⁵⁸
5. Justification of the selection of the bodies (identity, selection criteria, possible indication in the legal basis etc):	Set out in the Council Regulation establishing the ECSEL Joint Undertaking as a Union body
6. Summary description of the implementing tasks entrusted.	The ECSEL JU shall carry out the following tasks: (a) support financially research and innovation indirect actions, mainly in the form of grants;

⁵⁸ Council Regulation (EU) No 561/2014 of 6 May 2014, OJ L 169, 7.6.2014, p. 152.

	<p>(b) implement the tasks related to the operations of the Participants Guarantee Fund (PGF) for all the grants awarded by the ECSEL JU, according to the rules set out in the Rules for Participation and the Commission Decision on the financial management of the Participants Guarantee Fund C (2013) 9092, that establishes that the Executive Director of the ECSEL JU as the Authorising Officer (AO) will be responsible:</p> <ul style="list-style-type: none"> - for retaining, from each initial pre-financing, 5% of the maximum grant amount provided for in the grant agreement and for transferring this amount from their specific account to the PGF; - for returning PGF contributions to beneficiaries, for PGF interventions and for receipts. <p>(c) ensure sustainable management of the ECSEL JU;</p> <p>(d) develop close cooperation and ensure coordination with European (in particular Horizon 2020), national and transnational activities, bodies and stakeholders, aiming at fostering a fertile innovation environment in Europe, creating synergies and improving exploitation of research and innovation results in the area of electronic components and systems;</p> <p>(e) define and make any necessary adjustments to the multiannual strategic plan;</p> <p>(f) draw up and implement work plans for executing the multiannual strategic plan;</p> <p>(f) initiate open calls for proposals, evaluate proposals, and award funding to indirect actions through open and transparent procedures within the limits of available funds;</p> <p>(g) publish information on the indirect actions;</p> <p>(h) monitor the implementation of the indirect actions and manage the grant agreements or decisions;</p> <p>(i) monitor overall progress towards achieving the objectives of the ECSEL JU;</p> <p>(j) engage in information, communication, exploitation and dissemination activities by applying mutatis mutandis Article 28 of Regulation (EU) No 1291/2013, including making the detailed information on results from calls for proposals</p>
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	<p>available and accessible in a common Horizon 2020 e-database;</p> <p>(k) liaise with a broad range of stakeholders, including research organisations and universities.</p>
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Active and Assisted Living (AAL) Joint Programme

1. Programmes concerned:	<p>H2020</p> <p>Societal Challenges – Health, demographic change and well-being</p>
2. Annual budgetary amount entrusted /payments made	25 M€ / 6,83 M€
3. Duration of the delegation:	2014-2027
4. Justification of recourse to indirect centralised management:	<p>Required by co-decision⁵⁹ by the European Parliament and the Council concerning the Community participation in the AAL Joint Programme (represented by the AAL Association, an International ASBL under Belgian Law)</p>
5. Justification of the selection of the bodies (identity, selection criteria, possible indication in the legal basis etc):	<p>Set out in co-decision by the European Parliament and the Council on the participation of the Union in the AAL Programme jointly undertaken by several Member States</p>
6. Summary description of the implementing tasks entrusted.	<p>Implementation of the Union participation in the AAL Joint Programme</p>

⁵⁹ Decision 554/2014/EU of 15 May 2014

ANNEX 7: EAMR of the Union Delegations (not applicable)

ANNEX 8: Decentralised agencies

ENISA

Policy concerned	Annual budgetary amount entrusted
To achieve a high and effective level of Network and Information Security within the European Union. Together with the EU-institutions and the Member States, ENISA seeks to develop a culture of Network and Information Security for the benefit of citizens, consumers, business and public sector organisations in the European Union.	10.574.977 €

BEREC Office

Policy concerned	Annual budgetary amount entrusted
Development and better functioning of the internal market for electronic communications networks and services by aiming to ensure a consistent application of the EU regulatory framework for electronic communications.	4.246.000 €

ANNEX 9: Evaluations and other studies finalised or cancelled during the year

No	Title	Reason ¹	Scope ²	Type	Associated DGs	Costs (€)	Comments ⁴	Reference ⁵
		L, LMFF, FR, REFIT, CWP, O						
	I. Evaluations finalised or cancelled in 2017							
	a. Evaluations finalised in 2017							
	Intermediate evaluation of the eHealth Action Plan 2012-2020	O	Voluntary evaluation		SANCO			https://ec.europa.eu/newsroom/document.cfm?doc_id=40845
	Creative Europe mid-term evaluation – MEDIA part	L	Evaluation of the MEDIA programme	E	EAC	600,000	This evaluation contributed to the overall evaluation of the Creative Europe Programme led by DG EAC. Costs refer to overall budget including EAC.	
	Connecting Europe Facility (CEF) Interim evaluation	L	Mid term review - Focus on CEF Telecom	E	DG ENER, DG MOVE	200.000		
	Horizon 2020 Interim Evaluation	L	Input for overall exercise by RTD and own organisational learning	E	DG RTD	315.000	This evaluation contributed to the overall evaluation of H2020 led by DG RTD	For ease of reference, the input studies (including from CNECT) are published here: https://ec.europa.eu/research/evaluations/index_en.cfm?pg=h2020evaluation
	H2020 Interim Evaluation							

	Evaluation of Privacy and Electronic Communications Directive	REFIT/L	Article 18 of the Directive EC 2002/58 requires the Commission to submit to the European Parliament and the Council, not later than three years after the entry into force, a report on the application of the Directive. Where appropriate, the Commission shall submit proposals to amend the Directive, taking account of the results of that report, any changes in the sector and any other proposal it may deem necessary in order to improve the effectiveness of this Directive.	R		150,000 covered by study SMART 2016/0080		SWD: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017SC0005 Support study: https://ec.europa.eu/digital-single-market/en/news/evaluation-and-review-directive-200258-privacy-and-electronic-communication-sector
	Mid-term Evaluation of FET Flagships	L	Mid-term Evaluation of FET Flagships	E	RTD	80,000	This evaluation contributed to the overall evaluation of H2020 led by DG RTD	For ease of reference, the input studies (including from CNECT) are published here: https://ec.europa.eu/research/evaluations/index_en.cfm?pg=h2020evaluation
	AAL Interim Evaluation	L	Interim Evaluation of AAL activities	E	SANCO			https://ec.europa.eu/digital-single-market/en/news/interim-evaluation-aal-programme-funding-ict-projects-assisted-living-remains-important http://ec.europa.eu/newsoom/dae/document.cfm?doc_id=47936
	Interim evaluation of ECSEL Joint Undertaking and Final Evaluation of ARTEMIS and ENIAC Joint Technology Initiatives (JTIs)	L	See reason	E	RTD		This evaluation contributed to the overall interim evaluation of the Joint Undertakings within H2020 led by DG RTD.	For ease of reference, the input studies (including on the ECSEL JU) are published here: https://ec.europa.eu/research/evaluations/index_en.cfm?pg=h2020evaluation

	Evaluation of the European Union Agency for Network and Information Security Agency	REFIT/ L	Article 32 (1) of Regulation EU n. 526/2013 requires the Commission to "commission an evaluation to assess, in particular, the impact, effectiveness and efficiency of the Agency and its working practices. Also addressed: the possible need to modify the mandate of the Agency and the financial implications of any such modification".	E*	SEC GEN, DGIT, HOME, HR, BUDG, EEAS, JUST, JRC	150.000		
	b. Evaluations cancelled in 2017							
	Mid-term Review of Once-Only Principle (see comment)	O					This entry should be removed as there will not be such an evaluation (the once-only principle is Art. 12 of the Single Digital Gateway proposal - initiative led by DG GROW)	
	II. Other studies finalised or cancelled in 2017							
	a. Other studies finalised in 2017							
	Smart systems integration & smart objects: how to enable a fast track to manufacturing in Europe - SMART 2016/0004	O	To (i) identify barriers inhibiting and the challenges facing manufacturing of smart integrated systems in Europe; (ii) analyse existing and emerging innovation models and concepts which address these challenges; and (iii) propose measures to build scalable innovation models/programmes to facilitate manufacturing of smart systems in Europe.			15.000		We are not aware of its publication yet

Study on spectrum assignment in the EU - SMART 2016/0019	O	The objective of this study is to support the Commission's policy development efforts towards building a truly single market for electronic communications through a thorough techno-economic assessment of the processes and conditions under which radio spectrum for wireless broadband is assigned by Member States as well as an assessment of the impact that diverging assignment conditions resulting from the lack of harmonisation in the EU has in the deployment of high-speed broadband networks and in the provision of high quality and competitive electronic communication services across the EU.			165.050		https://publications.europa.eu/en/publication-detail/-/publication/2388b227-a978-11e7-837e-01aa75ed71a1
Women in the digital age - SMART 2016/0025	O	The aim of the study is to identify and analyse gender-segregated data on women and digital economy with a view of drawing informed conclusions about the status quo and identifying high-yield actions to correct identified asymmetries. It will analyse existing data and studies to construct an economic case, look at digital careers and address women's angle in various digital domains, for example media and gaming.		GROW, RTD	60.000		We are not aware of its publication yet
Portability of data cloud computing - SMART 2016/0032	O	The objective of the study is to gather evidence on practices relating to moving between cloud services in Europe, as well as to analyse the benefits, costs economic impact of the portability of data for data-based services and cloud computing (and related interoperability issues).		GROW	130.000		We are not aware of its publication yet
Broadband coverage in Europe - SMART 2016/0043	O	Monitor deployments of broadband access networks, i.e. to measure the household coverage of different fixed and wireless broadband technologies with a special focus on Next Generation Access technologies.			74.855		https://publications.europa.eu/en/publication-detail/-/publication/93c2997b-a265-11e7-a56f-01aa75ed71a1/language-en
Fixed Broadband Prices in Europe - SMART 2016/0044	O	Monitor the price of retail fixed broadband offerings for consumers. The European Commission will use this study to assess whether sector regulation and market developments translate into wider technology choice, more services and better prices for European consumers as well as to compare price levels between Member States and third countries.			126.315		https://publications.europa.eu/en/publication-detail/-/publication/ed62a15c-a265-11e7-a56f-01aa75ed71a1/language-en

	Mobile broadband prices - SMART 2016/0045	O	Develop a better understanding of the developments in mobile broadband markets by collecting price information on mobile broadband services.			50.000		Will be published in 2018
	Pilot to validate the creation of new key indicators for monitoring the digital economy and society policies - SMART 2016/0048 -	O	The objective of the study is support DG Connect to develop a special module to feature in the EU survey on ICT usage in households and by individuals. Support will consist of: programming and carrying out a cognitive online pre-test of the special module in both English and German; analysing the results (including the translation to English of the responses in German language) and producing a synthetic report with key results and recommendations.			15.000		Will not be published
	eGovernment benchmark 2015 – Collection of data on 4 Life Events - SMART 2016/0049	O	Collection of data on 4 Life Events through Mystery Shopping methodologies to assess the performance of EU28 + NO, IS, TK in the benchmarks defined in the eGovernment Benchmark method paper (2012).			429.355		Will not be published
	The sectoral impact of the digitisation of the economy - SMART 2016/0054	O	The study will assess the potential of ICT to reduce prices (through increased productivity) by sector, estimate the effect on demand for goods and services of each sector at these lower prices (based on price elasticities) and deduce potential employment impacts.			50.000		has not been published yet
	Support Study for Connecting Europe Facility (CEF) Mid-Term Evaluation - SMART 2016/0047	O	This study will support the evaluation of the activities of CEF in support of deployment and interoperability of projects of common interest in the field of trans-European networks in the area of telecommunications infrastructure (broadband networks and digital service infrastructures). DG MOVE and DG ENER will also carry out evaluations on their respective sectors, and the results of the sectoral evaluations will be the basis for the overarching evaluation of the Programme.		MOVE, ENER	200.000		

	Study on emerging issues of data ownership, interoperability, (re-)usability and access to data, and liability - SMART 2016/0030	O	The European Free Flow of Data Initiative is an important step taken at EU level to allow businesses, citizens and consumers to take advantage of the free flow of data in the Union. A free flow of data will support connectivity between sectors and industries, lowering costs, stimulating innovation and expanding to new economic models.		JUST	410.875		Has not been published yet
	Feasibility study on cross borders use of eID and authentication services (eIDAS compliant) to support students' mobility and access to academic data and services - SMART 2016/0064	O	The study shall develop a project concept and a roadmap to support student mobility by fostering the cross-border use of eID and authentication services (which are eIDAS compliant) to enable access to academic and other administrative/support services.		EAC	60.000		We are not aware of its publication yet
	Identification and analysis of measures to support the competitiveness and innovation in the cybersecurity industry in Europe - SMART 2016/0078	O	Findings from the AA should be instrumental in the preparation of possible accompanying industrial policy measures to the cybersecurity cPPP and review of the ePrivacy Directive - both DSM initiatives.			250.000		We are not aware of its publication yet
	ePrivacy review impact assessment - SMART 2016/0080	REFIT	The ePrivacy Directive (2002/58/EC) will undergo a REFIT evaluation of its performance. The REFIT evaluation will be based at least on the five mandatory evaluation criteria listed in the new Better Regulation Package: effectiveness, efficiency, relevance, coherence and EU added value. Furthermore, the review of this directive is one of the key actions under the DSM Strategy.			286.800		We are not aware of its publication yet

	Data in Smart Cities, Analysis of the current situation - SMART 2016/0083	O	The broad objective is to gain Insights into the business case (cost/benefit, rational and criteria) made for and by cities, internally and to their immediate stakeholders when adopting a Smart Cities project plan.			60.000		We are not aware of its publication yet
	Media literacy- SMART 2016/0008	O	The European Audiovisual Observatory will prepare a mapping and description of the significant practices and actions in promotion of media literacy in the EU-28 member states, since January 2010, of national or regional coverage.			95.805		Not published
	Support for the analysis of the public consultation of panorama exception - SMART 2016/0086	O	The contractor should analyse and summarise all the responses to the public consultation provided to it by the Commission. The contractor should then draft a short report highlighting the views and positions expressed.			14.835		https://ec.europa.eu/digital-single-market/en/news/report-replies-public-consultation-panorama-exception
	Creative Europe - MEDIA Lump Sum data collection - SMART 2016/0066	O	In line with Commission Decision C/2013/9199 lump sum mechanisms are used under the Development Single, Distribution Selective and Festivals schemes since 2014. The decision contains a revision clause common to all schemes: The assessment of the present methodology was developed on the basis of statistically robust dataset. However, the lack of real cost data in the future urges the Commission to use other similar objective means in order to keep the approved methodology up to date.		EACEA	80.000		We are not aware of its publication yet
	Creative Europe Review of Access to market and promotional activities - SMART 2016/0067	O	The study has three main objectives. Firstly it shall provide a track record exercise, in the absence of previous studies on the Creative Europe MEDIA subprogram support-scheme "Access to market". Secondly, it shall assess the activities currently undertaken under the "Access to market" scheme and the articulation with activities of the Education, Audiovisual and Culture Executive Agency (EACEA) stands services in order to avoid overlaps. Thirdly, the study shall identify operational options for improvements that will serve as a basis for reflection on the future of the support scheme beyond 2017.		EACEA	60.000		We are not aware of its publication yet

	Substantive issues of review in the areas of market entry, management of scarce resources and general consumer issues SMART 2015/0003	O	The study will assess the current regulatory framework with the view to identifying substantive aspects of review and provide a forward looking analysis taking into consideration the impact of technological changes and market developments on regulation.			150.000		https://publications.europa.eu/en/publication-detail/-/publication/808735f3-9379-11e7-b92d-01aa75ed71a1/language-en/format-PDF/source-41173941
	JRC support on radio spectrum policy - SMART 2015/0009	O	<ul style="list-style-type: none"> • Maintenance of the RSI tool and finalisation of the App measuring Wi-Fi and 2G/3G/4G use as well as broadband speeds. This is in accordance with Art. 9 of the RSPP, the Commission shall administer the spectrum inventory; • 5 GHz RLAN extension bands: testing of potential harmful interference to incumbent services; Participation in CEPT groups • Work in support of spectrum sharing concepts (LSA pilot at 2.3 GHz, Geolocation databases); • Testing of harmful interference cases between GSM-R and public mobile networks. Improvement of mitigation measures to prevent interference; • Further tasks in relation to CEPT work on EC Mandates pending discussion with JRC. 			200.000		https://ec.europa.eu/jrc/en/news/project-testing-radio-spectrum-mobile-broadband
	Implications of the emerging technologies Software-Defined Networking and Network Function Virtualization on the future Telecommunications Landscape - SMART 2015/0011 - PC	O	This study is prospecting in the unexplored area of technological and socio-economic impact of Software-Defined Networking (SDN) and Network Function Virtualization (NFV).			300.000		https://publications.europa.eu/en/publication-detail/-/publication/523a5ed2-f809-11e6-8a35-01aa75ed71a1
	Study on methods and data gathering strategy for the Key Performance Indicators of the 5G-PPP - SMART 2015/0013	O	The study is to provide guidance on the computing and validation (sound methodology and consistent data) of the 5G-PPP's KPIs.			54.550		https://publications.europa.eu/en/publication-detail/-/publication/2ce7b58e-4675-11e7-aea8-01aa75ed71a1

	The economic and social impact of software & services on competitiveness & innovation - SMART 2015/0015	O	The objective of the study is to: Analyse the impact of Software market & industry on European economic growth & competitiveness based on the available material along with newly collected data. Assess the impact of software development from companies not considered within the software industry on their product & service innovation and on their competitiveness. Assess current policy actions and provide further recommendations for improving the competitive position of European software industry.			60.000		https://publications.europa.eu/en/publication-detail/-/publication/480eff53-0495-11e7-8a35-01aa75ed71a1
	Clarification of applicable legal framework for full, co- or self-regulatory actions in the cloud computing sector - SMART 2015/0018	O	The objective of the study is to analyse and provide clarification as to the application of existing legal and regulatory frameworks (such as in the field of telecommunications, e-commerce and data protection) to current and future developments in cloud computing as to offer legal and regulatory certainty to the cloud computing sector and cloud computing customers in Europe.			60.000		https://ec.europa.eu/digital-single-market/en/news/clarification-applicable-legal-framework-full-co-or-self-regulatory-actions-cloud-computing-0
	Inventory of European and national experimentation facilities and Roadmap of the future needs for advanced networking experimentation - SMART 2015/0019	O	Building on XiPi, the European database of experimental facilities developed by the INFINITY project, the study will develop and inventory of European, national and regional experimental facilities, test beds and laboratories available for integration into FIRE+ in a heterogeneous but reconfigurable and evolving arrangement. The resulting experimental infrastructure must be extensive, span various technologies and allow for integration on demand in response to experimenters' and users' needs.			499.939		We are not aware of its publication yet
	The role and impact of Business Angels in financing R&I firms – Measures for reinforcing it - SMART 2015/0058	O	This study should: produce a comprehensive picture including trends and consolidated data characterising the evolving role of business angels in funding innovative firms, new profiles of individual investors, the ways to invest and their relation with other investors and investment or matchmaking platforms); benchmark			0		We are not aware of its publication yet

	Copyright / Study on the impact of new online business models on the distribution of copyright protected content and on the sharing of value with the creative industries - SMART 2015/0080	O	The study will fill in data gaps and also provide for some economic analysis, focusing on the following: Description of new business models that rely on the use of protected content in their online services and their evolution over time, analysis of how new technologies have impacted online content distribution and led to new ways of content consumption ;			350.000		We are not aware of its publication yet
	Satellite Broadband in Schools Feasibility Study - SMART 2015/0061	O	The study shall : 1) classify and quantify the schools located in areas not covered by any fixed or mobile broadband terrestrial solutions; identify major barriers to adoption and highlight best practices. 2) look into a different set of legal, technical and operational options in order to identify those that can lead to a successful implementation of a vouchers scheme. For example, the study should asses the minimum /maximum value of the voucher, identify the necessary roles of the satellite operators in this exercise; 3) provide actionable guidelines to be used at European, national, regional and local levels by public authorities wishing to implement the scheme at scale.			59.999		Not published yet
	Support to scaling up of innovations in Active and Healthy Ageing - SMART 2015/0039	O	- To analyse the context for innovation scaling-up within the EIP-AHA (by supporting regions involved or about to embark in development or deployment of innovation). - To analyse other innovation-driven sectors that have successfully tackled scaling-up challenges. - To identify key success factors from such sectors that can be applied to support the scaling-up innovation process in Active and Healthy Ageing.			250.000		Not published yet
	Study on a marketing plan to stimulate the take-up of eID and trust service for the Digital Single Market SMART 2015/0046	O	The objective of the study is to investigate the economic potentials of e-identification and trust services (eID & eTS) in a fully integrated digital single market at EU level (including e-government) and also taking the international dimension inherent to trust services.			200.000		Not published yet

	Review of Significant Market Power (SMP) Guidelines - SMART 2016/0015	O	The main objective of the study would be to gather information about the developments of the relevant jurisprudence and competition law principles regarding the assessment of dominance, with particular reference to application in the electronic communications sector, as well as Article 7 practice on significant market power.		COMP	135.000		https://publications.europa.eu/en/publication-detail/-/publication/84a10e85-937a-11e7-b92d-01aa75ed71a1/language-en/format-PDF/source-38546689
	Monitoring electronic communications and digital services in the Western Balkans and Turkey - SMART 2016/0024	O	The objective is to produce a monitoring tool for assessing progress in the EU enlargement countries on the alignment with the EU framework for electronic communications and information society services.		ELARG, MARKT, COMP, TRADE	135.000		Waiting confirmation on whether it has been completed
	The liability regime and notice-and-action procedures - SMART 2016/0039	O	Fact-finding: mapping of national legislation and case law regarding, in particular, the liability regime and notice and action procedures, as well as voluntary measures put in place under a self- or co-regulatory framework in Member States;			300.000		Waiting confirmation on whether it has been completed
	Overview of the Fintech sector: challenges for the European players and possible policy measures at EU level - SMART 2016/0042	O	Better understand the fintech and its players and to evaluate the impact on the banking sector and financial services industry and its incumbent players. This will include a view on who are the key European players and what is their position in the global context Understand the innovation aspects of fintech in terms of technology and business models and its impact on current regulation		FISMA	300.000		Waiting confirmation on whether it has been completed
	eGovernment benchmark report 2016-2018 - SMART 2016/0050	O	Detailed analysis of the data collected in the eGovernment Benchmark 2016 and production of a background and insights report.			60.000		Will not be published

	ICT Security Certification Cost-Benefit Analysis - SMART 2016/0092	O	The proposed European ICT security certification aims to create a common framework to verify that digital products and services meet certain standards for security and privacy, thus responding to the high demand for trust by citizens, companies and public administrations.			250.000		
	Safety of non-embedded software; Service, data access, and legal issues of advanced robots, autonomous, connected, and AI-based vehicles and systems - SMART 2016/0071	O	This initiative would be in line with the objectives of the DSM strategy as it will remove barriers to a connected digital single market, increase consumers' trust and promote a level playing field for the market. This study shall investigate some of these market barriers and mitigation measures to address them:		JUST	400.000		Waiting confirmation on whether it has been completed
	eID and digital on-boarding: mapping and analysis of existing on-boarding bank practices across EU - SMART 2016/0094	O	The study shall map existing on-boarding practices for new customers across the EU by analysing the regulatory requirements (CDD and KYC) and practices by banks and national authorities within a number of selected MS.		FISMA, JUST	200.000		We are not aware of its publication yet
	Accessibility of websites and mobile applications - compliance, accessibility statements, monitoring methodologies and reporting schemes - SMART 2016/0089	O	The objective of the study is to identify and collect information on the different - processes of producing an accessibility statement, schemes of reporting on the level of accessibility and monitoring methodologies for verification of compliance of public sector bodies' mobile applications with accessibility requirements existing in the Member States and in other countries with such processes.			450.000		Closed by payment of final invoice in January 2018
	Study on ensuring interoperability for enabling Demand Side flexibility - SMART 2016/0082	O	The study will elaborate recommendation on actions to be taken to align standards (mainly data definitions/models) and close potential gaps in standardisation. The study should also evaluate the maturity and completeness of standards to conclude if there is a sound basis for certification.			100.000		Waiting confirmation on whether it has been completed

	Eurobarometer household survey on Citizens attitudes towards the impact of digitalisation/automation on our daily lives - SMART 2017/0004		The high-level objectives of this survey are 1) to determine the level of awareness among European citizens of the role autonomous systems already play in everyday life, 2) to understand better how European citizens feel about these technologies and to what extent they are willing to accept them in various context and 3) to show to internal and external stakeholders that DG CONNECT understands the importance of this topic 4) explore the public attitude to and awareness of the impact of robotics and of the autonomous systems on the future EU industry and labour market		COMM	400.000		http://data.europa.eu/euodp/en/data/dataset/S216087_1_460_ENG
	Eurobarometer household survey on eCommunications in the Digital Single Market - SMART 2017/0010		The objectives are two-fold (i) a consumer survey conducted on a yearly basis since 2005 using the Eurobarometer tools, it aims to measure the diffusion of eCommunications services in households in particular in the areas of fixed and mobile voice telephony and Internet access, Internet-based communications services (e.g. VoIP), Digital TV, bundles, 112 and (ii) to measure the attitude/perception of households and citizens on a number of regulatory-related issues whose exact choice will depend on policy developments, such as transparency of information, control of expenditure, affordability, quality of services, switching, contracts, consumer experience in access to online applications and content, net neutrality, 112.			402.049		We are not aware of its publication yet
	Study on Intra EU-calls - SMART 2017/0012		<p>1. Collection of data on prices and service conditions for the provision of:</p> <ul style="list-style-type: none"> • intra-union fixed and mobile communications; • fixed domestic long-distance communications; • domestic mobile communications <p>2. Collection of data from operators and/or regulators on both traffic and revenues generated by the market for intra-eu calls in order to assess the combined effect of the availability of OTT communications services and the existence of competitive retail tariffs by providers</p>			134.050		We are not aware of its publication yet

	Retail tariffs and roaming conditions of selected Mobile Virtual Network Operators (MVNOs) in selected EU countries - SMART 2017/0088		The objective of the contract is to collect retail tariff plans and assess roaming conditions applied in mobile broadband offers for handset users for a selection of maximum 20 Mobile Virtual Network Operators (MVNOs) in a minimum number of 12 Member States. The contractor should collect retail prices going beyond the methodology and baskets adopted by the OECD , with the exception of the selection of the operators to be monitored, where a deviation of the methodology to focus on MVNOs is needed. The contract focuses only on the "handset use" baskets of the OECD. The objective is to get customised retail data to analyse market data on retail and roaming prices which will allow a proper monitoring of the developments on the market in the proximity of the entry into force of "roam like at home" RLAH regime as foreseen by the Roaming Regulation (EU) No 531/2012 of the European Parliament and of the Council and the related Commission Implementing Regulation (EU) 2016/2286 of 15 December 2016 laying down detailed rules on the application of fair use policy.			15.000		We are not aware of its publication yet
	Flash Eurobarometer on Roaming - Summer 2017 - 2017/0092		The objective of the study is to provide, at the end of the first summer holiday period under the new roaming rules, a first measure of the awareness and perception of the new roaming rules in the public, as well as the resulting expected change in behaviour of travelers as regards the use of their smartphone abroad.		COMM	93.480		http://data.europa.eu/euodp/en/data/dataset/S2178454_ENG

	Usage of millimetre-wave frequency bands for the deployment of the 5G ecosystem in the Union - SMART 2017/0015		<p>Very high frequency bands above 24 GHz (the so-called mm-wave bands) are suitable for short-range wireless communications at very high data rates. Following the 5GAP recommendations, the Commission, in cooperation with the Member States, should adopt a full set of spectrum bands to be harmonised for the deployment of terrestrial 5G services supporting commercial 5G networks in the EU.</p> <p>The study will focus on the particular benefits of mm-wave bands – with initial focus on the "pioneer" 26 GHz band – to build a vibrant wireless ecosystem, including hybrid systems, and explore economic outcomes in the delivery of innovative 5G services to citizens. It will assess the prospects of incumbent services (such as satellite or fixed wireless) and their co-existence with new 5G terrestrial services in terms of broad spectrum sharing scenarios and estimate the resulting aggregate socio-economic benefits for all sectors using mm-wave bands.</p>			150.000		Waiting confirmation on whether it has been completed
	Evaluation and review of Regulations 733/2002 and 874/2004 on the .eu Top Level Domain - SMART 2017/0035		The results of the study will be used as input to revise the existing body of legislation and policy on .eu (the results will feed into the Impact Assessment and legislative proposal).			300.000		https://ec.europa.eu/digital-single-market/en/news/summary-report-public-consultation-evaluation-and-revision-eu-top-level-domain-regulations

	<p>Contractual relationships between online platforms and their professional users -SMART 2017/0041</p>	<p>The study should comprehensively analyse the contractual terms and conditions currently governing the relationship between online platforms and their professional users. This analysis should aim to gain an understanding of whether, and if so how, online platforms' contractual terms and conditions may negatively affect existing and potential professional users. It should also allow to identify good and bad practices, and aim to develop an evidence-based notion of what constitutes 'fairness' or 'good commercial practice' in relation to these terms and conditions. In order to specifically develop this notion of 'fairness', the study should comprehensively assess existing legislative and non-legislative initiatives within as well as outside of the EU. Finally, the study should explore what role online platforms' contractual terms and conditions can play in any possible EU policy intervention that may ultimately be retained to address wider potentially unfair trading practices in online platforms' business-to-business relationships. As regards the types of online platforms...</p> <p>the study will have a broad scope, covering both large and small players operating, amongst other, e-commerce market places (including B2B e-commerce, as well as travel, real estate, insurance and other sectors), mobile/digital application stores, search engines (including metasearch and comparison websites/applications), digital advertising platforms, social media, digital content platforms (including e-books, audio-visual content, music and software), online payment intermediaries, online collaborative economy platforms, online 'IoT platforms' (including smart home appliances as well as other types of connected hardware), and online 'industrial platforms' (including industrial asset management platforms, smart cities as well as any other emerging areas where online intermediation is being introduced).</p>		<p>GROW, JUST, COMP</p>	<p>143.000</p>		<p>Waiting confirmation on whether it has been completed</p>
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	eGovernment benchmark 2017 – Workshop with National Experts - SMART 2017/0048		Workshop with representatives of MS in the eGovernment Benchmarking Working Group to present the results of the 2016 eGovernment benchmark and of the pilot on the once only principle, and to reflect on lessons learned and on preparing the 2017 exercise.			45.000		No deliverables to be published
	Administrative Arrangement with JRC supporting implementation of Cyber Communication Actions (COM(2016) 410) - SMART 2017/0070		JRC's support will aim at: a) gathering data on current market of IT security certification; b) mapping various IT security schemes across sectors, c) identifying most appropriate policy options and elaborating recommendations for setting out a European certification framework; d) identifying relevant information on existing cyber vulnerabilities at the EU level. The long-term goal of this AA is to create the conditions for a fruitful effective collaboration between the DG JRC and DG CNECT in the area of cybersecurity.			250.000		Waiting confirmation on whether it has been completed
	ANALYSIS OF THE PUBLIC CONSULTATION ON "Transformation of Health and Care in the Digital Single Market" - SMART 2017/0093		The objective of this assignment is to analyse and summarise the responses to the online questionnaire within the open public consultation "Transformation of Health and Care in the Digital Single market". The purpose of the consultation is to define the need and scope of policy measures that will promote digital innovation in improving people's health, and address systemic challenges to healthcare systems. This must be aligned with legislation on the protection of personal data, patient rights and electronic identification.		SANTE	100.000		Closed by payment of final invoice in December 2017
	b. Other studies cancelled in 2017							
	Analysis of the Supply and Demand of Cybersecurity Products and Services in Europe - SMART 2015/0042		The study will analyse the current structure of the digital security market in Europe, identifying the market trends, sizing and forecasts, by security solution type, by European country, by submarket. On the supply side, it will analyse the nature and causes of the current market fragmentation and look at regional/sectorial clustering of this industry. It will explore in details the emergence of innovative SMEs in the sector.					
	Vacancies for ICT Online Repository (VICTORY) - SW development - SMART 2015/0081 -		This combination of studies (0045 and 0081) will build a new data tool, a weekly-updated inventory of vacancies for ICT practitioners across the EU. It will provide data at NUTS2 level and subdivide ICT practitioners into at least 20 categories.					

	Eurobarometer household survey on e-communications and the DSM - SMART 2016/0013		A consumer survey conducted on a yearly basis since 2005 using the Eurobarometer tools, it aims to measure the diffusion of e-communications by EU households and individuals, and to measure consumers' perception on a number of regulatory specific issues in support of policy development					
	RSPP Support - Support to Radio Spectrum Policy programme - Renewal of the Administrative Arrangement with JRC for the period 2016-2017 - SMART 2016/0017		he renewed AA will provide support to the implementation of the Radio Spectrum Policy Programme (RSPP). Relevance to B4 unit priorities: i) Spectrum inventory, ii) Spectrum sharing opportunities, iii) Efficient use of spectrum.					
	Impact Assessment Support Study for CEF 2 - Telecommunications sector - SMART 2017/0021		The results will be used to feed the legislative proposals that DG CONNECT will put forward/contribute to in the next MFF.					
	Impact Assessment Support Study for Financing of Digital Projects initiative - SMART 2017/0022		The study will assess the needs, options and support for an ad hoc legal instrument ensuring efficient co-financing and management of ambitious "Digital Flagships"					

¹ L - legal act, LMFF - legal base of MFF instrument, FR - financial regulation, REFIT - listen on REFIT programme, REFIT/L - both legal act requirement+listed on REFIT, CWP - 'evaluate first', O - other (please specify in Comments)

² Specify what programme/regulatory measure/initiative/policy area etc. has been covered

³FC – fitness check, E – expenditure programme/measure, R – regulatory measure (not recognised as a FC), C – communication activity, I – internal Commission activity, O – other – please specify in the Comments

⁴Allows to provide any comments related to the item (in particular changes compared to the planning). When relevant, the reasons for cancelling evaluations/ other studies also needs to be explained in this column.

⁵For evaluations the references should be 1) number of its Evaluation Staff Working Document and number of the SWD's executive summary; 2) link to the supportive study of the SWD in EU bookshop. For other studies the references should be the link to EU bookshop or other reference where the 'other study' is published via different point.

ANNEX 10: DG CONNECT activities covered by cross sub-delegations in 2017

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.03	09.0301	CNECT/AGRI	10.6.2016	illimited	Promoting interoperability, sustainable deployment, operation and upgrading of trans-European digital service infrastructures, as well as coordination at European level	appropriation authorised	05.03.2018	21.2.2018 mail to AGRI sent for explanations	(2018)971498 & (2018)1202913	B5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.01	09.010401	CNECT/DIGIT	13.4.2016	illimited	Support expenditure for Connecting Europe Facility (CEF) — information and communication technologies (ICT)	appropriation authorised	16.2.2018	19.2.2018	(2018)908897	H1/H5
09.03	09.0304	CNECT/DIGIT	13.4.2016	illimited	WiFi4EU — Support the deployment of free local wifi	appropriation authorised				B5/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.01	09.010503	CNECT/EMPL	24.11.2015	illimited	Other management expenditure for Research and Innovation programmes — Horizon 2020	appropriation authorised				R3
09.03	09.0303	CNECT/EMPL	24.11.2015	illimited	Promoting interoperability, sustainable deployment, operation and upgrading of trans-European digital service infrastructures, as well as coordination at European level	appropriation authorised	12.2.2018	13.2.2018	(2018)809656	D1

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.03	09.0303	CNECT/ENER	4.7.2016	illimited	Promoting interoperability, sustainable deployment, operation and upgrading of trans-European digital service infrastructures, as well as coordination at European level	appropriation authorised	23.1.2018	24.1.2018	(2018)401658	F4/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.04	09.040201	CNECT/ESTAT	12.12.2013	illimited	Leadership in information and communications technology	appropriation authorised	5.2.2018	6.2.2018	(2018)675575	F4

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.02	09.0201	CNECT/GROW	28.7.2016	illimited	Definition and implementation of the Union's policy in the field of electronic communications	appropriation authorised	12.1.2018	15.1.2018	(2018)202297	F2/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.03	09.0303	CNECT/JUST	6.8.2015	illimited	Leadership in information and communications technology	100.000	21.2.2018	21.2.2018	(2018)988547	D1/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.04	09.045100	CNECT/OP	13.12.2013	illimited	Completion of previous research framework programme — FP7 (2007 to 2013)	appropriation authorised	25.1.2018	25.1.2018	(2018)438364	F4/D3/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.01	09.010503	CNECT/RTD	14.4.2015	illimited	Other management expenditure for Research and Innovation programmes — Horizon 2020	appropriation authorised	1.2.2018	5.2.2018	(2018)625343	D1/D4
09.04	09.040302	CNECT/RTD	14.4.2015	illimited	Fostering inclusive, innovative and reflective European societies	appropriation authorised				

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
09.02	09.0205	CNECT/SANTE	5.7.2017	illimited	Measures concerning digital content, and audiovisual and other media industries	appropriation authorised	25.1.2018	25.1.2018	(2018)442312	I1/H5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
26.01	26.030101	DIGIT/CNECT	25.4.2016	unlimited	Interoperability solutions for European public administrations, (ISA 2)	appropriation authorised	13.3.2018	15.3.2018	(20018)1373401	R3/E1/R2

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
32.04	32.040301	ENER/CNECT	3.6.2014	unlimited	Social challenge: Making the transition to a reliable, sustainable and competitive energy system	appropriation authorised	15.2.2018	19.2.2018	(2018)898442	H5/H2

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
12.02	12.027706	FISMA/CNECT	30.6.2017	unlimited	Pilot project - Horizontal Task Force on Distributed Ledger Technology (DLT)	appropriation authorised	16.3.2018	19.3.2018	(2018)1460538	F3/A5

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
19.06	19.060100	FPI/CNECT	2.3.2016	unlimited	Information outreach on the Union's external relations	appropriation authorised	6.2.2018	25.1.2018	(2018)694101	I3

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
33.02	33.0201	JUST/CNECT	12.12.2016	unlimited	Ensuring the protection of rights and empowering citizens	appropriation authorised	16.2.2018	19.2.2018	(2018)921185	G1

Chapter	Article	Fund Mgt Center	Date of signature	Period	Heading	Amount	Date DG's answer	Verified par R2	Ares	Responsible
08.02	08.020202	RTD/CNECT	27.2.2015	unlimited	Enhancing access to risk finance for investing in research and innovation	appropriation authorised	26.3.2018	26.3.2018	(2018)1640695	F2/A5
08.02	08.020304	RTD/CNECT	27.2.2015	unlimited	Achieving a European transport system that is resource-efficient, environmentally friendly, safe and seamless	appropriation authorised	26.3.2018	26.3.2018		H2

ANNEX 11: Specific annexes related to "Assessment of the effectiveness of the internal control systems" (not applicable)

ANNEX 12:

Performance tables⁶⁰

General objective A Connected Digital Single Market				
Impact indicator 1: Aggregate score in Digital Economy and Society Index (DESI) EU-28				
Explanation: DESI is a composite index that summarises relevant indicators on Europe's digital performance and tracks the evolution of EU Member States in digital competitiveness. The closer the value is to 1, the better. The DESI index is calculated as the weighted average of the five main DESI dimensions: 1 Connectivity (25%), 2 Human Capital (25%), 3 Use of Internet (15%), 4 Integration of Digital Technology (20%) and 5 Digital Public Services (15%). The DESI index is updated once a year. Source of the data: DESI ⁶¹				
Baseline (DESI 2015)	Latest known value (DESI-2017)		Target (2020)	
0.46	0.52		Increase	
Specific objective 1.1: Digital goods and services are available to consumers and businesses across Europe				
			Related to spending programme Creative Europe MEDIA	
Result indicator 1: Increased portability of online content service.				
Source of data: Impact assessment accompanying the proposal of Regulation on portability. Measurement every 2 years, as part of the monitoring of the impact of the legislation, comprehensive assessment 5 years after the start of application; data sources will be existing ones (e.g. European Audio-visual Observatory), data provided by online content service providers or right holders and possible specific studies or Eurobarometer				
Baseline 2015	Target 2017		Latest known results 2017	
Substantial number of online content services remain locked in national territories.	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 2017)		The Portability Regulation was adopted on 14.6.2017 and will be applicable as of 1.4.2018.	
Result indicator 2: New legislation to tackle unjustified geo-blocking is in place.				
Source of data: Roadmap for completing the DSM				
Baseline 2015	Interim Milestone		Target 2017	Latest known results 2017
	2016	2017		
DSM Strategy adopted by the Commission.	Legislative proposal to tackle unjustified geo-blocking.	Adoption of the legislation by EP and Council.	Entry into force of the legislation and transposition in national law in all Member States.	Co-legislators agreed on the Geoblocking Regulation on 20.11.2017; entry into force by the end of 2018.
Planned evaluations: Assuming that the new legislation will enter into force in 2018, the first assessment has to be made in 2021 and then every three years. The Commission has to present an evaluation report and propose an update if changes in the legislative or the technological environment warrant it.				

⁶⁰ The performance indicators reported in this annexe reflect the set of indicators of the Strategic Plan 2016-2020 (https://ec.europa.eu/info/publications/strategic-plan-2016-2020-communications-networks-content-and-technology_en). More indicators and detailed information are provided in Programme Statements H2020, CEF and Creative Europe which accompany the Draft Budget for the Financial Year 2019.

⁶¹ <https://ec.europa.eu/digital-single-market/digital-economy-and-society-index-desi>

Main outputs in 2017:			
Policy-related outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Legislative proposals for a revision of Regulation (EC) 733/2002 establishing the ".eu" TLD and Regulation (EC) 874/2004 laying down public policy rules concerning the implementation and functions of the ".eu" TLD.	Adoption by the Commission.	Q4 2017 (2017/CNECT/006)	Adoption of the proposals was postponed to April 2018.
Regulation to prevent unjustified geo-blocking on the DSM.	Adoption by the co-legislators.	Q2 2017	Regulation agreed by co-legislator on 20.11.2017.
Directive on copyright in the DSM.	Political agreement of co-legislators.	Q4 2017	Inter-institutional negotiations ongoing with a view to reaching political agreement in Q4 2018.
Regulation applicable to certain online transmissions of broadcasting organisations and retransmissions of television and radio programmes.	Political agreement of co-legislators.	Q4 2017	Inter-institutional negotiations ongoing with a view to reaching political agreement in Q2 2018.
Directive and Regulation for the implementation of the Marrakesh Treaty.	Adoption by the co-legislators.	Q1/Q2 2017	Adopted by co-legislator on 13.9.2017.
Structured dialogue with stakeholders on licensing issues.	4 quarterly meetings.	Q4 2017	A structured dialogue on the distribution sector was held with two meetings with stakeholders in 2017. Bi-annual frequency was assessed sufficient by the DG and stakeholders.
Dialogue with European animation studios aiming to agree a joint action plan to support the sector.	Adoption of the joint action plan.	Q3 2017	An industry action plan on animation was launched in September 2017.
Interoperable system for identifying audiovisual works.	Agreement between ISAN and the Entertainment Identifier Registry Association (EIDR).	Q3 2017	Agreement reached in Q2 2017.

Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Creative Europe MEDIA Work programme 2018 launching accompanying measures set out in the 2015 Copyright Communication.	Adoption by the Commission.	Q2 2017	Adopted in September 2017.
Strategic stakeholder dialogue through the European Film Forum and national film funds on accompanying measures.	Holding 10 events in film festivals in 2017.	Q4 2017	The full schedule of events was held.
Development of an online repository tool of subtitling through a preparatory action.	Showcase results.	Q4 2017	The Cinando Subtitles platform was launched in November 2017.

Specific objective 1.2: Electronic communications networks and services, digital content and innovative services benefit from favourable conditions and compete on a level playing field. Related to spending programme(s) ...				
Result indicator 1: Future-friendly regulatory framework for electronic communications is in place in Member States.				
Source of data: Roadmap for completing the DSM.				
Baseline 2015	Interim Milestone 2016		Target 2020	Latest known results 2017
Public Consultation	Adoption of the legislative proposal by the Commission	Adoption of legislation by EP and Council	Transposition in national law in all Member States by 2020	Interinstitutional negotiations on-going with a view to reaching political agreement by June 2018.
Result indicator 2: Number of connected devices in the EU, impacting the IoT market size.				
Source of data: Global System for Mobile Association (GSMA), Gartner, industry analysis (International Data Corporation) ⁶²				
Baseline 2016	Interim Milestone 2018	Target 2020 (Target is based on industrial forecasts)		Latest known results 2017
500 million phones and 100 million machine to machine devices	2 billion connected devices	Multiplication by 10 in 2020, about 5 billion connected devices in Europe, 5 devices average per citizen.		1,3 billion connected devices, according to Gartner forecasts, 1/6th of the worldwide 8 billion.
Result indicator 3: European agreement of at least 1 GHz identified above 6 GHz for 5G IMT 2020 allocation in 2019.				
Source of data: International Telecommunication Union, World Radio communication Conference decisions, work programme of the European Conference of Postal and Telecommunications Administrations (CEPT), EU research.				
Baseline 2015	Target 2019: Based on running research and use case as e.g. developed in project Mobile Enablers for 2020 Information Society (METIS) flagship 5G initiative, in the context of WRC 2019 preparatory actions			
0 MHz available for 5G above 6 GHz.	1 GHz minimum			
Latest known results (2017) The Radio Spectrum Policy Group Complementary Opinion on 5G spectrum prepared in cooperation with DG CONNECT, recommends to Member States to release, by 2020, a sufficiently large portion of the 26 GHz band, e.g. 1 GHz, available for 5G in response to market demand. Work progress at CEPT on the Commission 5G mandate underpins fulfilling the target on time.				

⁶² <https://www.gsmainelligence.com/research/?file=357f1541c77358e61787fac35259dc92&download>

Result indicator 4: Policy instruments available for the public and private sector actors to invest in Open Service Platforms (OSP). Market actors consolidated by the use of FIWARE and supported by a number of significant industrial companies to reach an appropriate penetration in several markets.

Source of data: Open Service Platforms study, FIWARE Core Industry Group. Continuous assessment will be carried out by projects selected under the WP 2016 in collaboration with the FIWARE foundation (in-house assessment based on the data sources listed above).

Baseline 2015	Interim Milestone		Target 2020	Latest known results 2017
	2017	2019		
<ul style="list-style-type: none"> - No Member States programmes on Open Service Platforms (OSP) - 4 large Telco companies, - 5000 people in the FIWARE ecosystem. 	<ul style="list-style-type: none"> - At least one Member State programme on OSP - 6 large companies - 5000 people in the FIWARE ecosystem 	<ul style="list-style-type: none"> - Increase in Member States programmes on OSP - 6 large companies - Increase beyond 5000 people in the FIWARE ecosystem 	Streamlining European OSP industry policy across all Member States, including innovation funding actions	2017 interim milestone almost reached: <ul style="list-style-type: none"> - In Germany the 'Smart Services World' programme includes the OSP concept. - 5 large companies are Platinum members in Fiware Foundation. Discussions are under way with more companies. - 2000+ FIWARE Lab users and 10000+ followers on Twitter.

Result indicator 5: Entry into force of a new legal framework for Audio-visual Media Services Directive (AVMSD)

Source of data: Roadmap for completing the DSM.

Baseline 2015	Interim Milestone		Target 2019	Latest known results 2017
	2016	2017		
Public consultation	Adoption of the legislative proposal by EC	Adoption of legislative proposal by EP & Council	All Member States have transposed directive	Inter-institutional negotiations ongoing with a view to reaching political agreement in 2018.

Result indicator 6: Transposition of legislative acquis in Network Information Security (NIS) and e-Privacy.

Source of data:

Baseline 2015	Interim Milestone		Target 2022	Latest known results 2017
	2016	2018		
Political agreement on NIS Directive	Adoption of the NIS Directive by EP and Council	1) All Member States have transposed NIS Directive 2) Adoption of the revised ePrivacy Directive	2) All Member States have transposed revised ePrivacy Directive (n/a)	1) Kick-off of EU level cooperation through the establishment of the NIS Cooperation Group and of the CSIRTs Network.

				2) The Commission adopted a proposal for a Regulation on 10.01.2017 Inter-institutional negotiations ongoing with a view to reaching political agreement in early 2018.
<p>Result indicator 7: Notified Electronic identifications (eIDs) by Member States to the Commission: Number of Member States that notify an eID scheme to the Commission under the eIDAS Regulation.</p> <p>Source of data: Electronic identification and trust services (eIDAS) Regulation</p>				
Baseline Q4 2015	Interim Milestone		Target 2018	Latest known results 2017
	Q4 2016	Q4 2017		
0	Planned: 7 Actual situation: 1	Planned: 13 Actual situation: 2	All Member States must recognise the notified schemes under the eIDAS Regulation)	Only 2 Member States have notified an eID scheme to the Commission. Other Member States are in process to notify. They have till September 2018 to notify and have committed to respect this target during t2017 Tallinn Summit.
Main outputs in 2017:				
Policy-related outputs				
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)	
Legislative proposal on the review of the ePrivacy Directive (REFIT).	Adoption by the Commission.	Q1 2017 (2016/CNECT/007), (2016/CNECT/013)	Commission adopted a proposal for a Regulation on privacy and electronic communications on 10.01.2017. Inter-institutional negotiations ongoing with a view to reaching political agreement in early 2018.	
Review of the Commission Recommendation on fixed and mobile termination rates in the EU.	Adoption by the Commission.	Q4 2017 (2017/CNECT/001)	The adoption of the Decision on termination rates has been postponed in view of parallel negotiations on the European Electronic Communications Code.	

Legislative proposals for a European Electronic Communications Code and a new BEREC Regulation.	Political agreement of the co-legislator.	Q4 2017	Interinstitutional negotiations are on-going with a view to reaching political agreement by June 2018.
Review of the functioning of the wholesale roaming market.	Political agreement of the co-legislators.	Q1 2017	Adoption by the co-legislators in Q2 2017.
Review of the Audiovisual Media Services Directive.	Adoption by the co-legislators.	Q3/Q4 2017	Inter-institutional negotiations ongoing with a view to reaching political agreement in Q2 2018.

Specific objective 1.3: The digital economy can develop to its full potential underpinned by initiatives enabling full growth of digital and data technologies. Related to spending programme: H2020

Result indicator 1: Actions to digitise European industry
Source of data:

Baseline 2015	Target 2020
European industry not prepared for the challenges posed by digitalisation	Roll-out of actions and establishing digital innovation hubs in every region

Latest known results (2017):
8 new networks of hubs selected in 2017 with a volume of 65 M€. In addition, a mentoring and widening scheme was organised to familiarise under-represented countries with the Digital Innovation Hub concept, resulting in 29 hubs being mentored and 31 additional ones selected for training to become a proper digital innovation hub.

Result indicator 2: Number of TOP10 supercomputers installed in the EU by 2020
Source of data: <http://www.top500.org>

Baseline 2015	Interim 2018	Milestone	Target 2020	Latest known results 2017
1	2 in Top 10		3 in Top 10	0 in Top 10; The objectives of the EuroHPC Joint Undertaking, proposed by the Commission in January 2018 and expected to have an effective start date on 1.1. 2019, foresee the acquisition in 2020 of at least two supercomputers to rank among the top 10 in the world.

Planned evaluations: Horizon 2020 ex-post evaluation of the Research Infrastructure part in 2022.

Result indicator 3: Removal of legislative and regulatory obstacles at Member States' level to the free flow of data.		
Source of data: Two studies on "Facilitating cross-border data flow in the DSM"		
Baseline 2016	Interim Milestone 2016 2018	
As identified by the two studies on "Facilitating cross-border data flow in the DSM" – data available in Q4 2016.	Adoption of the legislative proposal by EC.	Adoption of legislative proposal by EP and Council
Target 2020 Removal of legislative and regulatory obstacles at Member States' level to the free flow of data by 2020		
Latest known results (2017) Proposal for a Regulation on a Framework for the Free Flow of Non-personal Data in the European Union adopted on 13.9.2017. In October the European Council urged completion of negotiations by June 2018. The Council agreed on a negotiation mandate on 20 December 2017.		
Result indicator 4: Interoperable IoT solutions developed for automotive market. Source of data: European Road Transport Research Advisory Council, 5G PPP, industry		
Baseline 2015	Interim Milestone 2016	Target 2020: Target conforms to automotive industry plans
6 early pilots for connected and autonomous cars.	Large-scale pilots showcasing Society of Automotive Engineers autonomy level 4 or higher in at least 10 Member States ...	Availability of infrastructure for connected cars; e.g. Long-Term Evolution (LTE)-V 5G upgradable.
Latest known results (2017) One large-scale pilot on Connected and Automated Driving has been launched on 01.01.2017 under the IoT Focus Area. A dedicated 5G CAR (Fifth Generation Communication Automotive Research and innovation) project has been launched to test the applicability of 5G to connected cars.		

<p>Result indicator 5: New Data framework for connected automated driving and energy efficient smart homes. Source of data: Support action from 2015 Transport call or 2014 Smart cities call.</p>		
<p>Baseline 2015</p>	<p>Target 2020</p>	
<p>None</p>	<p>The framework is used by 10 major companies in at least 5 different countries.</p>	
<p>Latest known results (2017) On connected and automated driving, the Coordination and Support Action "SCOUT" is developing a common roadmap of the automotive and the telecommunication and digital sectors for the development and accelerated implementation of connected and automated driving in Europe. This roadmap will be available in June 2018. On smart homes (release of the relevant ETSI/OneM2M standard – SAREF - in 2015), ETSI released the new technical specifications for a modified core Smart Appliances REFERENCE (SAREF) ontology and new SAREF modules on energy, environment, buildings, etc. It also launched work on 3 new extensions (Smart Cities, Smart AgriFood, Smart Industry & Manufacturing) and 4 more are planned to be launched in 2018. A study for alignment of standards for the full demand-response chain and SAREF extension was launched in January 2017 and demonstrated fully functional standards-based end-2-end demand-side flexibility system with commercially available products at the European Utility Week, the ETSI IoT Week and an impressive event at the EC premises. The range of commercial products using SAREF is growing at an increasing rate. SAREF won also the best vocabulary award at the SEMANTICS 2016 conference.</p>		
<p>Result indicator 6: Citizens and businesses can access eGovernment services in any country of the EU, regardless of their country of origin. Source of data: CEF Digital.</p>		
<p>Baseline 2014/2015</p>	<p>Interim Milestone 2016</p>	<p>Target 2020: as listed in CEF Digital and defined in annual Work Programmes</p>
<p>CEF Work Programmes 1 and 2 adopted.</p>	<p>Launch of 4 sectoral Digital Service Infrastructures (DSIs) reusing building block DSIs (eProcurement, Business Registers Interconnection Systems, Electronic Exchange of Social Security Information, eJustice).</p>	<p>All CEF building block DSIs (eID, eDelivery, eSignature, eInvoicing, Automated Translation) are effectively reused by all Member States and integrated in all CEF-funded domain-specific DSIs.</p>
<p>Latest known results (2017) While all sectoral DSI in the annex of the CEF telecom guideline have committed to use more than one building block and are presently incorporating them, additional EU policy domains are now also committing to reuse the building blocks. In the 2018 WP, an additional 2 building blocks have been added to the DSI eco-system.</p>		

Main outputs in 2017:			
Policy-related outputs			
Description	Indicator (e.g. adoption by the Commission; completion)	Target date	Latest known results (situation on 31.12.2017)
DSM mid-term review.	Adoption by the Commission.	Q2 2017 (2017/CNEC T+/003)	DSM mid-term review adopted in May 2017.
Evaluation and review of the ENISA (European Union Agency for Network and Information Security) Regulation (REFIT).	Adoption by the Commission.	Q3 2017 (2017/CNEC T/002) Q4 2017 (2017/CNEC T/005)	Evaluation of ENISA concluded in July 2017. New legislative proposal adopted in September 2017.
Setting up and implementing the governance framework for the Digitising European Industry (DEI) strategy.	- Launch of the European Platforms of national initiatives on digitising industry. - Reaching out to 500+ stakeholders in a European Stakeholder Forum on DEI.	Q1 2017	- The European Platform of National initiatives has been successfully launched in March 2017. Currently, 15 Member States have established national initiatives and joined the platform. - A first DEI European Stakeholder Forum was organised in February 2017 in Germany, reaching more than 500 stakeholders.
Communication on emerging issues of access to and ownership of data, liability, and portability and on the free flow of data within the EU.	Adoption by the Commission.	Q1 2017 (2016/CNEC T+/001)	The Communication was adopted on 10.1.2017.
Connected Automated Driving: framework agreements with Member States on a) cross-border regulatory issues concerning field tests (focus on digital aspects) and b) data issues such as ownership, access, storage.	Agreement reached between Member States concerned by a testing corridor.	Q4 2017	Letter of Intent on cross-border testing and demonstration of CCAM signed by the Member States except UK, Norway and Switzerland) 23 March 2017. Several Member States has already initiated discussions on specific cross-border testing.

Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Integration and consolidation of the largest eInfrastructure services establishing the backbone of the European Science Cloud.	Launch of at least 1 integrated eInfrastructure project.	Q4 2017	The 40 M€ project EOSC-HUB integrating three major eInfrastructures EGI, EUDAT and INDIGO-DataCloud started on 1.1.2018 and is implemented as a collaborative grant with the eInfrastructure on access and preservation of scientific information OpenAIRE-advance.
Implementation of the High-Performance Computing (HPC) strategy: - development of a pan-European HPC infrastructure through the acquisition of next generation HPC technology for PRACE. - setting up the EuroHPC, a multi-government organisation responsible for the acquisition and operation of pre-exascale and exascale HPC systems. - supporting the set-up of an IPCEI on HPC and Big Data Applications addressing the build-up of a commercial activity around HPC and big data. (Unit C2)	- Signature of grant. - Signature of a joint statement by at least 4 Member States to set up EuroHPC. - Support IPCEI players to pre-notify DG COMP on the IPCEI by Q2 2017.	Q1 2017	- The Horizon 2020 Grant for public procurement of innovation, PPI4HPC, was signed by the Commission with an effective starting date of 1.4.2017. - Until end 2017 The EuroHPC Declaration was signed by 12 Member States and one Associated Country to Horizon 2020. - The Commission proposal for a Council Regulation establishing the EuroHPC Joint Undertaking was adopted on 11.1.2018. - The Member States did not further pursue the set-up of an IPCEI. This discussion was superseded by the proposal to establish the Joint Undertaking on HPC.
Cross-border pre-deployment project from industry on Connected and Automated Driving covering regulatory and deployment aspects and based on 5G evolution.	Project launched.	Q2 2017	5G CAR projects (Fifth Generation Communication Automotive Research and innovation) launched under 5G PPP phase 2 in June 2017. H2020 WP18-20 ICT adopted in September 2017 foreseeing 50 M€ for 5G for CAD.
Better Digital Skills for all Europeans, accompanied by H2020 support. (Unit F4)	Launch of the New Digital Skills and Jobs Coalition and a pilot voucher scheme for digital internships.	Q3 2017	The Coalition, initiated in December 2016, now counts more than 300 members, 90 pledges 18 national skills coalitions. The Digital Opportunity initiative was launched in December 2017.

<p>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.</p>		<p>Related to spending programmes: Connecting Europe Facility (CEF), H2020</p>	
<p>Result indicator1: Ensure favourable conditions towards full deployment of 5G networks, notably by a 5G PPP investment reaching 700 M€ matched by 5 times private investment.</p>			
<p>Source of data: Industry roadmaps</p>			
Baseline 2015	Interim Milestone		Target 2022: This is in line with industry roadmaps
	2017	2020	
<p>Availability of 4G networks based on "Long term evolution (LTE)" standards in all Member States 129 M€ committed as per phase 1 of 5G PPP investment</p>	<p>283 M€ committed after implementation of phase 2.</p>	<p>First 5G service introduction in at least 1 Member State</p>	<p>Availability of 5G full solutions including operations of bands above 6GHz in at least 5 Member States. 520 M€ committed for Phase 3 implementation.</p>
<p>Latest known results (2017): First 5G standard adopted in December 2017. Trials planned for more than 5 Member States in 2018. The 293 M€ of 5G PPP phase 1+2 will be complemented by 244 M€ under phase 3, which was approved by the Member States in September 2017.</p>			

Result indicator 2: Deploying of network infrastructure enabling the Gigabit society to socio-economic drivers			
Source of data: DESI Index / Digital Scoreboard https://digital-agenda-data.eu/			
Baseline June 2015	Interim Milestone 2020	Target 2022	Latest known results 2017
- 71 % coverage at 30 Mbps (Digital Agenda Europe (DAE) target) - 10% Take-up at 100 Mbps (DAE target)	a) 100% coverage at 30 Mbps (EU citizens, DAE target) b) 50% take-up at 100 Mbps (households, DAE target)	c) Coverage of all main socio-economic drivers (such as schools, transport hubs and main providers of public services as well as digitally intensive enterprises) with Gigabit connectivity allowing 1 Gbps download, 100 Mbps upload and very low latency. The targets for coverage were determined in September 2016 in the context of the Gigabit Communication adopted as part of the Telecom review.	Latest available results from July 2017: a) Next Generation Internet Access (NGA) 80% coverage at 30 Mbps (EU citizens, DAE target) b) 15.4% take-up at 100 Mbps (households, DAE target) c) Data not yet available

Main outputs in 2017:			
Policy-related outputs			
Description	Indicator (e.g. adoption by the Commission; completion)	Target date	Latest known results 2017
CEF Broadband fund.	Raising at least 100 M€ of funds from market investors in addition to EU/EIB funds. Finance first 3 projects.	End 2017	Fundraising campaign by the Fund managers is ongoing with the aim of having a fully functional Fund by the end of Q1 2018.
Decision on the use of the 470-790 MHz frequency band in the EU (UHF Decision).	Adoption by the co-legislators.	Q1 2017	Decision adopted on 17.5.2017.
Implementation of the 5G Action Plan a) advanced pre-commercial trials b) 5G Connectivity Group composed of Member States and EC.	a) Presentation at the Mobile World Congress of the EU industry roadmap for pre-commercial 5G trials. b) Start of the Connectivity/5G Group.	a) Q1 2017 b) Q2 2017	a) Industry trial roadmap adopted in December 2017. b) Launch of the COCOM 5G WG in September 2017.

CEF Telecom Work Programme 2017 financing projects of common interest in the form of Digital Service Infrastructures.	Adoption of the CEF Telecom Work Programme.	Q1 2017	Work Programme adopted in February 2017.
Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
WiFi4EU voucher scheme for local authorities	- Reaching political agreement between co-legislators. - First call (20 M€).	Q2 2017	Political agreement between co-legislators reached. In cooperation with DG DIGIT and INEA, the IT systems and administrative process for the management of the first call has been postponed to Q1 2018.

Specific objective 1.5: 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

Related to spending programme: Creative Europe

Result indicator 1: Share of European works in linear broadcast services.

Source of data: Second report on the application of Articles 16 and 17 of the AVMSD for the period of 2011-12.

Baseline 2012	Target 2020	Latest known results 2017
64,1% (average share on European level).	65% (average share on European level) A mature market that seems to have reached its level of saturation, so stability to be expected with a potential minor increase.	63,7% in 2014. A stable level of European works with a very minor decrease in 2014 compared to 2012 and 2013. The market seems to have reached its level of saturation.

<p>Result indicator 2: Share of European films in the catalogue of on-demand services.</p> <p>Source of data: European Audio-visual Observatory – Report on the origin of films and TV series in VOD (Video on Demand) catalogues – 2017 edition.</p>		
<p>Baseline 2015</p>	<p>Target 2020</p>	<p>Latest known results 2017</p>
<p>27% (average share)</p>	<p>30% (average share)</p>	<p>On average in 2017 EU films have a share of 20% of the SVoD (Subscription Video on Demand) catalogues and 25% in TVoD (Transaction Video on Demand) catalogues.</p>
<p>At first sight, the diversity of on demand catalogues has decreased between 2015 and 2017. Actually, the main reasons for this drop are methodological:</p> <ul style="list-style-type: none"> - the 2017 figures cover Microsoft catalogues and Netflix catalogues (Netflix rolled their services across the whole EU only in 2016) which both have a low average of EU content (13% and 16%). - there are less national services (Yomvi, Kinoplex...) which usually have a high share of EU content. This change is a sound methodological approach as these smaller services tended to artificially inflate the total share of EU works in the Member States although they actually account for a very small share of the on demand market. 		
<p>Result indicator 3: Share of non-national European works in linear broadcast services.</p> <p>Source of data: Study on the implementation of the provisions of the Audio-visual Media Services Directive concerning the promotion of European works. Next study on the promotion of European works.</p>		
<p>Baseline 2010</p>	<p>Target 2020</p>	<p>Latest known results 2017</p>
<p>8,1% (average share)</p>	<p>10% (average share)</p>	<p>Non-domestic European works make up 16.88% of the total qualifying European transmission hours in 2016.</p>

Result indicator 4: Share of non-national European films in the catalogues of on-demand services.

Source of data: European Audio-visual Observatory – Report on the origin of films and TV series in VOD catalogues – 2017 edition

Baseline 2015	Target 2020	Latest known results 2017
21% (average share)	25% (average share)	EU non-national films available on the SVoD catalogues in 2017 are often co-productions. Whereas co-productions represent 22% of films produced in Europe, they account from 24% to 53% of all EU films available. For the TVoD in 2017 the average share of EU non-national films in catalogues was 15,25%.

Result indicator 5: New legislation for web accessibility in place in Member States.

Source of data: Roadmap for completing the DSM.

Baseline 2015	Interim Milestone 2016	Target 2019	Latest known results 2017
Proposal for a Directive on the Accessibility of Public Sector Bodies' Websites adopted in 2012.	Adoption of Directive by EP and Council.	Transposition in national law in all Member States	After adoption of the Directive in 2016, transposition in national law is on-going with deadline on 23.9.2018.

Main outputs in 2017:

Policy-related outputs

Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Roadmap for European future media and social media for 2021-2027.	Endorsement of the roadmap in the New European Media summit.	Q4 2017	The White Paper on Social Media which represents the Roadmap was approved at the New European Media summit in October 2017.

Strengthening Europeana (CEF DSI)	Independent evaluation of Europeana and new funding method.	Q4 2017 (PLAN/2016/55)	Evaluation process launched Q4 2017 and to be concluded by Q2 2018. The funding instrument for Europeana Core services has been changed from grant to procurement in September 2017.
Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Facilitating a European Centre for Press and Media Freedom.	Launch of the preparatory action.	Q2 2017	Invitation to submit a proposal was sent in Q4 2017 and the new contract will take effect from the 1.2.2018.
Creative Europe MEDIA Work programme 2018.	Adoption by the Commission.	Q2 2017	Adopted in September 2017.
Frontloading of Creative Sectors Guarantee Facility from EFSI.	Agreement with ECFIN and EIF.	Q1 2017	A top-up of 60 M€ from EFSI was agreed with the EIF in December 2017.
Media Pluralism Monitor.	Launch of the preparatory action.	Q1 2017	A grant was awarded to the European University Institute and the action started on 1.1.17. It was supposed to run for 12 months, but was extended for 3 months.
Enhancing awareness among relevant stakeholders on EU policy in the field of media freedom and pluralism.	Launch of the contract with the European University Institute.	Q1 2017	A grant was awarded to the European University Institute and it started on 1.1.17. The contract will run for 24 months.

General objective A New Boost for Jobs, Growth and Investment				
Impact indicator 1: Europe 2020 target: Percentage of EU GDP invested in R&D (combined public and private investment).				
Source of data: Eurostat ⁶³				
Baseline 2012	Target (2020) Europe 2020 target		Latest known results 2016 provisional	
2.01%	3%		2.03 %	
Bookmark				
Specific objective 2.1: 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.				
Related to spending programme(s): Horizon 2020				
Result indicator 1: H2020 to become an important source of innovation for young companies and dynamic SMEs in pursuit of excellence by maintaining at least the current percentage of H2020 ICT budget dedicated to innovation activities				
Source: internal DG CONNECT statistics.				
Baseline 2015	Interim Milestone 2017		Target 2020	Latest known results 31.12.2017
	2019			
45% in 2015	45%	45%	45%	50%
Result indicator 2: Established platform for national cybersecurity industry to cooperate at European level				
Source of data:				
Baseline	Interim 2017	Milestone	Target 2020	
None	Contractual Public-Private Partnership on cybersecurity established and working on Research and Innovation implementation		Industrial cooperation extended to all industrial aspects (standardisation, certification, investment, skills...).	
Latest known results (2017):				
The European Cyber Security Organisation (ECSO) established itself as capturing nearly all cybersecurity market segments, with 230 members representing for example cybersecurity user industries, SMEs, associations, cybersecurity providers, research entities, regional authorities and Member States. By an initial mapping of educational & professional training courses, ECSO is setting up the structures to contribute to the Commission's skills objectives of tackling the 350 000 skills gap estimated until 2022. ECSO is contributing both to establishing a common set of cPPP performance indicators, as well as tailoring relevant indicators to track the development of the cybersecurity ecosystem in line with the Commission aims and expectations.				

⁶³ Please note that Eurostat periodically revises its published data to reflect new or improved information, also for previous years. The latest published data is available by clicking on "bookmark". The "latest known value" column reflects the data that was available at the time of the preparation of the AARs 2017 and it is the reference point for the AARs of Commission services.

Result indicator 3: Number of cities involved in replication and /or dissemination of solutions developed under the European Innovation Partnership on Smart Cities and Communities (EIP SCC) and/or H2020.
Source of data: The value of this indicator will be monitored by a support action from the 2014 Smart Cities call.

Baseline 2015	Target 2020	Latest known results 2017
0 cities.	50 cities: based on the requested replication rate in H2020 Smart Cities lighthouse projects.	110 cities within signatory networks have committed via the signing of an Letter of Intent (LoI) under the urban platform sub-cluster of the European Innovation Partnership on Smart Cities and Communities (EIP SCC) to implement open standard interoperable platforms developed by the sub-cluster, the project Espresso, and the lighthouse projects. Many of the cities that signed the above LoI are involved in the lighthouse smart cities projects as well.

Result indicator 4: Number of pilot projects launched for Open Government activities (including eParticipation, co-creation) and Once Only Large Scale Pilot (according to DSM).
Source of Data: H2020 WP SC6. In 2018 (midterm review of OOP pilot) and 2019 (assessment of the need for legal measures).

Baseline 2015	Interim Milestone		Target 2019	Latest known results 2017
	2016	2019		
Adoption of H2020 WP 2016-17 with relevant Open Government objectives and calls.	Launch of 4-5 Open Government projects (H2020 WP 2016/17) and 1 large-scale pilot to test implementation of Once-Only Principle (OOP) for businesses across borders (H2020 WP 2016/17).	Midterm review of pilots and OOP pilot.	10 projects launched. Assessment of necessity for legal measures of OOP completed.	The OOP legal measure has been introduced in a legislation, namely the (Single Digital Gateway Regulation).

Planned evaluations: The OOP pilot review will be used for the drafting of the implementing act.

Main outputs in 2017:			
Policy-related outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Staff Working Document (SWD) on the Intermediate evaluation of the eHealth Action Plan.	Adoption of the SWD.	Q3 2017	This SWD was replaced by the Communication and the accompanying SWD on the digital transformation of health and care, expected to be published in Q2 2018 (following the inclusion of digital health and care in the review of the DSM strategy in May 2017).
Standardisation initiatives, notably through the ETSI (European Telecommunications Standards Institute) on the basis of the European Smart Cities Framework.	2-3 standardisation initiatives.	Q4 2017	ETSI has launched the Industry Specification Group on City Digital Profile To accelerate the delivery of integrated citizen services and provide a technology road map for city leaders, by promoting the use of standards in a replicable solution stack. ETSI has launched the extension of SAREF ontology to further cover smart city use cases.
Establishment of a High Level Group on Smart Cities.	Group established.	Q2 2017	Commission internal discussions are ongoing on a possible relaunch of the High Level Group.
Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
Reinforcement of the Startup Europe initiative: - Startup Europe Club, the one-stop-shop for startups, - Startup Europe to become the umbrella initiative coordinating EU initiatives related to startups ecosystems, - Launch of pilot projects connecting people and ideas across startup ecosystems.	Number of nodes (ecosystems, clusters and digital innovation hubs) participating.	50 nodes from Europe and abroad.	60 EU nodes are part of Startup Europe platforms in addition to nodes in Africa, Latin America, Southern Mediterranean, Balkans, Eastern Partnership and Silicon Valley.

Adoption of the H2020 Work Programme 2018-20 including Societal Challenges (budget: 873 M€).	Adoption by the Commission.	Q4 2017	Work Programme adopted in October 2017.
Launch of pilot projects to identify the most promising H2020 innovation and help researchers to turn their innovation into successful businesses.	Launch of pilot projects (innovation radar).	Q4 2017	To date over 1500 EU R&I projects from ICT and non-ICT H2020 themes have been categorised by the Innovation Radar. In Spring 2018 a public-facing Innovation Radar platform will be launched to allow citizens and other stakeholders to access insights from the Radar.

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

Result indicator 1: Future and Emerging Technologies: Number of publications in peer-reviewed high-impact journals per 10 M€ of EU funding (defined in H2020 Specific Programme Regulation).

Source of data: Reporting done by H2020 beneficiaries via Common Grant Management System (SYGMA) available through CORDA (RTD/CSC).

Baseline	Target	Latest known results
N/A	2020: The target was set on the basis of FP7 data for overall number of publications and estimating the share of publications in high-impact journals)	2017
N/A new approach adopted under H2020	25 per 10 M€.	6,91 per 10 M€

Planned evaluations: Horizon 2020 mid-term and ex-post evaluations in 2017 and 2022; Horizon 2020. In 2017, DG CONNECT finalised the mid-term evaluations of both the Horizon 2020 and CEF programmes for the activities managed by this DG. The findings of both evaluations were included in the overall evaluation exercises managed by, DG RTD and DG MOVE respectively.

Result indicator 2: Reinforcing industrial partnerships and strengthened cloud and software research that will enable technological capacity building and wide take up of cloud in Europe.

Source of data: Strategic Research and Innovation Agenda to be developed by stakeholders by mid-2016 - COMPASS / SYGMA

Baseline 2014	Interim Milestone 2018	Target 2020	Latest known results 2017
174 M€ investment from H2020 calls 2014/16	314 M€ (cumulative)	384 M€ (cumulative). Further leveraging public funding to secure additional private investments and potential ESIF funding.	Investment from H2020 calls (commitments): 2014-17 – 195 M€ 2018-19 – 50 M€ Cumulative - 245 M€

Result indicator 3: Leveraging private investment through Contractual Private Public Partnerships.

Source of data: Internal Commission plans and contractual arrangement signed with the associations.

Baseline 2014	Interim Milestone 2017	Target 2020: target agreed at the inception of the cPPPs	Latest known results 2017
Level of private funding in Research and Development*	Additional private funding matching at least EU funding (i.e. 1.3 Bn€)	Private investment at least 3 times the total EU funding for the cPPPs	The contractual arrangements between the Commission and the private counterpart foresee different leverage factors for each cPPP. Information for 2017 is not yet available, but does form part of the annual monitoring exercise carried out for each cPPP. Private investment estimates as reported by the cPPP associations for 2016 is at least three times the value of the EU contribution to cPPP projects (the estimate for one cPPP goes as high as 14 times). This information reflects information received from cPPP associations in the context of the annual monitoring exercise for 2016.

Planned evaluations: A mid-term review of the contractual public-private partnerships (cPPPs) over the first three years of Horizon 2020 was carried out by a group of independent experts and completed in September 2017. Whilst recognising that the instrument is too young to provide an exhaustive evaluation, and acknowledging differences in the nature and 'life-cycle' stages of the cPPPs, the experts concluded that cPPPs broadly achieved the purpose for which they were created – a more structured shift from a top-down to a bottom-up approach in defining European R&I strategies, spanning the whole innovation cycle and relevant actors. Recommendations were provided concerning inter alia governance, links to other instruments, KPIs and Member State involvement.

The full report is available here: <https://publications.europa.eu/en/publication-detail/-/publication/6de81abe-a71c-11e7-837e-01aa75ed71a1/language-en>.

Result indicator 4: Increase development of networks beyond 5G technologies, exploit spectrum above 90 Ghz up to 1Thz for mobile communications, and invent novel architectures and systems for wireless communications.
Source of data: H2020 Future Internet WP2016/17, Network technologies consultations for WP2016/17, Networld2020 beyond 5G white paper, WP2016/17.

Baseline 2015	Interim Milestone 2017	Target 2025	Latest known results 2017
18 M€ for Networking research Beyond 5G; Long term R&D to support the 1000+ constituency that forms the European Technology Platform	72 M€ (cumulative)	200 M€ (cumulative) to be commensurate with required efforts to develop technologies beyond 5G	Following the implementation of WP 2014-15 and 2016-17, the cumulative budget for beyond 5G amounts to 73 M€ (54+ 19). This budget is in fact greater considering that some 5G PPP projects are already addressing beyond 5G technologies (estimate 20 M€).

Planned evaluations: Horizon 2020 mid-term and ex-post evaluations in 2017 and 2022. In 2017, DG CONNECT finalised the mid-term evaluations of both the Horizon 2020 and CEF programmes for the activities managed by this DG. The findings of both evaluations were included in the overall evaluation exercises managed by, respectively DG RTD and DG MOVE

Result indicator 5: Industrial strategy for Next Generation Internet. Maximise the impact of the current PPPs by integration of the key outcomes into a Next Generation Internet objective. As a very large innovation policy initiative it is a project of important European value beyond 2020.
Source of data: FIWARE ecosystem and others.

Baseline 2016	Interim Milestone 2017		Target 2020	Latest known results 2017
	2017	2019	2020	2017
Concept development	Start developing the industrial strategy and policy support ecosystem. Allocation of funds.	Interim outcomes European industry policy impact	Adoption of the industrial strategy for the Next Generation Internet.	The FI-PPP ended a year ago with several significant achievements and a tangible impact. 4 Coordination and Support Actions and a major study were launched in 2017 assisting the Commission to shape the NGI and to engage the relevant stakeholders to become part of the NGI ecosystem. Also the Future Internet Forum Member State representatives have been active since Q2 2017, creating NGI Contact Points in 23 countries, organising workshops and other activities throughout Europe to engage relevant stakeholders.

<p>Result indicator 6: 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).</p> <p>Source of data: CORDA data warehouse (data collected by CSC).</p>		
<p>Baseline N/A</p>	<p>Target (2020: as defined in the Horizon 2020 Specific Programme)</p>	<p>Latest known results 2017</p>
<p>This is a new approach under Horizon 2020.</p>	<p>LEIT ICT: 3 patent applications per 10 M€ funding. FET: 1 patent application per 10 M€ funding</p>	<p>LEIT ICT: 23 patents applications (= 0.1/ 10 M€ funding), 3 patents awarded (= 0.01/10 M€ funding). FET: 62 patents applications (= 2.16/ 10 M€ funding), 5 patents awarded (= 0.17/ 10 M€ funding).</p> <p>Output data is collected through the continuous project reporting of beneficiaries under their own responsibility. At this early stage of data reporting, no systematic data quality check has been performed, hence data is solely based on self-declarations of project coordinators. The preliminary statistics for LEIT ICT show progress in the number of patents applications and patents awarded. However, as many Horizon 2020 projects are in their early phases, they have not yet produced large numbers of patents as patenting and commercial exploitation often take a long time.</p>
<p>Planned evaluations: Horizon 2020 mid-term and ex-post evaluations in 2017 and 2022; Horizon 2020. In 2017, DG CONNECT finalised the mid-term evaluations of both the Horizon 2020 and CEF programmes for the activities managed by this DG. The findings of both evaluations were included in the overall evaluation exercises managed by, respectively DG RTD and DG MOVE.</p>		
<p>Result indicator 7: Leveraged investment from SMEs, industry, public bodies and Non-Governmental Organisations in the Active & Assisted Living Programme and H2020 Societal Challenge 1 topics.</p> <p>Source of data: Cordis+ Active & Assisted Living Programme funding reports.</p>		
<p>Baseline 2015</p>	<p>Target 2020</p>	<p>Latest known results 2017</p>
<p>28 M€</p>	<p>160 M€</p>	<p>59 M€ AAL + 32 M€ H2020 totalling 91 M€</p>
<p>Planned evaluations: Horizon 2020</p>		

Main outputs in 2017:			
Main expenditure outputs			
Description	Indicator	Target date	Latest known results (situation on 31.12.2017)
H2020 – Future and Emerging Technologies (FET) Proactive – High Performance Computing calls.	Timely launch of 2 calls (44 M€).	Q2 2017	Target reached in Q2 2017.
Adoption of the H2020 Work Programme 2018-20 - Excellent Science (FET: 1457 M€, e-infrastructures 405 M€), - Industrial Leadership (LEIT ICT 2778 M€, LEIT ICT / ECSEL: 565 M€), - Cross-cutting activities.	Adoption by the Commission.	Q4 2017	Adopted in Q4 2017.
Cybersecurity cPPP.	3 calls for proposals.	Q3 2017	The following calls for proposals closed during 2017: - DS06 2017 Cryptography - DS072017 Addressing Cyber Threats - DS082017 Privacy, data protection
FET-Flagships: the Graphene Flagship and the Human Brain Project.	Proposals for the third phase of the Flagships.	Q2 2017	The Graphene and Human Brain Project (HBP) call for the third phase of the Flagships, covering April 2018 to March 2020, resulted in grants, worth 89M€ each. Another 25M€ grant from the e-Infrastructure Programme, serving the high performance and interactive computing needs of HBP, was selected and is under preparation.
Ambient Assisted Living Joint Programme Initiative to support the transition of "Innovation to Market" in the field of Active and Healthy Ageing.	Adoption of annual work programme 2017.	Q4 2017	Target reached in Q2 2017 (approval of the annual work plan 2017 and adoption on the financial contribution).