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Commission

Annual Activity Report 2022

Directorate-General for Communications
Networks, Content and Technology

Table of Contents

- CONNECT IN BRIEF3
- EXECUTIVE SUMMARY4
 - A. Key results and progress towards achieving the Commission’s general objectives and department’s specific objectives.....4
 - B. Key performance indicators6
 - C. Key conclusions on financial management and internal control.....7
 - D. Provision of information to the Commissioner(s).....7
- 1. KEY RESULTS AND PROGRESS TOWARDS ACHIEVING THE COMMISSION’S GENERAL OBJECTIVES AND SPECIFIC OBJECTIVES OF THE DEPARTMENT8
- 2. MODERN AND EFFICIENT ADMINISTRATION AND INTERNAL CONTROL30
 - 2.1. Financial management and internal control.....30
 - 2.1.1. Control results31
 - 2.1.2. Audit observations and recommendations.....53
 - 2.1.3. Assessment of the effectiveness of internal control systems.....54
 - 2.1.4. Conclusions on the assurance.....55
 - 2.1.5. Declaration of Assurance58
 - 2.2. Modern and efficient administration – other aspects59
 - 2.2.1. Human resource management.....59
 - 2.2.2. Digital transformation and information management61
 - 2.2.3. Sound environmental management63
 - 2.2.4. Examples of economy and efficiency63

CONNECT IN BRIEF

Making *Europe fit for the digital age* is one of the headline ambitions that Commission President Ursula von der Leyen set out in her political guidelines and was further developed in her mission letters to Executive Vice-President for A Europe Fit for the Digital Age, Margrethe Vestager and to the Commissioner for Internal Market, Thierry Breton. The Directorate-General for Communications Networks, Content and Technology (CONNECT) supports the digital transformation of the Union's economy and society and fosters the internal market.

If for the past years digital has been central to people's and business' lives, the pandemic underscored the importance of the digital technologies as key enablers for the proper functioning of the society and economy.

CONNECT invests in research, innovation, deployment and uptake of trustworthy and green digital technologies that improve Europe's economy and people's lives. We foster Europe's connectivity, a key enabler of the digital and green transitions, and the vitality of the internal market by ensuring that companies can invest and compete on equal terms. CONNECT promotes Europe's human-centric model of an innovative, fair and sustainable digital transformation of society, which respects our democratic values, our fundamental rights and cultural diversity. We help bridge the digital divide by supporting digital literacy and skills of EU citizens. The DG works towards making Europe a global leader in the data economy, in cybersecurity and on ensuring Europe's open strategic autonomy.

In 2022, CONNECT implemented an overall budget of EUR 2 331.65 million. The DG implemented directly 68.73% of the overall budget (EUR 1 602.62 million). The remaining 31.27% of the overall budget was implemented by entrusted entities and other DGs which have been delegated budget implementation tasks by CONNECT (EUR 729.03 million). mainly to executive agencies, to joint undertakings such as the Key Digital Technologies Joint Undertaking (KDT), the Smart Networks and Services Joint Undertaking (SNS JU) and the European High Performance Computing Joint Undertaking (EuroHPC). Also, two decentralised agencies, the European Union Agency for Cybersecurity (ENISA) and the Office of the Body of European Regulators for Electronic Communications (BEREC office), work under CONNECT's remit.

CONNECT implements several programmes of the 2021-2027 multi-annual financial framework (MFF), namely *Digital Europe*, *Horizon Europe*, *Connecting Europe Facility II - Digital* and *Creative Europe – Media*, which CONNECT partly delegated to executive agencies. 2022 was also the year in which *InvestEU* programme started its implementation.

CONNECT interacts with many other Commission DGs, and in particular with DG Internal Market, Industry, Entrepreneurship and SMEs and DG Defence Industry and Space, which are also under the lead of Commissioner Thierry Breton, and with DG Research and Innovation as well as DG Health and Food Safety.

EXECUTIVE SUMMARY

This annual activity report is a management report of the Director-General for Communications Networks, Content and Technology (CONNECT) to the College of Commissioners. Annual activity reports are the main instrument of management accountability within the Commission and constitute the basis on which the College takes political responsibility for the decisions it takes as well as for the coordinating, executive and management functions it exercises, as laid down in the treaties ⁽¹⁾.

A. Key results and progress towards achieving the Commission's general objectives and department's specific objectives

President Ursula von der Leyen's headline ambition **A Europe fit for the Digital Age** is the main general objective of CONNECT. The DG also contributes to other general objectives, in particular to *A European Green Deal*, *An economy that works for people*, and *A stronger Europe in the world*.

The Digital Decade policy programme, which was adopted by the co-legislators at the end of 2021, is CONNECT's main guide towards the achievement the digital transformation of our society and economy by 2030.

Important actions were undertaken to foster the Union's internal digital market.

The **digital services act (DSA)** and the **digital markets act (DMA)** were adopted by the co-legislators. These new regulations set out, for the first time across the world, a comprehensive and modern legal framework to ensure the safety of users online and create a fair and open online platform economy. The DSA defines new rules for online intermediary services to reduce harm and risks in the online space, and places digital platforms under a unique new transparency and accountability framework. The DMA establishes a list of obligations that digital platforms designated as gatekeepers will need to implement to ensure fair and open digital markets, opening up possibilities for companies to contest markets and giving them more space to innovate.



The Commission adopted a proposal for a **data act** aiming to create and promote a fair data economy in Europe, where the value of data is allocated fairly, and data usage rights are clear to individuals and businesses.

To ensure a cybersecure Europe, the Commission adopted the proposal for a **cyber resilience act**. This legislative proposal aims to help businesses and consumers by introducing mandatory cybersecurity requirements for manufacturers of products with

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

digital elements throughout their life cycle. By ensuring the conformity of such type of products with cybersecurity requirements CONNECT aims to make products available on the EU market safer contributing to the Union's internal market and its economy.

Ensuring cybersecure public communications assets, in particular its critical infrastructure and encryption systems, is more than a simple necessity; it is one of the essential elements to guarantee Europe's open strategic autonomy. CONNECT fostered the growth of the European quantum communication ecosystem and the development the national quantum communication networks that will constitute the **European quantum communication infrastructure**. CONNECT started helping to achieve this objective, funding projects through *Digital Europe*.

Another key achievement was the adoption of the Commission proposal of a **Regulation establishing a common framework for media services in the internal market (European media freedom act)** and the accompanying Recommendation. The Regulation introduces a common framework for media services in Europe. It is designed to remove obstacles to the provision of media services across the EU, safeguarding media pluralism and independence in the internal market while ensuring that Member States remain able to adapt media policy to their national context. Among others it safeguards editorial decisions against political interference and surveillance. It puts focus on the independence and stable funding of public service media as well as on the transparency of media ownership and of the allocation of state advertising.

The Commission adopted the proposal for a **European chips act**, which will mobilise and coordinate European, public and private resources to increase coordination among Member States, help enhance European production capacity, support the European ecosystem, strengthen the semiconductor research strategy, and create a framework for international cooperation and partnership.

CONNECT also prepared a flagship initiative in the context of the European Year of Youth: the **new strategy for a better internet for kids (BIK+)**, adopted by the Commission in May 2022, aims to ensure that every child is protected, empowered and respected online, including through active child participation.



2022 has been marked by Russia's war of aggression against Ukraine. In its efforts to **help Ukraine and its people** CONNECT took some concrete steps. For example, in the context of the data space for cultural heritage the Commission quickly agreed on a project of the Competence Centre for the Conservation of Cultural Heritage to contribute to the safeguard of Ukraine memory and monuments by preserving over a million files, 120 terabytes of photos, three dimensional models, catalogues, databases in EU data centres. To limit the impact of disinformation related to Russia's war against Ukraine, CONNECT started monitoring the actions taken by the signatories of the code of practice on disinformation. The Commission facilitated the signature and successive renewals of a Joint Statement between EU and Ukraine operators ensuring free or affordable international calls and roaming services. It has ensured that more than four million Ukrainian refugees stay connected. Technical discussions were

initiated with Ukraine on the long-term solution for bringing Ukraine into the EU roaming area. CONNECT has coordinated connectivity equipment support to Ukraine, facilitating donations by the telecom and digital industry via the Union civil protection mechanism. In November the Commission helped launch the targeted campaign to collect laptops, tablets and smartphones for the most urgent needs such as education, the healthcare sector and public administration.

The new programme, **Digital Europe**, was successfully launched. Despite its late adoption and its challenging ramp up, 264 projects were selected in 24 calls for proposals, representing an investment of approximately EUR 845 million. These projects, together with those of the other funding programmes, will support Europe’s ambition of strategic leadership in the digital domain.

B. Key performance indicators

Key Performance Indicator 1: Number of EuroHPC systems installed in the EU ranking among the top 10 in the world

Baseline (2020)	Interim milestone (2022)	Target (2024)
0	3	4

Latest known results: Two of EuroHPC systems installed in the EU rank among the top 10 in the world. The interim milestone was not achieved as the Barcelona pre-exascale supercomputer procurement procedure was finalised only mid-2022. The system will be delivered and installed in 2023. The 2024 target is likely to be reached.

Key Performance Indicator 2: Impact of the data economy on EU GDP ⁽²⁾

Baseline (2018)	Interim milestone (2022)	Target (2024)
Estimated impact of the data economy on EU GDP: 2.4%	None	Estimated impact of the data economy on EU GDP to at least 3.6%

Latest known results: The estimated impact of the data economy on EU GDP was 3.9% in 2022.

Key Performance Indicator 3: Number of testing and experimentation facility sites in AI supported through Digital Europe Programme

Baseline (2020)	Interim milestone (2022)	Target (2024)
0	None	15

Latest known results: At the end of 2022 contracts for five projects on testing and experimentation facilities sites in artificial intelligence (TEFs) were signed under the Digital Europe programme. The approach to support sites was modified. Instead of funding individual projects per site, which would have required a large budget, it was decided to fund larger projects supporting several sites/nodes. With this new approach, it is expected that by 2024, the sectorial TEFs will set up 23 nodes and 16 satellites/sub-nodes. As each node is in general linked

⁽²⁾ This indicator measures the contribution of the generation, collection, storage, processing, distribution, analysis elaboration, delivery, and exploitation of data enabled by digital technologies to EU GDP.

to one site, the number of sites receiving support from Digital Europe programme would exceed 15 sites, which was a conservative estimate of the minimum number of sites.

Key Performance Indicator 4: Number of actions ⁽³⁾ launched under the Cybersecurity Competence Centre, including the deployment of common cyber infrastructures

Baseline (2021)	Interim milestone (2022)	Target (2024)
1 action launched	3 actions launched	7 actions launched

Latest known results: 3 actions have been launched.

Key Performance Indicator 5: Estimated risk at closure

Baseline (2019)	Target (2024)
2.24% of the relevant expenditure	< 3% of relevant expenditure

Latest known results: 1.58% -1.62% of the relevant expenditure

C. Key conclusions on financial management and internal control

In line with the Commission’s Internal Control Framework CONNECT has assessed its internal control systems during the reporting year and has concluded that it is effective and that the components and principles are present and functioning well overall. Please refer to annual activity report section 2.1.3 for further details.

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

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

D. Provision of information to the Commissioner(s)

In the context of the regular meetings during the year between CONNECT and the Commissioner on management matters, the main elements of this report and assurance declaration, have been brought to the attention of Commissioner Thierry Breton, responsible for the Internal Market.

⁽³⁾ The term ‘actions’ means here projects (supporting cybersecurity infrastructures, services, skills, etc), funded with budget from the EU and possibly also from Member States, managed by the Cybersecurity Competence Centre.

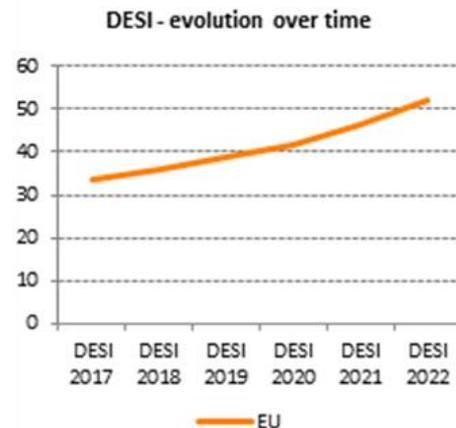
1. KEY RESULTS AND PROGRESS TOWARDS ACHIEVING THE COMMISSION'S GENERAL OBJECTIVES AND SPECIFIC OBJECTIVES OF THE DEPARTMENT

General Objective

A Europe fit for the Digital Age

To help make **A Europe fit for the Digital Age**, CONNECT follows the path set in the digital compass communication for Europe's digital transformation by 2030. The Digital Decade policy programme 2030, a monitoring and cooperation mechanism to achieve common targets for Europe's digital transformation by 2030, has entered into force in January 2023. The Digital Decade evolves around targets in four areas: improve citizens' basic and advanced digital skills; improve the take-up of new technologies, like artificial intelligence, data and cloud, in the EU businesses, including in small businesses; further advance the EU's connectivity, computing and data infrastructure; and make public services and administration available online. These targets embody the policy programme's objectives, such as ensuring safe and secure digital technology, a competitive online environment for SMEs, safe cybersecurity practices, fair access to digital opportunities for all, as well as developing sustainable, energy and resource-efficient innovations.

Europe's digital transformation is reflected in the continuous increase of the digital economy and society index (DESI), a composite indicator developed and managed by the DG. Used since 2015 for monitoring Europe's overall digital performance and tracking the progress of EU countries in digital competitiveness, it has increased from 34.3 to 52.3 during that period.



In CONNECT, policymaking is closely interlinked with financing from EU funding schemes and financial instruments. In 2022, the programmes of the 2021-2027 multiannual financial framework were in full speed: the research framework programme *Horizon Europe*, the *Connecting Europe Facility II – Digital* to support investment in 5G and fibre infrastructures – especially in areas where the market alone is not able to deliver adequate quality of connectivity –, *Creative Europe – Media* to support the audiovisual and news media sectors and *Digital Europe*, which aims to build the strategic digital capacities of the EU and facilitate wide deployment of digital technologies, such as supercomputing, artificial intelligence, cybersecurity and advanced digital skills, while helping the recovery and driving the digital transformation of Europe ⁽⁴⁾.

⁽⁴⁾ More details on the achievements, EU added value of the programme and work programme are available in the programme statements of the [Draft general budget of the European Union for the financial year 2023](#). The updated programme statements will be available in the proposal for Draft budget of the European Union for the financial year 2024.

InvestEU programme started its implementation, with several financing and investment operations on strategic digital technologies, digital connectivity, and media & audiovisual sectors.

In the context of the response to the COVID-19 pandemic, CONNECT supported the implementation of the *Recovery and Resilience Facility* of NextGenerationEU, making sure that digital contributes to the short-term recovery and long-term prosperity. CONNECT assessed the recovery and resilience plans (RRPs) regarding their alignment with the Commission's digital priorities and their potential to address Member States-specific digital challenges, including those identified in the European Semester country-specific recommendations. All RRP's were adopted and their digital share amounts to 26% (i.e. EUR 128billion) exceeding the 20% digital target.

In year 2022, the delivery of the 305 ultraviolet disinfection robots, procured by the Commission and donated to hospital across Europe as part of the actions taken to fight against COVID-19 pandemic, was concluded. Additionally, for the implementation of the central EU Gateway for the EU Digital COVID Certificates (EU DCC), CONNECT further procured maintenance and support new releases of the EU DCC solution.

CONNECT closely works with the European Parliament, the Council, Member States, other DGs, executive and decentralised agencies, joint undertakings and other bodies, which all contribute to the implementation and achievement of the DG objectives.

Based on the information the DG possesses, no substantial issues were reported that would affect the implementation of programmes entrusted to the executive agencies implementing CONNECT programmes. Feedback from project implementation for policy purposes is of considerable value to help the DG achieve its objectives. The related process of 'policy feedback' is subject to continuous attention and finetuning to accommodate the emerging needs and new developments of the delegated programmes. The Executive Agency for Small and Medium-sized Enterprises (EISMEA) issued a reservation on reputational grounds concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the European Innovation Council (EIC) Accelerator scheme within the EIC programme. CONNECT is monitoring and supporting EISMEA to implement the necessary measures to solve the issues that led to the reservation. For detailed information as regards CONNECT's supervision on executive agencies see section 2.1.1 Control results.

The supervision of the decentralised agencies and other entrusted entities did not reveal any particular issues. Detailed information is provided in section 2.1.1 and in the annexes.

The success of CONNECT's activities depend significantly on actions of Member States. Therefore, monitoring and enforcement actions, if needed, are essential. CONNECT, together with the Legal Service and the Secretariat-General, continued infringement procedures as regards the late transposition of the audiovisual media services Directive, the European electronic communications code, the Directive laying down rules on the exercise of copyright and related rights applicable to certain online transmissions of broadcasting organisations and retransmissions of television and radio programmes, the Directive on

copyright and related rights in the digital single market, and the Directive on open data and the re-use of public sector information.

In this context several Member States have been referred to Court for the late or partial transposition of the audiovisual media services Directive (one case) and the European electronic communications code (five cases).

Finally, the College decided to refer two Member States to Court in three bad application cases regarding:

- independence of the national regulatory agency;
- the Klubradio case concerns media freedom concerning the European electronic communications code and the audiovisual media services Directive;
- the LGTBQI case relates to provisions in national law of a Member State that violates a number of EU rules concerning audiovisual media services, the prohibition of quantitative restrictions on imports and other measures having equivalent effect on the free movement of goods, rules on the protection of personal data as well as provisions of the Charter of Fundamental Rights, as they are based on sex and sexual orientation.

Relations with stakeholders are very important and communicating with the European citizens plays a central role for CONNECT. In addition to press releases and question and answers to journalists, the DG sought to create a direct link with citizens. CONNECT did this via an increased use of social media, extending also to LinkedIn. We created various in-house clips in multiple linguistic versions and plain language for citizens. Transition to an increasingly multilingual digital strategy website is also an important element of communication with the wider public.



<p>Specific objective 1</p> <p>Europe’s strategic autonomy is ensured in critical technology areas</p>	<p>Related to spending programmes: Horizon 2020, Horizon Europe, Digital Europe, CEF - Digital</p>
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On 8 February 2022, the Commission adopted the **proposal for a European chips act**, which will mobilise and coordinate European, public and private resources to increase coordination among Member States, help enhance European production capacity, support the European ecosystem, strengthen the semiconductor research strategy, and create a

Commissioner Thierry Breton

framework for international cooperation and partnership. The Commission also adopted a proposal for a Council Regulation amending Regulation (EU) 2021/2085⁽⁵⁾, which will **transform the Key Digital Technologies Joint Undertaking (KST JU) into the Chips Joint Undertaking**. CONNECT has actively contributed to the deliberations in the European Parliament and Council.

The KDT JU, and a second **important project of common European interest (IPCEI) on microelectronics**, will foster research and development and innovation, and the first deployment amongst industries on processors and semiconductor technologies across the participating Member States. During 2022, the KDT JU selected 14 proposals from its first call, and launched and evaluated its 2022 call for proposals. The proposals for the second IPCEI on microelectronics are under assessment.

In the field of **processors and semiconductors technologies**, several actions were taken namely: (i) the adoption of a Recommendation setting up the European semiconductor expert group to facilitate the coordination between Member States and the Commission to increase the resilience of the semiconductor supply chain in the Union, to exchange experience and good practices for addressing semiconductor shortages, and to respond to the immediate crisis response measures and monitor the semiconductor value chain at Union level; (ii) the signature of two administrative agreements with the United States of America in the context of the Trade and Technology Council to set up an early warning mechanism to share information about and cooperate in addressing supply chain disruptions, and to exchange information on subsidies granted to semiconductor industry.

The **European High Performance Computing Joint Undertaking (EuroHPC JU)** finalised the procurement of eight supercomputers, located across Europe. Six supercomputers are now operational: Discoverer in Bulgaria, Karolina in Czechia, LEONARDO in Italy, MeluXina in Luxembourg, Vega in Slovenia, and LUMI in Finland. Two more supercomputers are in preparation: MareNostrum5 in Spain and Deucalion in Portugal.

Further to this, five sites for supercomputers - in Germany, Greece, Hungary, Ireland, and Poland - were announced by the EuroHPC JU in June 2022, with one of them to host Europe's first exascale supercomputer: JUPITER, which will be hosted in the Jülich supercomputing centre in Germany. These systems will increase by at least a factor of four the available computing power of the EU available to users from academia, industry and the public sector across Europe.

In October 2022, the EuroHPC JU announced six sites to host quantum computers (in Czechia, Germany, Spain, France, Italy and Poland), which will be integrated with existing supercomputers.

The **quantum technologies flagship** began its second phase, publishing an updated strategic research and industry agenda with enhanced targets in quantum computing,

⁽⁵⁾ The Regulation established joint undertakings under Horizon Europe (amongst others the Key Digital Technologies Joint Undertaking – KDT JU)

simulation, sensing and communication, and an emphasis on the development of Europe’s quantum ecosystem and on strengthening links with other EU initiatives with a quantum focus, namely, the European quantum communication infrastructure (EuroQCI), the European High Performance Computing Joint Undertaking, and the European chips act. Flagship projects started to work towards these enhanced targets – for instance, maturing the quantum computing and simulation platforms developed in the Flagship’s first phase, with the aim of achieving practical quantum advantage for real-world problems.

The **European quantum communication infrastructure (EuroQCI)** will protect the EU’s public communication assets, in particular its critical infrastructure and encryption systems, against cyber threats. Following *Digital Europe* calls, 34 projects were selected to foster the growth of a European quantum communication ecosystem, and to develop the national quantum communication networks that will constitute the EuroQCI. A *Connecting Europe Facility II - Digital* call to fund projects focused on cross-border links between national networks and on interconnections with the EuroQCI’s space component. EuroQCI will be integrated into IRIS², the Union secure connectivity programme, and in 2022 CONNECT worked closely with DG Defence Industry and Space to prepare for this integration.



The **destination Earth** project aims to develop a high-precision digital model of the Earth (‘digital twin of the Earth’), which will serve as the basis for developing dedicated thematic applications and services, to support decision makers to mitigate and adapt to the

effects of climate change. The first phase of implementation of the initiative has kicked-off in January 2022.

The **Smart Networks and Services Joint Undertaking (SNS JU)** went into operational mode with the implementation of the first call for proposals. It resulted in the selection of 35 projects covering technologies, testbeds and large-scale pilots. The joint undertaking also moved closer to autonomy, planned for April 2023, with the recruitment of staff.

The **European open science cloud (EOSC)** aims to give the EU a global lead in research data management and cross-disciplinary scientific collaboration ensuring that the European research community enjoys the full benefits of data-driven science, supporting the EU’s policy of open science and the European data strategy. In December 2022, the Commission opened the procurement to build, deploy and operate a production-grade infrastructure and service platform for EOSC.

As part of the Digital Decade development, the **local and regional digital indicators framework assessment method (LORDIMAS)** was developed in 2022 as a framework of indicators on digital performance of cities and regions to assist policy makers, businesses, and citizens to understand better the digital transformation at local level, and to guide targeted policy responses. It achieved a good step in 2022 by reaching an

agreement among the Commission, the Committee of the Regions and ESPON (an EU funded programme) to develop the LORDIMAS survey tool and release its first version in 2023.

Photonic solutions provide the sensory input for digital systems and equip them with the capabilities to understand the system's environment, which is a precondition for meaningful data processing. In 2022 the photonics public-private partnership played a strategic role in building and bridging communities across Europe, with support from *Horizon Europe*. Calls for proposals resulted in the selection of more than 30 projects. Cooperation with the Key Digital Technologies Joint Undertaking has led to a pilot line project on silicon photonics.

A new wave of *Horizon Europe* funded projects, supporting the **startup Europe initiative** was launched in December 2022. In cooperation with the European innovation ecosystem programme these projects will support deep tech startups across the EU in reaching investors, corporates and new markets. The **EU Startup Nation Standard** (EU SNS), a policy initiative focused on improving framework conditions for EU startups, made progress in moving from 'aspirations' to 'operations'. The 'implementation vehicle' of EU SNS, the European Startup Nations Alliance (ESNA), was launched operationally. ESNA started to scale up the support it provides to the 27 EU SNS countries in the sharing and implementing of best policy practices and monitoring progress of member states in implementing them.

The **innovation radar** is a tool being used across Commission's services to identify high potential innovations and innovators in *Horizon Europe* and *Digital Europe*. At the end of 2022, more than 10 000 innovations had been analysed with the Innovation radar, giving access to actionable intelligence for industrial policy makers. In addition, Dealflow.eu, the *Horizon Europe* support action delivering investor readiness training to the best innovation radar innovators, continued to help EU-funded deep tech startups and spinoffs to raise growth financing from private investors.



One of the key actions for **blockchain** is the European blockchain partnership (EBP) in which the Commission, all Member States, Norway and Liechtenstein are cooperating and which is building a European blockchain services infrastructure (EBSI). The EBSI was updated to reach its production readiness stage, the early adopter programme was reinforced and has mobilised more than one hundred users and contributors to EBSI applications. A call for proposals of the *Digital Europe* selected four projects to accelerate the exploitation of EBSI. They notably support the deployment of the EBSI model of verifiable credentials that provide more efficiency and trust, avoiding fraud and simplifying verification process, when exchanging certificates or attestations. This will be applied in the fields of education, social security and can be exploited in a wide range of other areas. The regulatory sandbox initiative was kick-started with a dedicated contract for implementing it in liaison with Commission services.

The **next generation internet** (NGI) has continued to deliver internet technologies that support the implementation of several digital policies in the field of data governance,

digital identity, inclusion, trustworthy media and social networking, or internet sustainability. In addition, CONNECT has inaugurated a policy stream on digital commons, which links the NGI effort to develop and nurture open source internet technologies with a new initiative to coordinate support (policy and funding) at national and EU level.

The external communication activities focussed not least on announcing the launch of new high-performance computers, quantum computers and funding calls under *Digital Europe*, as well as the association of Ukraine to it. It also covered the chips act, the annual digital economy and society index and launch of destination Earth as a digital twin initiative as well as developments in high-performance computing. Audiovisual material, press releases, websites, frequently asked questions were the main communication tools.

Specific objective 2	Related to spending programmes: Horizon Europe, Digital Europe
A European single market for data where data can flow for the benefit of all and where the rules for access and use of data are fair, practical and clear	

Further to the entering into force of the **data governance act**, CONNECT continued the preparation of the application of the Regulation through its implementing legislation – notably on logos for data intermediation services, data altruism organisations, and the European data altruism consent form. Furthermore, it continued the works to set up the **European data innovation board** as a formal expert group, in time for the date of application of the Regulation in September 2023.

The **data act** was adopted as a Commission proposal in February 2022. It aims to create and promote a fair data economy in Europe, where the value of data is allocated fairly and data usage rights are clear to individuals and businesses, which should remain in control of the data they produce.

CONNECT continued the progressive deployment of the **common European data spaces**, as planned in the Commission communication on a European strategy for data. The Staff Working Document on the common European data spaces highlighted the progress done on the development of the data spaces. In the last quarter of 2022, coordination and support actions funded by the *Digital Europe* started for each sectoral/domain-specific data space. Their aim is to create a community of practice, engage relevant stakeholders, identify priority datasets and develop governance/business models for the data space.



Common European data spaces are currently set up in 14 strategic sectors or domains, including green deal, agriculture, mobility, health, skills, manufacturing, public administrations, financial, tourism, language, cultural heritage, energy and European open science cloud. For the majority, preparatory actions, funded by *Digital Europe*, started in the fourth quarter of 2022 for a 12–18-month period. The data spaces support centre, funded by the same programme, ensures overall coherence and interoperability of the

and faster clinical decision-making, diagnostics, treatments and predictive medicine for cancer patients.

A EUR 5 million coordination and support action was launched under *Digital Europe* to support building an ecosystem for human digital twins in healthcare. Human digital twins hold great promise for the delivery of personalised health and care across the disease continuum. The action will deliver a roadmap to accelerate the uptake of digital twins, including by developing specifications for a proof of concept of a federated repository and simulation platform.

CONNECT continued to facilitate significant investment in next-generation cloud and edge technologies, both under its own financing instruments, and by ensuring coordination with the large-scale investments that Member States are launching under the NextGenerationEU fund, including the **important project of common European interest on next generation cloud infrastructure and services** that was pre-notified in April 2022.

Significant investment was generated via the NextGenerationEU, under which 20 Member States supported cloud uptake via public sector modernisation, business cloudification and the development of advanced novel cloud and edge data processing solutions. These were complemented by investments for novel cloud and edge capability deployment under *Digital Europe* and *Connecting Europe Facility II – Digital*.

With the support of CONNECT, twelve Member States (Belgium, Czechia, Germany, Spain, France, Italy, Latvia, Luxemburg, Hungary, the Netherlands, Poland and Slovenia) pre-notified an Important Project of Common European Interest.

Under *Horizon Europe*, CONNECT continued its research and innovation initiative ‘From cloud to edge to Internet of things (IoT) for European data’ to develop the technologies that are to form the foundation for the next generation of the European cloud-edge-IoT infrastructure. Two large clusters of projects were launched addressing swarm intelligence and cognitive computing.

The European Alliance for Industrial Data, Edge and Cloud is a key instrument to implement the European data strategy and reach the targets of the 2030 digital compass. The Alliance consists of key European industrial players in the area of cloud, business users of cloud services, Member States’ representatives and civil society stakeholders.

CONNECT intensified the preparation of the forthcoming **EU cloud rulebook**, building in particular on discussions with Member States representatives in the Cloud Alliance. The rulebook will offer a coherent framework around the different applicable rules (including self-regulation) for cloud services.

The Commission finalised a study and held a workshop with Member States as part of the evaluation of the implementation of the free flow of non-personal data Regulation. To maintain consistency across the EU and European Economic Area (EEA), the Commission also cooperated and exchanged good practices with the relevant EEA countries.

Communication focussed on the data act, data sets, and cloud research as well as on the newly adopted digital market act and fair access to data generated by platforms. Webinars were held on infrastructure for big-data tests and the role of data spaces in the European data economy.

Specific objective 3	Related to spending programmes: Horizon 2020, Horizon Europe, Digital Europe
Artificial intelligence that is human-centric, ethical, sustainable and that respects EU values	

CONNECT has actively contributed to the deliberations in the European Parliament and Council for a swift adoption of the **Commission proposal for a regulatory framework for artificial intelligence (AI act)**. The Council adopted a general approach on 6 December, while the European Parliament is expected to adopt its position in Spring 2023. CONNECT has prepared a mandate to European Standardisation Organisation to meet the requirements set out in the AI act and has also implemented actions set out in the coordinated plan, such as the calls for networks of excellence, research and innovation projects, the AI-on-demand platform and AI testing and experimenting facilities (TEFs).

Grants for TEFs in healthcare, agri-food, manufacturing, smart cities and communities, and edge AI have been signed, co-funded with Member States through *Digital Europe* for a total budget of EUR 376 million. These TEFs aim to support AI developers, in particular small and medium-sized enterprises (SMEs), to bring trustworthy AI to the market more efficiently and facilitate its uptake. They will be an important part of building the AI ecosystem of excellence and trust to support Europe’s strategic leadership in AI. They will also contribute to the implementation of the AI act by supporting regulatory sandboxes in cooperation with competent national authorities for supervised testing and experimentation.



The European public-private partnership (PPP) on AI, data and robotics (ADRA), launched in 2021, contributed to define the *Horizon Europe* strategic priorities, builds bridges between stakeholders, including SMEs and startups, to drive excellence, innovation and uptake of AI, data and robotics technologies. ADRA held an info-day and conducted several workshops with national contact points. It drafted the strategic orientation, starting the process for the update of the strategic research, innovation and deployment agenda.

In the EU-US Trade and Technology Council, a joint roadmap on evaluation and measurement tools for trustworthy AI and risk management was developed. Topics for cooperation on AI were agreed on and included in the Digital Partnerships concluded with Japan, Korea, and under development with Singapore. Areas of cooperation were outlined with Canada and India.

The communication efforts focused on all aspects of artificial intelligence, including launch of the first regulatory sandbox. Artificial intelligence figured prominently as an area for joint work in digital partnerships.

Specific objective 4

A fair, competitive and resource efficient digital economy

Related to spending programmes:
Horizon 2020, Horizon Europe,
Digital Europe, CEF - Digital

A key milestone towards a fair and competitive digital economy and a well-functioning digital internal market was achieved with the entry into force of the **digital services act** and the **digital markets act**. The new rules support the creation of a safer digital space in which the fundamental rights of all users of digital services are protected, and the establishment of a level playing field to foster innovation, growth, and competitiveness in the European internal market.

Europe is the first continent in the world to undertake a comprehensive reform of our digital space. With the DSA and the DMA we are about to reorganise the digital space in our internal market, both for societal and economic reasons. A new framework that can become a reference for democracies worldwide.

Commissioner Thierry Breton

To support the implementation of the **platform-to-business Regulation**, as follow up of the regular contacts with Member States, eight infringement letters were issued to Member States.

With specific regard to the **geo-blocking Regulation**, CONNECT launched a study aiming at assessing the evolution of cross-border e-commerce and the persisting obstacles for cross-border active engagement of traders, while at the same time testing the impact of certain delivery limitations practices of some of the largest multinational traders.

A key achievement **in the area of 5G** has been the selection of 15 5G corridor deployment projects funded under the *Connecting Europe Facility II - Digital*, together with eight inception studies. These 5G corridors for connected and automated mobility are part of a multi-country project contributing to the Digital Decade objectives. Coordinated by the Smart Networks and Services Joint Undertaking they will help to accelerate the deployment of 5G connectivity infrastructure along the main European transport paths and the provision of advanced road safety services and digital rail operations. The continued implementation of the 5G spectrum roadmap resulted in a revamped '5G-ready' spectrum harmonisation Decision on the 900 MHz and 1800 MHz frequency bands, as well as the '5G-ready' amendment of the harmonisation Decision on mobile communications on board aircraft. A '5G-ready' amendment of the harmonisation Decision on mobile communications on board vessels has also been launched.

Following the 2020 Commission Recommendation ⁽⁶⁾, a connectivity toolbox was developed and agreed by Member States. It contains 39 best practices aiming at (i) reducing the cost and increasing the speed of deploying very high capacity networks and (ii) ensuring a timely and investment-friendly access to 5G radio spectrum.

With the first calls for proposals under the *Connecting Europe Facility II - Digital*, and with the launch of a second set of calls, CONNECT is intensifying its actions to leverage public and private investment in very high-capacity networks, with the objective to cover pan-European backbone infrastructures that connect digital capacities, such as cloud federation, high performance computing, as well as submarine and satellite backbone infrastructure, 5G cross-border corridors and 5G early take-up in local smart communities.

CONNECT continued to follow the deployment of local wireless connectivity funded under the **WiFi4EU scheme, towards its completion by the first quarter of 2023**. By the end of 2022, more than 9 000 networks and 92 000 access points were active throughout Europe with more than 160 000 daily connections.

In line with the digital compass, CONNECT, in close cooperation with other DGs, started the development of **digital partnerships around the world**. Three digital partnerships with likeminded countries in Eastern Asia were launched in 2022: with Japan, with Korea, and with Singapore. The objective of these digital partnerships is to cooperate on regulatory convergence, on research, and to work together in international fora.

In 2021, the EU and the United States of America (USA) agreed to establish the Trade and Technology Council (TTC) to deepen transatlantic cooperation on key trade, technological and security challenges. In light of current geopolitical shifts and global crises, the TTC serves as a forum to coordinate on a joint EU-USA approach to tackle them. It aims to explore critical and emerging technology standards, including those relating to artificial intelligence, climate and clean tech, and it addresses resilience of supply chains, including for semiconductors. The TTC functions on a high-level political steering, as well as technical execution through the relevant 10 working groups, and stakeholders' engagement. So far three ministerial meetings took place.



The EU and India have agreed to establish a TTC to tackle key trade, technological and security challenges. The EU-India TTC will provide the political steer and the necessary structure to operationalise political decisions, coordinate technical work, and report to the political level to ensure implementation and follow-up in areas that are important for both sides. The aim is to launch the TTC in the first quarter of 2023.

⁽⁶⁾ [Commission Recommendation on a common Union toolbox for reducing the cost of deploying very high capacity networks and ensuring timely and investment-friendly access to 5G radio spectrum](#)

In the same context and in close cooperation with DG International Partnership and DG Neighbourhood and Enlargement Negotiations, CONNECT started implementing the digital window in the Global Gateway both in terms of policy support, involving other stakeholders and linking internal and financial resources. CONNECT's main objective is to contribute to deploying secure digital infrastructures in third countries and promote the EU regulatory framework, notably on data governance and cybersecurity. CONNECT has also contributed to the setup of the EU-Latin America and Caribbean (LAC) Digital Alliance which is to be launched in spring 2023. The alliance will strengthen secure and resilient connectivity between the EU and LAC and within Latin America and will establish a policy dialogue between the two continents.



The **new roaming Regulation** ⁽⁷⁾ entered into force on 1 July 2022 ensuring the continuation of the 'roam-like-at-home' benefits for EU consumers. The rules introduced important changes such as increased sustainability for operators thanks to reduced wholesale caps; the improved access to all network technologies; better quality of service for consumers and increased transparency in terms of access to emergency services; value added services and non-terrestrial networks on ships and airplanes.

CONNECT cooperated with the Body of European Regulators for Electronic Communications and national regulatory authorities to define the relevant **roaming guidelines** to ensure a consistent implementation of the **roaming Regulation** in all Member States.

The preparation of the review of the broadband cost reduction Directive progressed significantly. It aims at supporting the achievement of the Digital Decade connectivity targets, for example by aiming to ensure fibre deployment in all new and majorly renovated buildings by 2030.

CONNECT continued its **strong engagement in the multistakeholder internet governance** fora, representing the Commission's vision for an internet that is open, free, global, interoperable, reliable, and secure. These fora include the Internet Corporation for Assigned Names and Numbers, the Internet Governance Forum (IGF), and the European Dialogue on Internet Forum. CONNECT has also provided strong impetus to establishing the IGF leadership panel and to developing the multistakeholder component of the Declaration for the Future of the Internet, which has now been supported by over 65 partners worldwide, and which culminated in a high-level multistakeholder event held in November. CONNECT, together with the European External Action Service (EEAS) and the Foreign Policy Instrument has successfully concluded an agreement with the Office of the new United Nations Technology Envoy (responsible for the implementation of the United Nations Secretary-General's roadmap for digital cooperation), helping to shape its mandate and providing the Office with financial support. In this context, CONNECT and the EEAS have

⁽⁷⁾ Regulation (EU) 2022/612 of the European Parliament and of the Council of 6 April 2022 on roaming on public mobile communications networks within the Union.

elaborated the draft EU contribution to the United Nations' Global Digital Compact that is currently being negotiated with the EU Member States in view of a submission to the UN in March 2023.

CONNECT achieved significant progress in implementing the internet security, resilience and openness actions announced in the 2020 security union strategy and cybersecurity strategy. In particular, as part of the adopted Directive on measures for a high common level of cybersecurity across the Union (NIS2 Directive), CONNECT successfully negotiated provisions that create a legal framework for domain name registration data. In addition, CONNECT awarded a grant under *Connecting Europe Facility II – Digital* for a project to deploy autonomous European resolution capabilities. CONNECT has also ensured that EU interests in the area of internet security were defended in key European standardisation fora (in particular the European Telecommunications Standards Institute) as well as international fora (International Telecommunication Union). Through its collaboration with the Joint Research Centre, CONNECT delivered a web tool for monitoring the uptake across the EU of key internet security standards, which is an important step towards possible policies ensuring that the EU catches up on the adoption of world-class internet standards and protocols.

In the context of the Trade and Technology Council, CONNECT also worked with international partners to improve the mechanisms for monitoring the internet and the capacity to react to major disruptions, including government-driven internet shutdowns. This led to the delivery by a technical community stakeholders' group of a first report covering a recent major shutdown.

CONNECT successfully concluded negotiations of the new contract with the designated registry of the .eu top-level domain name. The contract entered into force in October 2022. CONNECT also adopted an implementing act containing the lists of reserved and/or blocked .eu domain names by Member States. Finally, CONNECT started preparatory work to establish the multistakeholder advisory group that will advise the Commission on the organisation and management of the .eu top-level domain.

CONNECT analysed the status and content of Member States national recovery and resilience plans with respect to the digitalisation of business. The report, published in June 2022, found that within digital investments in the plans, digitalisation of business is the second largest intervention field with 20% of the investments after digitalisation of public services that reached 36%.

With a view to achieving the Digital Decade objective of 90% EU small and medium-sized enterprises (SMEs) reaching at least a basic level of digital intensity, CONNECT has concluded over 120 grant agreements with European digital innovation hubs (EDIHs) that will help SMEs and public sector organisations with their digital transformation. The initial network of EDIHs will cover the entire EU, Norway, Iceland, and Lichtenstein.

CONNECT continued to pursue the objectives set out in the Digital Decade communication to reach the targets of at least 80% of the population having basic digital skills and 20

million employed information and communications technology specialists in the EU, with convergence between women and men by 2030.

To address the digital skills gap, the Commission launched, under *Digital Europe*, one call to support the creation of master's degrees in key technologies and one call to support short-term courses for upskilling the labour force. A coordination support action, 'LeADS', was also launched. It will deliver insights into the changing demand of advanced digital skills.

In the framework of the structured dialogue on digital education and skills conducted with the Secretariat-General, DG Education, Youth, Sports and Culture, DG Employment, Social Affairs and Inclusion and CONNECT, organised nine bilateral meetings with Member States to analyse the policies implemented for digital transformation of education and digital skills. The results will feed into two Council recommendations on enabling factors for digital education and for provision of digital skills and to the Digital Decade in 2023.

Code week celebrated 10 years of bringing computing and computational thinking to schools and training teachers. More than 77 000 activities were organised in nearly 80 countries around the world.

The digital skills & jobs platform, which is the home of digital skills in Europe, continued to grow. 11 national coalitions have now connected their website to the platform and contribute with relevant national content on digital skills.

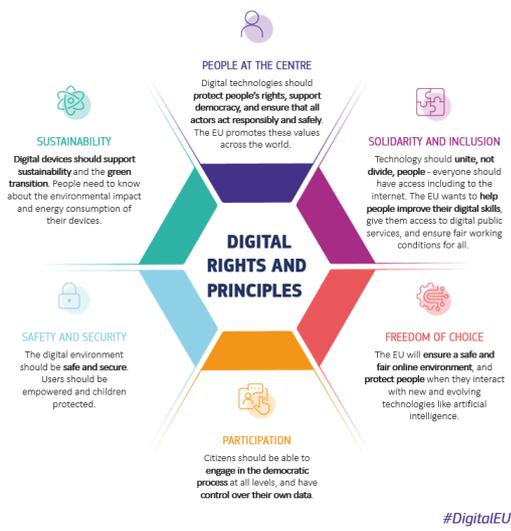
The digital volunteers pilot programme allowed 84 small and medium-sized enterprises to receive tailor-made mentoring support by larger companies for digitalising processes.

Regarding the transparency measures on the environmental footprint of electronic communications networks and services, the study on the greening of electronic communications services and networks, which was initially planned in 2022, has been delayed. The study has finally been assigned to the Joint Research Centre and will begin in February 2023. The outcome of the study will enable CONNECT to assess the feasibility of a set of common indicators to measure the sustainability of electronic communications networks and services, and to build the basis for the development of a sectorial code of conduct by end 2025.

The soon to be adopted energy efficiency Directive provides for the design of a measurement and reporting framework on the energy efficiency of data centres, which will be part of a forthcoming delegated act. This exercise began in 2022 under the lead of DG Energy. CONNECT contributed to the inception and award of a study that will assist the Commission in preparing such a measurement framework and will be closely involved in all phases of the study during 2023.

CONNECT signed a contract for an 18-month study on synergies between data centres and energy systems, one of the actions under the digitalisation of energy action plan. The study aims to gain better understanding on the barriers and drivers on how the waste heat and water generated by data centres can be reused for the benefit of local energy systems.

Following the adoption of the Communication on digitalising the energy system – EU action plan, CONNECT started to implement several key actions. These include promoting connectivity, interoperability and seamless exchange of data between different actors, fostering more and better coordinated investments in the electricity grid, empowering consumers to benefit from new ways to engage in the energy transition, to enhancing cyber-security, as well as addressing the energy consumption of digital technologies and promoting greater efficiency and circularity. Work is also ongoing towards developing a common reference framework including an open-source reference implementation for a consumer application that allows for voluntary reductions in energy consumption and helps them in reducing their energy costs.



The European declaration on digital rights and principles was signed by the President of the Council, President of the European Parliament on 15 December. The principles will then be monitored through an annual report on 'The State of the Digital Decade'. The Commission will conduct a Eurobarometer survey to monitor the implementation of the digital rights and principles in the Member States, on an annual basis. The aim is also to actively present the declaration to EU citizens and explain their rights in the digital age. For this reason, the declaration will be continuously promoted throughout 2023, mostly as a part of existing institutional and stakeholders' events on related topics, such as digital skills or safer internet for children. This will be an opportunity to present the different components of the declaration to a different target audience. The aim is to present the declaration to the key EU stakeholders but also ensure its reach to citizens and businesses outside of Brussels and international partners in effort to ensure that the declaration promotes EU values on international stage.

A pivotal element in communication efforts was the adoption of the digital services act and digital market act, as well as the proposal and agreement of the digital principles. For the latter, also an online game was created ahead of EU Open Day. On the international front, we communicated on the Trade and Technology Council with the United States of America as well as on digital partnerships with Japan, Korea, and Singapore were prominent. The 10-year anniversary of EU code week was marked.

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Specific objective 5 Related to spending programme: Horizon Europe, Digital Europe

A cyber resilient Europe, promoting digital identities for all Europeans, while protecting their e-privacy

The Commission adopted on 15 September 2022 the proposal for a cyber resilience act which aims to introduce mandatory cybersecurity requirements for manufacturers of

products with digital elements, throughout their life cycle. It also aims to increase the responsibility of manufacturers by obliging them to provide security support and software updates to address identified vulnerabilities. The proposed rules would rebalance the responsibility towards manufacturers, who must ensure conformity with cybersecurity requirements of products with digital elements that are made available on the EU market. As a result, these rules benefit business users and consumers by improving the transparency of the security properties in question.

Following the entry into force of the Regulation on the **European Cybersecurity Competence Centre (ECCC)** and the setting up of its governing board, the establishment of the centre continued throughout 2022. The chair and vice-chair of the governing board were selected. The governing board started holding its meetings. National Coordination Centres (NCCs) have been appointed and the network of NCCs has been active through its thematic working groups. Work to make the ECCC reach financial autonomy has continued, with the adoption of several decisions by the governing board related in particular to human resources matters, as well as preparations for the ECCC building in Bucharest. The negotiations on the hosting agreement also continued. Recruitment of staff has been started, including the selection process of the executive director, which was launched and is to be finalised in 2023.



CONNECT worked on the preparation of a call for expression of interest on joint procurement (between the ECCC and interested Member States) of cross-border security operations centres platforms, together with the ECCC Governing Board. This call, together with a related call for grants to support the referred platforms, was launched in November 2022.

CONNECT has facilitated the work of the **European Union Agency for Cybersecurity (ENISA)** on developing a candidate scheme for an EU cybersecurity certification for cloud services. The adoption of the scheme in 2022, as planned, has not been possible in view of a delay in the submission of the final scheme to the Commission, arising from discussions on the possible inclusion of 'sovereignty criteria' in the scheme. The new timeframe for the adoption is now set for the second quarter of 2023. In 2022, CONNECT has acted to expedite the submission of the scheme, notably by facilitating informal discussions between key public/private actors and ENISA.

CONNECT has prepared a draft Implementing Act establishing the common criteria-based European cybersecurity certification scheme, the first EU certification scheme. The draft is awaiting launching of the Inter-Service Consultation.

The work by ENISA on a candidate scheme for 5G security with a dedicated experts' group continued in 2022. The first phase of identification of gaps has been finalised and the second phase (drafting of the candidate scheme) will be launched in 2023.

CONNECT was able to successfully close the negotiations on the **Directive on measures for a high common level of cybersecurity across the Union (NIS2 Directive)**. The Directive was formally adopted by the co-legislators in November 2022 and has entered into force on 16 January 2023.

CONNECT has prepared with the European External Action Service and DG Defence Industry and Space, the **Joint Communication on the EU policy on cyber defence**, adopted in November 2022, which will enhance EU cooperation and investments in cyber defence to better protect, detect, deter, and defend against a growing number of cyber-attacks.

The trilogue negotiations on the ePrivacy Regulation continued in 2022 and the Commission will continue to support the co-legislators with a view of concluding the negotiations in 2023.



The Commission President established a **Cyber Crisis Task Force**, consisting of relevant Commission services and EU institutions, bodies and agencies with responsibilities for operational aspects of cybersecurity. To support it, a Cyber Coordination Task Force was created within CONNECT to focus on situational awareness and preparation for coordination in the event of a major cyber incident. The Task Force prepared weekly input to the Integrated situational awareness and analysis report, participated in the Cyber Crises Liaison Organisation network of national cyber authorities, and coordinated and prepared reports to the hierarchy on the cybersecurity situation in the EU. In addition, it has developed a playbook of procedures for internal escalation in the event of a major incident, led the follow up to the Council Conclusions of May 2022 regarding risk evaluation and mapping of secure communications tools. The Task Force also managed the project of establishing a Cyber Situation and Analysis Centre in the Commission with the collaboration of CERT EU and ENISA.

To achieve progress in the legislative discussion of the proposed revised digital identity (e-ID Regulation), CONNECT provided extensive support to both co-legislators.

CONNECT also worked with Member States on the technical preparations and selected for funding large-scale pilot projects involving actors and major industry players from all Member States to test the reference implementation of the European digital identity wallet.

The communication efforts focussed on different aspects of cybersecurity, including the proposal for a cyber resilience act, the adoption of the new rules on cybersecurity of network and information systems and the 10th anniversary of the European cybersecurity month. Cybersecurity is also a prominent aspect in the Trade and Technology Councils with the US and India, as well as the digital partnerships.

Specific objective 6

A modern, open and pluralistic society in the digital age where online disinformation is countered and diverse cultural content is available to all Europeans

Related to spending programmes:
Horizon Europe, Creative Europe -
Media, CEF – Digital, InvestEU

The adoption by the co-legislators of the digital services act (DSA) in 2022 will offer another important instrument to tackle disinformation. Its main regulatory tool is the supervised risk management framework for larger online platforms. The DSA is accompanied by co-regulatory measures such as codes of conduct, standards, and crisis protocols, which aim at building good practices and fostering cross-industry cooperation.

CONNECT supported the **code of practice on disinformation** signatories and prospective new signatories in the drafting of a new code, which was signed by 34 signatories on 16 June 2022 with the aim to become the code of conduct under the DSA. It contains 44 commitments and 128 measures designed to match the wide set of services covered by the code and address the shortcomings indicated in the guidance. Following the signature of the code, the Commission has chaired the code's task force which has been created to support the implementation and development of the code.



Through monthly reports handed in by the signatories of the code of practice and published in the Commission website, CONNECT continued, until June 2022, to monitor the actions taken by the signatories to limit the impact of disinformation campaigns related to the COVID-19 pandemic. Following Russia's war of aggression against Ukraine, the DG also started to monitor the actions of the signatories to limit the impact of disinformation related to the war within the code's task force.

With regard the **audiovisual media services Directive**, starting in December 2022 CONNECT carried out an interservice consultation on the guidelines regarding the scope of Member States' reports on measures taken for the development of media literacy skills between. The guidelines were ready for adoption at the beginning of 2023.

One major achievement of the year was the preparation of a **Regulation establishing a common framework for media services in the internal market (European media freedom act)** and an accompanying recommendation, which were adopted by the Commission in September 2022. The Regulation introduces a common framework for media services in Europe. It is designed to remove obstacles to the provision of media services across the EU, safeguarding media pluralism and independence in the internal market while ensuring that Member States remain able to adapt media policy to their national context, in line with their competences. The proposed Regulation envisages, among others, safeguards against political interference in editorial decisions and against surveillance. It

An independent and diverse media landscape is essential. The Media Freedom Act will give us an important opportunity to enhance the transparency and independence of EU operators.

Commissioner Thierry Breton

puts a focus on the independence and stable funding of public service media as well as on the transparency of media ownership and of the allocation of state advertising. Member States will also have to look at the impact of national measures and media concentrations on media freedom and pluralism.

CONNECT launched a study on the **audiovisual media services Directive (AVMSD)** provisions related European works which will end in the first quarter of 2023. This study will be used to prepare the Commission report on the same matter. In this field, the DG also started the preparation of the report on the application of AVMSD, launched an open tender for a study to support our work in completing the AVMSD compliance checks.

CONNECT contributed to the media freedom and pluralism pillar of the Rule of Law 2022 Report, focusing on core areas such as the independence of the media regulatory authorities, transparency of media ownership, transparency and fairness in the allocation of state advertising, the safety of journalists and access to information. The report also includes specific recommendations to all Member States.

Inclusion is a key pillar of the digital transformation, as reflected in the European declaration on digital rights and principles. CONNECT completed and published, in an accessible format, the review of the web accessibility Directive. The review showed that the level of accessibility of public sector websites and mobile applications has improved across the EU, but there is room for further improvement. The review also identified a shortage of digital accessibility experts across the EU.



A flagship initiative in the European Year of Youth, the new **strategy for a better internet for kids (BIK+)**, adopted by the Commission in May 2022, aims to ensure that every child is protected, empowered and respected online, including through active child participation. BIK+ will improve age-appropriate digital services, supporting the implementation of the legal framework, notably of the digital services act. A child-friendly version of the BIK+ Strategy was also made available.

In the context of the digital education action plan, CONNECT co-chaired two Commission expert groups together with DG Education, Youth, Sport and Culture: one on artificial intelligence and data in education and training, and a second on tackling disinformation and promoting digital literacy through education and training. They worked on developing ethical guidelines on artificial intelligence and data in education and training based on the ethics guidelines for trustworthy artificial intelligence, and comprehensive guidelines for teachers and educators on tackling disinformation and promoting digital literacy through education and training. The guidelines were published in September and October 2022, respectively.

Supported by *Digital Europe*, CONNECT launched a call for proposals for a coordination and support action project to support the European EdTech sector, i.e, the use of advanced digital technologies in classrooms. The selected project starts its activities in the first quarter of 2023.

The development of the European student eCard to facilitate cross-border student mobility has been progressing, including upgrading the existing infrastructure.

Following the Commission Recommendation (EU) 2021/1970, the previous digital service infrastructure has been extended and converted into the common data space for cultural heritage. The data space builds on the Europeana initiative which has been displaying, enriching and linking content shared from over 4 000 museums, libraries, and archives across Europe over the past 15 years.

The data space for cultural heritage is part of an extended group of initiatives contributing to the preservation, digitalisation and reuse of cultural heritage. The Competence Centre for the Conservation of Cultural Heritage (4CH) ensures research mapping, sharing best practices with a particular attention to three-dimensional digitisation of monuments and sites. During 2022, the Commission quickly agreed with the 4CH project the help to save Ukraine monuments: over a million files, 120 terabytes of photos, three dimensional models, catalogues, databases are preserved in EU data centres, to preserve Ukraine memory and support the future restoration of assets from the damages caused by the war of aggression of Russia.

CONNECT continued monitoring the implementation of the **Directive on copyright in the digital single market (DSM Directive) and the Directive on online television and radio programmes**. On 19 May 2022, the Commission sent reasoned opinions to 13 Member States for failure to notify or partial notification of the measures implementing the DSM Directive and to 10 Member States that failed to transpose the Directive on online television and radio programmes. By the end of 2022, 20 Member States completed the transposition of the DSM Directive and 21 of the Directive on online television and radio programmes. CONNECT also started to assess the compliance with EU law of the national transposition acts notified by Member States.

The DG launched preparatory work for the Recommendation on piracy of live content, which has been included in the 2023 Commission work programme. In this context, CONNECT organised a meeting with Member States to start an exchange of experiences on the role of national competent authorities in the fight against online piracy, in particular on the application of blocking injunctions specifically tailored to address piracy of live content.

CONNECT continued to seek actions to improve availability and access to audiovisual content across the EU.

CONNECT carried out a study on the consequences of the Recorded Artists Actors Performers judgement (C-265/19) and discussed the possible follow-up with Member States in the copyright Council working party. In July 2022 CONNECT issued a call for evidence concerning a possible initiative on the conditions for the remuneration of third country recorded music played in the EU.

Two important reports were issued during 2022 in the field of copyrights and related rights: (i) the report on the availability of copyright protected works in accessible formats for persons with disabilities and (ii) the report on the application of the Portability Regulation.

CONNECT also launched preparatory work on the evaluation of the Marrakesh Directive and continued working on the targeted review of the database Directive in the context of the data act.

CONNECT represented the Commission and took active part on the discussions regarding the Broadcasting Treaty in the 42nd session of the Standing Committee on Copyright and Related Rights held by the World Intellectual Property Organisation in May.

On the basis of a Commission Decision, the multimedia budget line continued to be gradually opened to competition. In 2022, a total of EUR 14.5 million was awarded to Euronews through specific grants. Calls for proposals were awarded for other actions including a radio network.

S+T+ARTS, innovation at the nexus of Science, Technology and the ARTS, has continued to put forward the role of the arts in achieving human-compatible and ecologically conscious (digital) technologies. New projects were launched that facilitate inclusion of artists in research and development via STARTS residencies and a number of exhibitions across Europe demonstrated results achieved in STARTS.

The communication efforts focused on disinformation, including in relation to Russia's war of aggression against Ukraine and on the media freedom act. A dedicated webpage providing an overview of the efforts undertaken in the digital area to help Ukraine was created (association to *Digital Europe*, disinformation action, industry support on roaming, laptops collection). In context of the European year of youth, a child friendly version of the digital principles and an online game on the same topic was delivered.

2. MODERN AND EFFICIENT ADMINISTRATION AND INTERNAL CONTROL

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

The first subsection reports the control results and other relevant information that supports management's assurance on the achievement of the financial management and internal control objectives ⁽⁸⁾. It includes any additional information necessary to establish that the available evidence is reliable, complete and comprehensive. It covers all activities, programmes and management modes relevant to the DG.

The second subsection deals with the other components of organisational management: human resources, better regulation principles, information management and external communication.

2.1. Financial management and internal control

Assurance is provided on the basis of an objective examination of evidence of the effectiveness of risk management, control and governance processes. This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. The results are explicitly documented and reported to the Director-General. The following reports / documentation have been considered:

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

⁽⁸⁾ Art 36.2 FR: a) effectiveness, efficiency and economy of operations; b) reliability of reporting; c) safeguarding of assets and information; d) prevention, detection, correction and follow-up of fraud and irregularities; and e) adequate management of risks relating to the legality and regularity of underlying transactions.

- The observations and recommendations reported by the European Court of Auditors (ECA).

The systematic analysis of the available evidence provides sufficient guarantees as to the completeness and reliability of the information reported and results in the full coverage of the budget delegated to the Director-General of CONNECT.

This section covers the control results and other relevant elements that support management's assurance. It is structured into 2.1.1 Control results, 2.1.2 Audit observations and recommendations, 2.1.3 Effectiveness of internal control systems, and resulting in 2.1.4 Conclusions on the assurance.

2.1.1. Control results

This section reports and assesses the elements identified by management which support the assurance on the achievement of the internal control objectives (ICO) ⁽⁹⁾. CONNECT's assurance building and materiality criteria are outlined in annual activity report annex 5. The annual activity report annex 6 outlines the main risks together with the control processes to mitigate them and the indicators used to measure the performance of the relevant control systems.

In 2022, CONNECT implemented an **overall budget of EUR 2 331.65 million**. CONNECT implemented directly 68.73% of the overall budget (EUR 1 602.62 million). The remaining 31.27% of the overall budget was implemented by entrusted entities and other DGs which have been delegated budget implementation tasks by CONNECT (EUR 729.03 million).

2022 was the **second year of implementation of the programmes of the new multi-annual financial framework (MFF) 2021-2027** i.e. *Horizon Europe, Digital Europe, Connecting Europe Facility II - Digital and Creative Europe - Media*. However, it is the first year in which significant payments were made. In 2021 the payments made were very limited as delays were encountered due to late adoption of the MFF 2021-2027 which led to the late adoption of the new basic acts for the establishment of the joint undertakings to which CONNECT is delegating certain budget implementation tasks, the late adoption of the work programmes and consequently also to delays in the launching of the calls.

In this context, the amount of the total payments made by CONNECT during 2022 has significantly increased compared to the previous year, i.e. EUR 965.70 million in 2021.

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

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

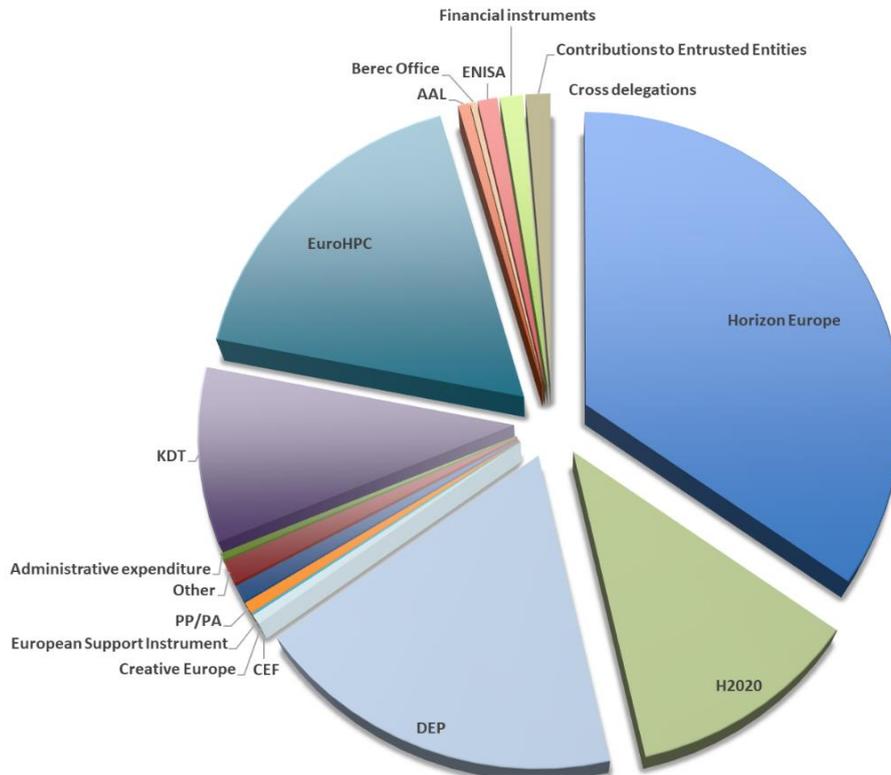
Payments made in respect of **grant management** represented 96% of CONNECT's payments made under direct management. Therefore, grant management represents the main relevant control system of the DG ⁽¹⁰⁾ in direct management and will receive special attention in this report.

Budget implemented by CONNECT (EUR million)	
Horizon Europe (HE)	811,29
Horizon 2020 (H2020)	272,22
Digital Europe (DEP)	432,27
Connecting Europe Facility 2-Digital (CEF 2-Digital)	0,03
Connecting Europe Facility 1-Telecom (legacy)	12,29
Creative Europe-Media	1,18
Creative Europe-Media (legacy)	0,72
Emergency Support Instrument (ESI)	13,86
Pilot Projects and Preparatory Actions (PP/PA)	20,99
Other	29,45
Administrative expenditure	8,31
Sub-Total	1.602,62
Budget implementation tasks entrusted to other DGs and entities (EUR million)	
1- Implementing Bodies	
Key Digital Technologies (KDT)	218,22
European High-Performance Computing (EuroHPC)	407,14
Ambient Assisted Living (AAL) Association (H2020)	13,81
Body of European Regulators for Electronic Communications (BEREC) Office	7,43
European Union Agency for Cybersecurity (ENISA)	24,21
Financial instruments (CCSGF,CEBF)	28,04
Contributions to ESA, EAO, EUMETSAT, ECMWF, UN	30,16
2- Cross delegations to other Commission DGs	
DIGIT, PMO	0,02
Sub-Total	729,03
TOTAL	2.331,65

Note 1: CONNECT implements part of the budget of Horizon and Digital Europe programmes in the name of Smart Networks and Services Joint Undertaking and European Cybersecurity and Competence Centre, for which it is parent DG, until the date they become autonomous.

Note 2: The amounts in the table above represent the 'payments made' during the year.

⁽¹⁰⁾ Annex 6 presents the relevant control systems of the DG in detail.



Overview of 2022 CONNECT budget implementation (as payments made)

Furthermore, CONNECT was a **parent DG for four Executive Agencies** which processed operational payments for a value of EUR 608.39 million linked to CONNECT activities.

Executive Agency (EA)	Operational payments implemented by the EAs linked to CONNECT activities
HADEA	276,29
REA	22,27
EISMEA	125,64
EACEA	184,19
TOTAL (EUR million)	608,39

In the context of the COVID-19 pandemic, CONNECT took part in the implementation of part of the **Emergency Support Instrument** (ESI). In year 2022, the delivery of the 305 ultraviolet disinfection robots, procured by the Commission and donated to hospital across Europe as part of the actions taken to fight against COVID-19 pandemic, was concluded. Additionally, for the implementation of the central EU Gateway for the EU Digital COVID Certificates (EU DCC), CONNECT further procured maintenance and support new releases of the EU DCC solution. The contracts signed were based on the same existing framework contract. In addition, ESI provided funds for grants supporting Member States to cover specific activities related to EU Digital COVID-19 Certificates (EU DCC). This followed usual control mechanisms established for grants.

During 2022, CONNECT followed up on the action plans designed in the previous year to **adapt the DG's internal control system** to the new portfolio of programmes, to the new delegation of programmes to its entrusted entities and to the new environment. All actions were implemented on time and as foreseen.

In line with the 2018 Financial Regulation, CONNECT's assessment for the new reporting requirement is as follows:

- Cases of 'confirmation of instructions' (FR art 92.3): no such cases.
- Cases of financing not linked to costs (FR art 125.3): no such cases.
- Cases of Financial Framework Partnerships >4 years (FR art 130.4): one case (for more details refer to Annex 3, Table 15).
- Cases of flat-rates >7% for indirect costs (FR art 181.6):
 - (i) According to the *Horizon 2020* and *Horizon Europe* rules for participation⁽¹¹⁾, indirect eligible costs of *Horizon 2020* and *Horizon Europe* grants are determined by applying a flat rate of 25% of the total direct eligible costs;
 - (ii) It is the basic act that derogates from the Financial Regulation. This applies to all *Horizon 2020* and *Horizon Europe* grants. However, in *Horizon 2020* and *Horizon Europe*, in some cases the 25% is directly embedded within a unit cost (e.g. in *Horizon 2020*, unit cost for clinical studies and in *Horizon Europe*, unit costs for providing trans-national and virtual access in research infrastructures actions). In other cases, the indirect costs are included within a larger unit cost or lump sum and the percentage of indirect costs cannot be determined separately (e.g. SME instrument phase 1 or the unit costs for institutional cost under Marie Skłodowska-Curie actions);

⁽¹¹⁾ Article 29 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in 'Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020)' and Article 39 Regulation (EU) 2021/65 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination.

- (iii) For the *Media/Euronews* CONNECT also uses flat rates for indirect costs which exceed the 7% ceiling. For the framework partnership agreement signed in July 2021, the indirect cost used in the unit costs was determined by an external audit firm, specifically appointed for this, at 17.92%.
- Cases of ‘Derogations from the principle of non-retroactivity [of grants] pursuant to Article 193 FR’ (Financial Regulation Article 193.2):
 - (i) There were seven cases, out of which, four in respect of *Preparatory Actions and Pilot Projects*, two in respect of Multimedia grants and one in respect of *Horizon Europe*;
 - (ii) In all above cases, costs incurred prior to the date of submission of the grant application were not eligible.

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 the Internal Audit Service 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.

CONNECT has put in place cost-effective controls. They fulfil the intended control objectives⁽¹²⁾ in an efficient manner and at a reasonable cost. To support this conclusion, here below we present the assessment of the **effectiveness, efficiency and economy of the controls**.

1. Effectiveness of controls

In order to be considered effective, controls are expected to meet the internal control objectives (to be detailed hereafter). Control results are detailed hereafter regarding the legality and regularity of the operations, the fraud prevention, detection and correction and other control objectives. The benefits of the controls for the direct grant management are also described.

a) Legality and regularity of the transactions

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

⁽¹²⁾ Art 36.2 FR: a) effectiveness, efficiency and economy of operations; b) reliability of reporting; c) safeguarding of assets and information; d) prevention, detection, correction and follow-up of fraud and irregularities; and e) adequate management of risks relating to the legality and regularity of underlying transactions.

Details related to aspects of legality and regularity of transactions for the programmes implemented directly by CONNECT or delegated for implementation to entrusted entities please refer to Annex 7.

Budget directly implemented by CONNECT:

Horizon Europe

2022 was the second year of implementation of the *Horizon Europe* framework programme. No representative error rate for *Horizon Europe* is available in 2022 as the ex-post audit campaign for the programme is planned to be launched by the end of 2023 at the earliest, once a meaningful number of payments can be audited. Consequently, without elements allowing an assessment of the level of errors and taking into account the simplifications introduced for *Horizon Europe* that aim to reduce the error rate, the detected and residual error rate will be estimated to 2% ⁽¹³⁾ for CONNECT.

Horizon 2020 research programme (legacy)

In 2020, the Commission refined its methodology for calculating the *Horizon 2020* error rates in line with the European Court of Auditors' observations in its 2018 and 2019 Annual Reports ⁽¹⁴⁾. The methodology applied is described in Annex 5 'Materiality criteria'. As of January 2020, DG Research and Innovation applied the revised methodology on a sample of 1 937 audit conclusions. This results in the following error rates for *Horizon 2020* ⁽¹⁵⁾ on 31 December 2022:

- Cumulative representative detected error rate: **2.71%** ⁽¹⁶⁾;
- Cumulative residual error rate for the Research and Innovation Family DGs: **1.67%** (**1.71% for CONNECT**) ⁽¹⁷⁾.

In line with the Financial Statement ⁽¹⁸⁾ accompanying the Commission's proposal for the *Horizon 2020* Regulation, a reservation is not necessary for the related expenditure if the

⁽¹³⁾ These rates correspond to the objective set for Horizon Europe.

⁽¹⁴⁾ When calculating the multi-annual error rate, the Commission took into account the results of the audit re-performed by the ECA as part of Module 2 of the DAS 2018-2019.

⁽¹⁵⁾ The Horizon 2020 audit campaign started in 2016. At this stage, four Common Representative Samples with a total of 628 expected results have been selected. By the end of 2022, cost claims amounting to EUR 40.8 billion have been submitted by the beneficiaries to the services. The audit coverage for Horizon 2020 is presented in annex 7. In addition to the Common Representative Samples, Common Risk Samples and Additional Samples have also been selected. The audits of 4 060 participations were finalised by 31/12/2022 (of which 633 in 2022).

⁽¹⁶⁾ Based on the 479 representative results out of the 628 expected in the four Common Representative Samples.

⁽¹⁷⁾ It should be noted that in 2021 most Horizon 2020 grants managed by CONNECT were transferred to Executive Agencies. Hence, this figure is based only on the actions that remained with CONNECT at the end of 2021.

⁽¹⁸⁾ The legislative financial statement accompanying the Commission's proposal for the Horizon 2020 regulation states: 'The Commission considers therefore that, for research spending under Horizon 2020, a risk of error, on an annual basis, within a range between 2-5% is a realistic objective taking into account the costs of controls, the simplification measures proposed to reduce the complexity of rules and the related inherent risk associated to the reimbursement of costs of the

cumulative residual error rate for the programme falls within the target range of 2-5%. In 2022, and despite the above-mentioned caveats, CONNECT cumulative residual error rate for *Horizon 2020*, calculated at 1.71%, more than fulfils this condition and is below the materiality threshold. Despite the absence of reservation, the root causes of errors have been identified and targeted actions taken to address any identified weaknesses.

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

These error rates are calculated on the basis of the audit results available when drafting the Annual Activity Report. They should be treated with caution as they may change subject to the availability of additional data from audit results.

Given the results of the audit campaign, and the observations made by the European Court of Auditors (ECA) in its Annual Reports, the Common Implementation Centre, in close cooperation with central Commission services, defined actions aimed at significantly simplifying the rules, and paving the way for a significant reduction of the error rate in *Horizon Europe*. Apart from the use of a Corporate Model Grant Agreement and a common Annotated Grant Agreement for all programmes directly managed by the Commission, other actions include further simplification, such as the increased use of simplified forms of funding (including lump sums and unit costs), focused communication campaigns to more 'error-prone' types of beneficiaries with higher than average error rates, such as small and medium-sized enterprises and newcomers, and enhanced training to external audit firms performing audits on behalf of the Commission (the last three measures also target *Horizon 2020* grants and beneficiaries). Focusing on the most common errors, these events will be straightforward, reaching more participants and achieving higher impact.

In addition, the ECA recommended certain improvements related to the quality of the audit process. Following the recommendation of the ECA the Commission reinforced or introduced a number of actions to remedy the risks identified by the ECA. The Court has acknowledged all these efforts to improve the quality of audits and considers its recommendation to be fully implemented.

Digital Europe

2022 was the second year of implementation of *Digital Europe* and the first year in which payments were made. The first ex-post audits for the programme will be carried out in the beginning of 2024, once the first payments can be audited. Considering that the ex-ante controls in place for the programme are similar to the ones of the Horizon programmes,

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

CONNECT decided to estimate the detected and residual error rate for 2022 at 2% ⁽¹⁹⁾.

Creative Europe – Media and Creative Europe - Media (legacy)

The payments made by CONNECT for *Creative Europe - Media* (i.e. EUR 1.18 million) and for *Creative Europe – Media (legacy)* (i.e. EUR 0.72 million) during 2022 were very limited. The associated level of error is estimated as low as the implementation was done mostly on the basis of unit costs and procurement.

Connecting Europe Facility (CEF) II - Digital and CEF Telecom (legacy)

The payments made during 2022 for *CEF II - Digital* (i.e. EUR 0.03 million) and *CEF Telecom* (i.e. EUR 12.29 million) were very low. The associated level of error is estimated as low as the implementation was done through procurement.

Emergency Support Instrument (ESI), Pilot Projects & Preparatory Actions (PP/PA)

For the *Emergency Support Instrument*, CONNECT estimated a detected error rate within the range of 2%-3%. Considering the limited amount of payments of EUR 3.21 million and the financial impact of EUR 0.38 million, the *de-minimis* rule applies.

For the *Pilot Project and the Preparatory Actions*, CONNECT estimated a detected error rate of 3%. Given the limited payments of EUR 18.43 million and the financial impact of EUR 0.45 million, the *de-minimis* rule applies.

Budget implemented by entrusted entities:

CONNECT has entrusted parts of its budget to other Commission services, to the Key Digital Technologies (KDT) ⁽²⁰⁾ and to the European High Performance Computing (EuroHPC) joint undertakings; to the Body of European Regulators for Electronic Communications (BEREC) office and European Union Agency for Cybersecurity (ENISA) (decentralised agencies); to the Ambient Assisted Living (AAL) Association (body pursuant to Article 185 of the TFEU), and to Executive Agencies, i.e. the European Health and Digital Executive Agency (HaDEA), the Research Executive Agency (REA), the European Innovation Council and SMEs Executive Agency (EISMEA) and the European Education and Culture Executive Agency (EACEA).

CONNECT has also entrusted budget to the European Space Agency (ESA), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the European Centre for Medium-Range Weather Forecasts (ECMWF), the United Nations Department of Social and Economic Affairs (UNDESA) and to the European Audiovisual Observatory (EAO).

⁽¹⁹⁾ These rates correspond to the objective set for Digital Europe.

⁽²⁰⁾ Former Electronic Components and Systems for European Leadership (ECSEL) Joint Undertaking.

A number of financial instruments managed by the European Investment Bank (EIB), the European Investment Fund (EIF) and by Cube Infrastructure Managers are also used ⁽²¹⁾.

The total amount of payments made by CONNECT to these entities amounts to EUR 729.03 million. In addition, EUR 608.39 million were delegated by CONNECT to Executive Agencies.

Entity	Legal form	Payments made (EUR million)
Other Commission Services through cross delegations (DIGIT, PMO)	EU Institution	0.02
Key Digital Technologies (KDT)	Joint Undertaking	218.22
European High-Performance Computing (EuroHPC)	Joint Undertaking	407.14
Body of European Regulators for Electronic Communications (BEREC) Office	Decentralised Agency	7.43
European Union Agency for Cybersecurity (ENISA)	Decentralised Agency	24.21
Ambient Assisted Living (AAL) Association	Private Law Body	13.81
European Investment Bank (CEF Debt Instrument)	Financial Instrument	0
European Investment Fund - Cultural and Creative Sectors Guarantee Facility (CCSGF)	Financial Instrument	15.43
Cube Infrastructure Managers S.A. - Connecting Europe Broadband Fund (CEBF)	Financial Instrument	12.61
Contributions to ESA, EAO, EUMETSAT, ECMWF, UN	Contribution Agreements	30.16
TOTAL		729.03

Entity	Legal form	Payments made (EUR million)
European Research Executive Agency (REA)	Executive Agency	22.27
European Innovation Council and SMEs Executive Agency (EISMEA)	Executive Agency	125.64
European Education and Culture Executive Agency (EACEA)	Executive Agency	184.19
European Health and Digital Executive Agency (HaDEA)	Executive Agency	276.29
TOTAL		608.39

In all cases, the supervision arrangements for the entrusted entities are based on the **principle of controlling 'with' the relevant entity** and are described in annex 6. For further details on the supervision arrangements and on the control results of each of the entrusted entities please see Annex 7, section 1, point B.

⁽²¹⁾ Financial instruments to the EIB established under the CEF Broadband, the Connecting Europe Broadband Fund, and the Cultural and Creative Sectors Guarantee Facility managed by the EIF.

Executive Agencies

Three **executive agencies (i.e. REA, EACEA and HaDEA)** for which CONNECT is parent DG reported in their annual reports that they have in place cost-effective control systems and reported positive control results for the year 2022.

For HaDEA, as regards *CEF Telecom* legacy (delegated by CONNECT), the residual error rate was 3.28%, above the 2% materiality criteria. However, the cumulative conditions of the *de minimis* rule were met and no reservation was issued (i.e. the share of payments for *CEF Telecom* legacy was 0.73% of the total payments of the Agency and the financial impact was EUR 1.57 million.

EISMEA, for which CONNECT is parent DG, reported in its annual report a positive conclusion on the cost-effectiveness of the controls for programmes delegated to the Agency albeit qualified by a reservation on reputational grounds concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the European Innovation Council (EIC) Accelerator scheme within the EIC Programme.

The agency considers that, for all programmes except COSME (not delegated by CONNECT), the cumulative residual error rates fall within the established materiality criteria. For COSME, the multi annual residual error rate at the end of 2022 was 2,69% (down from 2,90% in 2021), above the materiality threshold of 2%. However, this programme meets the cumulative criteria for the *de minimis* rule and hence it does not report a reservation.

EISMEA assessed its internal control system and concluded that it is partially effective as internal control principles 3, 8, 10, 11, 12, 13, 14 need improvements which could have a significant impact on the assurance. The improvements and remedial measures envisaged are described in the action plan designed following the internal control self-assessment and also in the joint action plan following the recommendations in the final audit report on the 'Design and early implementation of the EIC in EISMEA, DG RTD and DG CNECT', which was communicated to the Internal Audit Service on 22 February 2023.

The supervision arrangements for the executive agencies are described in detail in Annex 7, section 1, point B. CONNECT, in its supervisory role, follows up closely with EISMEA and supports the implementation of the remedial actions envisaged to address the reported weaknesses. Consequently, overall CONNECT does not consider that the afore mentioned represents a weakness in CONNECT's supervision.

Joint Undertakings

The EuroHPC and KTD joint undertakings, for which CONNECT is parent DG, implement parts of *Horizon Europe*, *Horizon 2020*, *Digital Europe* and *CEF* programmes.

The European Court of Auditors, in its Annual Report on Joint Undertakings regarding the financial year 2021, published 15/11/2021 considered that the payments underlying the accounts for the year ended 2021 for both EuroHPC and KDT joint undertakings, were legal

and regular in all material respects. The auditor made several observations which do not affect the

A new joint undertaking, the **Smart Networks and Services Joint Undertaking (SNS JU)** was established on 19/11/2021 through Council Regulation 2021/2085. CONNECT is responsible for the initial operations until it becomes autonomous, which is foreseen for the first semester of 2023. There were no activities/payments during 2022 and thus no control results to report so far.

The supervision arrangements for the joint undertakings are described in detail in Annex 7, section 1, point B. CONNECT in its supervisory role did not identify any particular issues to report upon in this report.

Decentralised agencies

For the decentralised agencies, **BEREC Office** and **ENISA**, CONNECT considers that its supervision has been effective and appropriate in 2022.

Other entrusted

The annual on-site review of the **AAL Joint Programme** assessed the overall performance of the AAL Association and confirmed sound financial situation and good operation of the AAL JP.

The **European Cybersecurity Network and Cybersecurity Competence Centre (ECCC)** was established on 20/05/2021 ⁽²²⁾ and will be responsible for parts of *Digital Europe* and *Horizon Europe*. CONNECT is responsible for ECCC's operations until it becomes autonomous which is foreseen for 2023. During 2022 it included the evaluation of the calls for proposals, the signature of grants and the management of the projects retained for funding and launching of the preparation of the work programmes for 2023-2024. In doing so, CONNECT uses the same control systems in place as for its own operations.

ESA, EUMETSAT, ECMWF, UNDESA, EAO

CONNECT signed contribution agreements on 15 December 2021 with the European Space Agency, the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and the European Centre for Medium-Range Weather Forecasts (ECMWF) (entrusted entities) to entrust budget implementation tasks in respect of the Destination Earth initiative under the *Digital Europe* work programme 2021-2022. CONNECT relies on the control systems of these entities which were validated by external independent auditors which performed pillar assessments (based on the common terms of reference of the Commission). This allows CONNECT to rely on the external control systems of these entities, which becomes part of the accountability chain of the DG. During 2022, a total of EUR 29.40 million was paid to these entrusted entities.

⁽²²⁾ Regulation (EU) 2021/887 of the European Parliament and the Council establishing the European Cybersecurity Industrial, Technology and Research Competence Centre and the Network of National Coordination Centres.

CONNECT signed a contribution agreement with the United Nations Department of Social and Economic Affairs (UNDESA) on 27/05/2021 with a view to delegate the implementation of one of the actions of the Communication of the Commission 'Internet Policy and Governance: Europe's role in shaping the future of Internet Governance'. A payment of EUR 0.24 million was effected during 2022. From the available monitoring and communication received from UNDESA during the year, CONNECT can conclude that its supervision has been effective and there is no weakness to report.

CONNECT signed a contribution agreement on 24/11/2021 with the European Audiovisual Observatory (EAO) for the implementation of the action entitled 'EA06 — Information and Research on the Audiovisual Sector'. In 2022, a total of EUR 0.53 million was paid to the EAO. From the available monitoring and communication received from EAO during the year, CONNECT can conclude that its supervision has been effective and there is no weakness to report.

Financial Instruments

As regards the **financial instruments** (CEF debt instrument, CEF equity instrument, Connecting Europe Broadband Fund and the Cultural and Creative Sectors Guarantee Facility), CONNECT considers that its supervision and controls have been effective and appropriate in 2022. In particular, CONNECT considers that the reporting of the European Investment Bank and European Investment Fund is sufficient and provides relevant information.

Overall, we can conclude that CONNECT has set up strong internal control processes aimed at ensuring 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.

We are aware of the higher error rate of *CEF Telecom (legacy)* reported by HaDEA but for which the *de minimis* rule applies. We are aware of the reservation on reputational grounds issued by EISMEA concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the European Innovation Council (EIC) Accelerator scheme within the EIC Programme. We closely monitor and support the implementation of the remedial actions envisaged by EISMEA to address the reported weaknesses in their internal control system. Nevertheless, overall, we do not consider that they represent a weakness in CONNECT's supervision.

CONNECT's portfolio of activities consists of:

- segments with a relatively higher error rate, related to grant management implemented directly or entrusted to other entities (e.g. *Horizon 2020, Horizon Europe, Digital Europe*);
- segments with a relatively low error rate, related to direct or indirect implementation of administrative expenditure or operational expenditure through procurement.

This is, respectively, due to the risk profile of the beneficiaries, the inherent risks of the spending modalities and the performance of the related control systems, taking into account the complexities of the programmes, as well as the overall control strategy followed.

Annex 7, section 1, point A includes information about the actions taken and communication campaigns focused on more error-prone types of beneficiaries, enhanced training to project officers and external auditors and actions for improving table X checks which contributed to the lower risk of error.

In addition, CONNECT has in place an effective mechanism for correcting errors, through ex-ante and ex-post controls, resulting in preventive and corrective measures, respectively. Please see table below for details:

	Preventive Measures (m EUR)	Corrective measures (m EUR)
Implemented by the Commission		
<i>of which from EU controls</i>	1.38	1.26
CONNECT total	1.38	1.26

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 EUR 1.4 million of EU contribution in 2022.

Based on all the above, CONNECT presents in the following table an estimation of the risk at payment and risk at closure for the expenditure managed during the reporting year:

Table X: Estimated risk at payment and at closure (amounts in EUR million)

The full detailed version of the table is provided in annex 9, along with the footnotes.

CONNECT	Payments made	Relevant expenditure	Estimated risk (error rate %) at payment				Estimated future corrections and deductions				Estimated risk (error rate %) at closure			
	m EUR	m EUR	m EUR	m EUR	%	%	m EUR	m EUR	%	%	m EUR	m EUR	%	%
Grants: Horizon Europe (HE)	806,99 €	0,00 €	0,00 €	0,00 €	2,00%	2,00%	-	-	0,00%	0,00%	0,00	0,00	2,00%	2,00%
Grants: Horizon 2020 (H2020)	262,29 €	874,52 €	23,70 €	23,70 €	2,71%	2,71%	8,75	8,75	1,00%	1,00%	14,95	14,95	1,71%	1,71%
Grants: Digital Europe (DEP)	423,11 €	0,00 €	0,00 €	0,00 €	2,00%	2,00%	-	-	0,00%	0,00%	0,00	0,00	2,00%	2,00%
Grants: Creative Europe-Media	0,58 €	0,34 €	0,01 €	0,01 €	1,50%	2,00%	-	-	0,00%	0,00%	0,01	0,01	1,50%	2,00%
Grants: Creative Europe-Media (Legacy)	0,13 €	0,13 €	0,00 €	0,00 €	1,50%	2,00%	-	-	0,00%	0,00%	0,00	0,00	1,50%	2,00%
Grants: Emergency Support Instrument (ESI)	3,21 €	15,66 €	0,31 €	0,47 €	2,00%	3,00%	0,09	0,09	0,54%	0,54%	0,23	0,38	1,46%	2,46%
Grants: Pilot Projects and Preparatory Actions (PP/PA)	18,43 €	15,04 €	0,45 €	0,45 €	3,00%	3,00%	-	-	0,00%	0,00%	0,45	0,45	3,00%	3,00%
Other Grants (e-comm multimedia prerogative)	25,67 €	23,24 €	0,35 €	0,46 €	1,50%	2,00%	0,13	0,13	0,54%	0,54%	0,22	0,34	0,96%	1,46%
Procurement	54,62 €	54,58 €	0,27 €	0,27 €	0,50%	0,50%	-	-	0,00%	0,00%	0,27	0,27	0,50%	0,50%
Other	7,60 €	7,60 €	0,04 €	0,04 €	0,50%	0,50%	-	-	0,00%	0,00%	0,04	0,04	0,50%	0,50%
Entrustees Entities: Ambient Assisted Living (AAL) Association (H2020)	13,81 €	0,15 €	0,00 €	0,00 €	2,71%	2,71%	0,00	0,00	1,00%	1,00%	0,00	0,00	1,71%	1,71%
Entrustees Entities: Body of European Regulators for Electronic Communications (BEREC) Office	7,43 €	7,23 €	0,04 €	0,07 €	0,50%	1,00%	-	-	0,00%	0,00%	0,04	0,07	0,50%	1,00%
Entrustees Entities: European Union Agency for Cybersecurity (ENISA)	24,21 €	22,51 €	0,11 €	0,23 €	0,50%	1,00%	-	-	0,00%	0,00%	0,11	0,23	0,50%	1,00%
Entrustees Entities: European High-Performance Computing (EuroHPC)/CEF:Procurement	30,04 €	0,04 €	0,00 €	0,00 €	0,50%	0,50%	-	-	0,00%	0,00%	0,00	0,00	0,50%	0,50%
Entrustees Entities: European High-Performance Computing (EuroHPC)/ H2020	68,97 €	68,97 €	1,87 €	1,87 €	2,71%	2,71%	0,69	0,69	1,00%	1,00%	1,18	1,18	1,71%	1,71%
Entrustees Entities: European High-Performance Computing (EuroHPC)/HE	96,76 €	0,00 €	0,00 €	0,00 €	2,00%	2,00%	-	-	0,00%	0,00%	0,00	0,00	2,00%	2,00%
Entrustees Entities: European High-Performance Computing (EuroHPC)/DEP	211,36 €	0,00 €	0,00 €	0,00 €	2,00%	2,00%	-	-	0,00%	0,00%	0,00	0,00	2,00%	2,00%
Entrustees Entities: Key Digital Technologies (KDT)/HE	117,74 €	0,00 €	0,00 €	0,00 €	2,00%	2,00%	-	-	0,00%	0,00%	0,00	0,00	2,00%	2,00%
Entrustees Entities: Key Digital Technologies (KDT)/H2020	100,48 €	100,48 €	2,72 €	2,72 €	2,71%	2,71%	1,00	1,00	1,00%	1,00%	1,72	1,72	1,71%	1,71%
Entrustees Entities: EIF, Cube Infrastructure Managers SA. (CCSGF, CEBF Financial Instruments)	28,04 €	28,04 €	- €	0,14 €	0,00%	0,50%	-	-	0,00%	0,00%	-	0,14	0,00%	0,50%
Entrustees Entities: ESA,EAO, EUMETSAT, ECMWF, UN	30,16 €	0,20 €	0,00 €	0,00 €	0,50%	0,50%	-	-	0,00%	0,00%	0,00	0,00	0,50%	0,50%
Cross-delegations to other DGs (DIGIT, PMO)	0,02 €	0,02 €	0,00 €	0,00 €	0,50%	0,50%	-	-	0,00%	0,00%	0,00	0,00	0,50%	0,50%
CONNECT total	2.331,65	1.218,77	29,88	30,44 €	2,45%	2,50%	10,65	10,65	0,87%	0,87%	19,22	19,79	1,58%	1,62%

Estimated overall risk at closure

CONNECT's relevant expenditure, its estimated overall risk at payment, estimated future corrections and risk at closure are set out in Table X: Estimated risk at payment and at closure.

The estimated overall risk at payment for 2022 expenditure is between EUR 29.88 million and EUR 30.44 million, representing 2.45%-2.50% of the DG's total relevant expenditure for 2022.

This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in subsequent years. The conservatively estimated future corrections for 2022 expenditure amount to EUR 10.65 million.

The difference between those two amounts results in the estimated overall risk at closure of between EUR 19.22 million and EUR 19.79 million, representing 1.58%-1.62% of the DG's total relevant expenditure for 2022.

The estimated overall risk at payment for 2022 expenditure is the AOD's best conservative estimate of the amount of relevant expenditure during the year, not in conformity with the contractual and regulatory provisions applicable at the time the payment was made. This expenditure will subsequently be subject to ex-post controls and a proportion of the underlying errors will be detected and corrected in subsequent years. This amount corresponds to the conservatively estimated future corrections for 2022 expenditure.

The estimated overall risk at closure for 2022 (EUR 19.22 and EUR 19.79 million) is higher than the estimated overall risk at closure for 2021 (EUR 17.78 and 18.22 million) mainly because of a considerable increase in the 2022 payments made of EUR 2 331.65 million as compared to the 2021 payments made of EUR 965.70 million. The estimated overall amount at risk at payment (EUR 29.88 and EUR 30.44 million) is also higher than last year (EUR 25.13 - 25.57 million) for the same reason.

For an overview at Commission level, the DGs' estimated overall risk at payment, estimated future corrections and risk at closure are consolidated in the AMPR.

b) Fraud prevention, detection and correction

CONNECT has developed and implemented its own anti-fraud strategy since 2009, based on the methodology provided by the European Anti-Fraud Office (OLAF). It was updated regularly. It was last updated in January 2022. Its implementation is being monitored and reported to management.

CONNECT also contributed to the Commission's anti-fraud strategy and followed up on OLAF's financial recommendations. In the period 2018-2022, OLAF issued seven ⁽²³⁾

⁽²³⁾ OLAF issued another three recommendations related to a national grant scheme co-financed by the European Social Fund (ESF) which financed staff cost that were at the same time claimed in the context FP7 projects. The ESF funding was

financial recommendations to CONNECT, which the DG followed up at 100% with the following results: two (29%) were fully implemented, four (57%) have a non-implemented status and one (14%) is under analysis. For all four non-implemented recommendations, recovery orders were issued. Two recoveries concern entities currently in liquidation. One recovery will be implemented through an enforced recovery by the Legal Service. The fourth case could not be implemented as the entity was in liquidation and no recovery was possible; the debt therefore had to be waived. As regards the case under analysis, its implementation is ongoing and under discussion with central services.

Furthermore, CONNECT follows and implements the common anti-fraud strategy in the Research Family (RAFS) and its action plan. The RAFS was first established in 2012, and updated in 2015 and 2019 to respond to new challenges. The implementation of the action plan is regularly monitored by the Steering Board and the Executive Committee of the Common Implementation Centre and the Fraud and Irregularities in Research (FAIR) Committee, in which CONNECT actively participates. At the end of 2022, the RAFS action plan was fully implemented.

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

In 2022, CONNECT has taken action in the following areas targeting fraud prevention, detection and correction:

- Ethical behaviour of staff ⁽²⁴⁾;
- Awareness of fraud risks ⁽²⁵⁾ for staff involved in grants and/or procurement;
- Timely implementation of OLAF reports;
- Good cooperation with stakeholders;
- Consideration of fraud risks when drafting legislative acts.

During the fraud risk awareness raising training sessions organised by CONNECT, the percentage of newcomers trained ⁽²⁶⁾ was 62% while the target set was 80%. In 2022, two training sessions were organised in October and November totalling 52 participants. In 2023, CONNECT will continue to provide fraud awareness training sessions and have a good organisation and communication to ensure a high participation.

withdrawn, therefore OLAF withdrew the three recommendations and confirmed that no further recovery under FP7 is necessary.

⁽²⁴⁾ Ethics related training sessions.

⁽²⁵⁾ Awareness of fraud risks training sessions.

⁽²⁶⁾ Staff involved in procurement and grant management for less than 2 years.

On the basis of the available information, CONNECT has reasonable assurance that the anti-fraud measures in place are effective overall and that an adequate fraud prevention, detection and correction system is in place. In 2022, CONNECT has started the implementation of the action plan for the updated anti-fraud strategy 2022-2024. The actions due in 2022 were implemented at 96%. Only one action is still ongoing, the target date for its implementation has been extended to 2023.

Entrusted entities

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

The Commission anti-fraud strategy is binding for all Commission services and the executive agencies. The DGs and executive agencies of the research family also adhere to the common anti-fraud strategy in the Research Family. CONNECT ensures compliance of the BEREC Office, ENISA, EuroHPC and KTD JU with anti-fraud requirements through its participation in their governing boards.

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

The results achieved during the year are described in more detail in Annex 7, section 1, point C.

c) Other control objectives: safeguarding of assets and information, reliability of reporting

The assets reported by CONNECT in the balance sheet 2022 mainly concern short term and long-term pre-financing under direct and indirect management (mostly related to *Horizon 2020* and Joint Undertakings) and financial instruments Connecting Europe Broadband Fund and the Cultural and Creative Sectors Guarantee Facility. The control system is covered in the section of the management of those programmes.

The intangible assets reported in the balance sheet 2022 are IT software amounting to EUR 10.991.772,46. They are related to:

- The EU Digital COVID Certificate (EU DCC) IT system, whose value amounts to EUR 10.724.545,15 was developed to facilitate free movement between connected countries during the COVID pandemic. The only component of the EU DCC IT system deployed in operation is EU DCC gateway which is run by the Commission. In addition, the reference implementation of three mobile apps was also developed to support Member States in issuing, verifying and accepting interoperable COVID vaccination, test and recovery EU Digital COVID Certificates;

- The capitalization of costs related to IT project digital services act, EUR 267.227,31 which will establish and maintain a modern, reliable and secure IT system, supporting the implementation and operation of the digital services act.

No security incidents with significant impact on the confidentiality, integrity or availability of Information Systems were reported during the year. Overall, CONNECT considers that its safeguarding of the assets is effective and appropriate.

Other control objectives: Off-balance sheet items

The contingent liabilities reported by CONNECT in 2022 (EUR 142.1 million) represent the amount available for the Cultural and Creative Sectors Guarantee Facility and the open balance of the guarantee paid to the EIB for the project PBI, later merged and currently called CEF debt instrument. The 'other significant disclosures' (EUR 3 337.4 million) reported in 2022 are related to the open 'RAL' for research grants in *Horizon Europe*, *Digital Europe* and *Connecting Europe Facility Digital* programme as well as other non-research grants and procurement files for *Horizon Europe*, *Digital Europe*, *Pilot projects & Preparatory actions*, *Connecting Europe Facility (digital and legacy)* and *Creative Europe* programmes. A separate control strategy is not deemed necessary for 2022.

2. Efficiency of controls

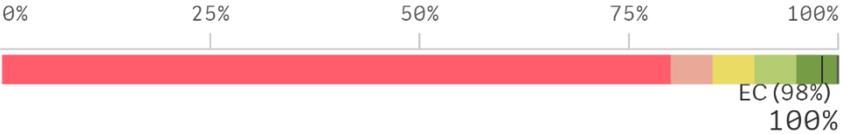
The **control system for grant management under direct management of CONNECT** is divided into four distinct stages: programming, evaluation and selection of proposals (stage 1), contracting (stage 2), monitoring the execution of the projects (stage 3) and ex-post controls and recoveries (stage 4). Key indicators were defined for each stage. The efficiency indicators of each stage were analysed. A summary of the main indicators is presented below.

Efficiency Indicators for the grant management control system			
Stage	Indicator	2022	2021
1	Average time-to-inform	123 days	101 days
2	Time-to-grant	239 days	304 days
3	Timely payments	100%	100%
	Time-to-pay monitors / experts	8.4 calendar days	8 calendar days
4	See previous section on Legality and Regularity		

2022 was a pivotal year in which the first grants of the new programmes *Horizon Europe* and *Digital Europe* were signed. The time-to-inform and time-to-grant indicators for 2022 relate to the grants of these two new programmes.

As from 2020, the 'timely payments' indicator is used to report on the 'time-to-pay' indicator. For more information refer to Annex 4 (Financial Scorecard).

As in the previous years, CONNECT made all its payments on time, the result for the efficiency indicator ‘timely payments’ during 2022 reaching 100%, which is higher than the average EC score.

Timely Payments	CONNECT Score	EC Score
	100%	98%

This result was achieved because of increased attention to payment monitoring (be it in a local system such as Compass or of the invoices in ABAC). For invoices submitted in local systems such as Compass, it has become also easier to monitor the legal deadlines.

An example of an initiative to increase the economy and efficiency of controls is included in 2.2.4.

Based on an assessment of the most relevant key indicators above and control results, it is considered that an efficient control system has been put in place.

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

More detailed information about the efficiency of controls is presented in Annex 7, section 1, point D and Annex 4 (new Financial Scorecard).

3. Economy of controls

The table below provides an estimate of the total costs of control for the **direct management** of grants within CONNECT. The cost of controls is estimated for each of the four stages of grant direct management control system and calculated based on the corporate methodology for the estimation, assessment and reporting on the cost-effectiveness of controls.

The details of the calculation are available in annex 7, section 1, point E.

The total cost of control within CONNECT for direct grant management is estimated at approximately EUR 30.42 million, corresponding to 1.98 % of the total operational grant payments made in 2022 (EUR 1 540.40 million).

The decrease of the overall cost of control rate as compared to last year is mainly due to the very important increase of total operational grant payments from EUR 527.51 million in 2021 to EUR 1 540.40 million in 2022. The reasons for the increase in the payments made was explained in the beginning of section 2.1.1 Control Results. It is mainly due to the payments made related to the programmes of the MFF 2021-2027 (*Horizon Europe, Digital Europe, Creative Europe - Media*). In 2021 the payments made were very limited as delays were encountered due to the late adoption of the MFF 2021-2027, of the legal basis for the new programmes and of the related work programmes.

CONNECT costs of controls for direct grant management	Overall rate 2022	Overall rate 2021	Overall rate 2020	Overall rate 2019
Stage 1 – programming and evaluation	0.26%	0.75%	0.27%	0.38%
Stage 2 – contracting	0.21%	0.58%	0.19%	0.25%
Stage 3 – monitoring the execution	1.45%	4.12%	1,40%	1.87%
Stage 4 – ex-post controls and recoveries	0.06%	0.15%	0.05%	0.06%
TOTAL	1.98%	5.60%	1.92%	2.56%

Details of the estimated cost related to shared/pooled control activities carried out by European Research Executive Agency (REA) and hosted by DG Research and Innovation (DG RTD) (Common Implementation Centre, including the Common Audit Service; Common Policy Centre) for the Research and Innovation family are reported in the annual activity reports of REA and DG RTD.

The **cost incurred by CONNECT for the monitoring and the supervision of the entrusted entities** amounts, approximately, to EUR 6.88 million. This amount includes primarily personnel costs (in total 44 full time equivalents). This represents 0.51% of the operational payments made to these entities during 2022. The overall rate of the cost of control remains stable compared to previous years (see table below).

Entrusted Entity	Cost of control 2022 (m EUR)	Cost of control (%) 2022	Cost of control (%) 2021	Cost of control (%) 2020	Cost of control (%) 2019
Services through cross delegations (DIGIT, PMO) ⁽²⁷⁾	0.001	3.20%	10.83%	0.11%	1.86%
Executive agencies	1.87	0.31%	0.26%	0.52%	0.39%

⁽²⁷⁾ For 'Administrative expenditure cross delegated', 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.

EuroHPC	0.80	0.20%	0.64%	0.39%	NA
KDT	0.72	0.33%	0.40%	0.22%	0.24%
ECCC ⁽²⁸⁾	0.80	NA	NA	NA	NA
SNS ⁽²⁹⁾	0.87	NA	NA	NA	NA
BEREC Office	0.29	3.88%	4.76%	3.70%	8.46%
ENISA	0.30	1.22%	0.53%	1.60%	3.02%
Ambient Assisted Living (AAL) Association	0.13	0.92%	1.08%	1.22%	0.95%
CCS GF (Guarantee fund)	0.15	1.33%	1.33%	0.81%	1.42%
CEBF (Equity instrument)	0.22				
CEF Broadband Fund (Debt instrument)	0.00				
ESA, EUMETSAT, ECMWF, UNDESA, EAO	0.73	2.43 %	0.15%	NA	NA
TOTAL	6.88	0.51%	0.48%	0.49%	0.52%

The transfer of the payments to the four executive agencies to which CONNECT is delegating budget implementation tasks is not directly effected by CONNECT, the funds are transferred by the Commission central service DG Budget. The estimated cost of control has been calculated at entrusted entity level, as shown in the table.

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

More details related to the cost of controls and more specifically costs at entrusted entity level (e.g. the management fees paid) are provided in annex 7, section 1, point E.

4. Conclusion on the cost-effectiveness of controls

Based on the most relevant key indicators and control results, CONNECT has assessed the effectiveness, efficiency and economy of its control system and reached a positive conclusion on the cost-effectiveness of the controls for which it is responsible.

⁽²⁸⁾ As previously mentioned in section 2.1.1. all activities of ECCC are carried out by CONNECT until the ECCC reaches its autonomy. The related payments made are included in the CONNECT total payments made. ECCC is included here in the table in respect of all activities needed to set up the ECCC (building, recruitment, organisation, governance arrangements, etc.). The estimated cost of control cannot be calculated as a percentage as there were no payments made to ECCC.

⁽²⁹⁾ Similarly to ECCC, all activities of the SNS JU are carried out by CONNECT until it reaches its autonomy. The related payments made are included in the CONNECT total payments made. SNS JU is included here in the table in respect of all activities needed to set it up. The estimated cost of control cannot be calculated as a percentage as there were no payments made to SNS JU.

A first objective of the control systems is to achieve the related policy/programme objective. 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 of controls are much wider than the budget implemented in the given year.

A second objective of the control system is to ensure the achievement of internal control objectives for the budget implementation tasks of CONNECT. In other words, to ensure that legal and regular transactions are performed efficiently and in an economic manner. Some benefits of the controls are quantifiable as presented above. Other benefits are qualitative, cannot be quantified however they are significant and relate to all stages of the programme management cycle.

This report develops at several points how the balance between these two requirements (policy objectives and internal control objectives) is assessed and ensured.

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

- the successful policy achievements as set out in Part 1;
- the benefits arising from the control systems adopted;
- the risk at closure set out above, which is at a level considered as being an appropriate balance between different policy objectives and between trust and control;
- declaration of assurance without qualification/reserve;
- the good results as regards efficiency of controls: the time-to-pay, time-to-inform and time-to-grant indicators;
- the costs of the control system compared to the level of expenditure;
- adapted control strategy in line with the new portfolio of budget implementation tasks and adapted supervision role as regards the new entrusted entities to which CONNECT delegates budget implementation tasks.

The DG's involvement in the governance of the entrusted entities did not show any significant events, issues or problems that could have a material impact on assurance as regards effectiveness of controls, except for the following: (i) the higher error rate of *CEF Telecom (legacy)* reported by HaDEA but for which the *de minimis* rule applies; (ii) the reservation issued by EISMEA on reputational grounds concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the European Innovation Council (EIC) Accelerator scheme within the EIC programme. We closely monitor and support the implementation of the remedial actions envisaged by EISMEA to address the reported weaknesses in their internal control system.

Overall, we consider CONNECT's supervision to be effective. Also, in the absence of contradictory information in the reports received from the entrusted entities and in view of the cost of the control system compared to the level of expenditure, the cost-effectiveness of controls is considered adequate.

2.1.2. Audit observations and recommendations

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

Internal Audit Service (IAS)

CONNECT was subject to three IAS audits, namely the audit on the design and early implementation of the European Innovation Council (EIC), the audit on Horizon Europe governance and the audit on the design and set-up of the Digital Europe Programme.

At the end of 2022, CONNECT had no open recommendations.

Following the closing of the audit on the design and early implementation of the EIC in January 2023, CONNECT received one sub-recommendation related to the governance framework of the EIC programme where it is associated and DG Research and Innovation is in the lead.

More details on the audits and recommendations from the IAS are provided in Annex 7 – Section F.

In its contribution to the 2022 Annual Activity Report process, the IAS provided a limited conclusion on the state of internal control in CONNECT, concluding that the internal control systems in place for the audited processes are effective.

European Court of Auditors (ECA)

CONNECT is mostly concerned by Chapter 4 of the Annual Report of the ECA for the financial year 2021, namely 'Single Market, Innovation and Digital'. The estimated error rate for this Chapter is 4.4%. The results indicate that the level of error remains high for research and innovation expenditure, which was the main source of error, particularly in the area of personnel costs.

The ECA closed the performance audits on 'SME internationalisation instruments', 'e-Government actions targeting businesses' and 'Tools facilitating travel within the EU during the COVID-19 pandemic'. The following ECA audits are still ongoing: 'Smart cities', 'recovering EU funds', 'Artificial intelligence', 'Digitalisation of schools' and 'Circular economy'.

Regarding ECA recommendations, CONNECT closed all remaining recommendations from the 2020 audit on 'Digitising Europe industry', the 2021 audit on 'Disinformation' and the 2022 audit on 'SME internationalisation'.

At the end of 2022, CONNECT had eleven open ECA recommendations:

- Six from the audit on security of 5G networks;
- Four from the audit on e-Government;
- One from the audit on tools facilitating travel within the EU during the COVID-19 pandemic.

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 CONNECT believes that the recommendations issued by the IAS and the ECA do not raise any critical assurance implications and are being implemented.

Further details on the ongoing audits are provided in Annex 7 – Section F.

2.1.3. Assessment of the effectiveness of internal control systems

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

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

CONNECT assesses on a continuous basis the effectiveness of its internal control systems, in order to determine whether they work as intended and to ensure that any control weakness in the control system is detected, analysed and considered for improvement.

The annual assessment of the effectiveness of the internal control systems is based on the assessment of the internal control monitoring criteria (ICMC) and the analysis of various sources of information such as the register of exceptions and non-compliance events, the IAS and ECA recommendations, the risk register and of the main internal control issues mentioned in the 2022 Directorates' Management Reports. For a summary of the end-of-the-year assessment, please refer to Annex 8.

CONNECT has assessed its internal control system during the reporting year and has concluded that it is effective and that the components and principles are present and functioning well overall.

The following findings were made during the annual assessment of the effectiveness of the internal control systems, which do not impact the overall effectiveness of the internal control system:

Principle 8: the participation of newcomers (i.e. staff involved in procurement and grant management for less than two years) in anti-fraud training sessions in 2022 was 62%

compared to the target of 80%. CONNECT will continue providing anti-fraud training sessions in 2023, with newcomers as target audience.

Principle 13: At the end of 2022, three records for identified processing activities pertaining to the same contract had not been finalised. At the time of drafting the Annual Activity Report, the three records were finalised and validated.

For the above findings, given the actions planned and given the other risk mitigating measures in place such as the availability of detailed guidance in anti-fraud, the residual risk is assessed to be very low.

2.1.4. Conclusions on the assurance

This section reviews the assessment of the elements reported above (in Sections 2.1.1, 2.1.2 and 2.1.3), and the sub-conclusions already reached. It draws an overall conclusion to support the declaration of assurance and whether it should be qualified with reservations.

The information reported in section 2.1 results from the results of management and auditor monitoring contained in the listed reports. 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 comprehensive coverage of the budget delegated to the Director-General of CONNECT. It also supports the Declaration of Assurance with respect to the use of resources for the intended purpose and in line with the principles of sound financial management and legality and regularity.

The declaration of assurance is based on the analysis of the cost-effectiveness of CONNECT's internal control systems, supported by the conclusions of the audit reports of the Internal Audit Service and the European Court of Auditors which did not highlight any critical recommendation, the Internal Audit Service positive limited conclusion on the state of internal control, the conclusions of the annual assessment of the effectiveness of the internal control systems, the reports received from the Commission services to which CONNECT has cross-delegated (DG Informatics and Office for Administration and Payment of Individual Entitlements), the reports from the Executive Agencies (i.e. HADEA, REA, EACEA and EISMEA), the EIB/EIF, the KDT and EuroHPC Joint Undertakings, the Ambient Assisted Living Joint Programme and the BEREC Office and ENISA Decentralised Agencies.

CONNECT's assessment on legality and regularity ⁽³⁰⁾ concluded on the following:

- For **Horizon Europe**, no representative error rate is available in 2022 as the ex-post audit campaign is planned to be launched by the end of 2023, once a meaningful number of payments can be audited. Consequently, without elements

⁽³⁰⁾ Based on the audits carried out by the Common Audit Centre hosted by DG Research and Innovation.

allowing an assessment of the level of errors, the detected and residual error rate will be cautiously estimated to 2% ⁽³¹⁾ for CONNECT.

- For **Horizon 2020**, the audit results show a residual error rate of 1.71% which is below the Commission materiality threshold.
- For **Digital Europe**, the first ex-post audits will be carried out at the beginning of 2024, once the first payments can be audited. Considering that the ex-ante controls in place for the programme are similar to the ones of the Horizon programmes, CONNECT decided to cautiously estimate the detected and residual error rate at 2% ⁽³²⁾.
- For the **Emergency Support Instrument**, CONNECT estimated a detected error rate within the range of 2%-3%. Taking in consideration that the average recoveries and corrections were estimated at 0.54%⁽³³⁾ of the relevant expenditure, the estimated residual error rate would remain above the 2% materiality criteria (i.e. 2.46%). However, considering the limited amount of payments made for grants of EUR 3.21 million and the financial impact of EUR 0.38 million, the *de-minimis* rule applies.
- For the **Pilot Projects and the Preparatory Actions**, CONNECT estimated a detected error rate of 3%. Taking in consideration that there are no expected recoveries and corrections, the estimated residual error rate would remain above the 2% materiality criteria (i.e. 3%). However, given the limited payments for grants of EUR 18.43 million and the financial impact of EUR 0.45 million, the *de-minimis* rule applies.

HaDEA reported in its Annual Activity Report a higher error rate for *CEF Telecom legacy*, programme delegated by CONNECT. We have provided more details in section 2.1.1a) Budget entrusted to other entities. CONNECT noted the information provided by HaDEA and considers that it does not represent a weakness in CONNECT's supervision and does not have an impact on the DG's declaration of assurance.

CONNECT is aware that EISMEA provided in its annual activity report a declaration of assurance qualified by a reservation on reputational grounds concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the European Innovation Council (EIC) Accelerator scheme within the EIC Programme. We have provided more details in section 2.1.1a). In its supervisory role, CONNECT monitors closely with EISMEA and supports the implementation of the remedial actions envisaged to address the reported internal control weaknesses. Therefore, CONNECT does not consider there is a weakness in CONNECT's supervision.

⁽³¹⁾ These rates correspond to the objective set for Horizon Europe.

⁽³²⁾ These rates correspond to the objective set for Digital Europe.

⁽³³⁾ Estimation based on the historical seven-year average recoveries and correction for our DG (i.e. 0.54%)

In its 2021 annual report, the European Court of Auditors concludes on an estimated overall level of error of 4.4% for the entire 2021 spending in the chapter 4 Single Market, Innovation and Digital'. The Court points out that research spending remains a higher-risk area, particularly for personnel costs and the main source of error under this chapter.

In the annual limited conclusion of the IAS on the state of internal control in CONNECT, the IAS concludes that the internal control system in place for the audited processes is effective.

Overall amount at risk at closure

For CONNECT, the estimated overall amount at risk at payment for the 2022 expenditure is between EUR 29.88 and 30.44 million. This is the Authorising Officer by Delegation's best, conservative estimation of the amount of relevant expenditure during the year not in conformity with the applicable contractual and regulatory provisions at the time the payment is made.

The conservatively estimated future corrections for the 2022 expenditure amount to EUR 10.65 million. This is the amount of errors that the DG conservatively estimates to identify and correct from controls that it will implement in successive years. The difference between those two amounts leads to the estimated overall amount at risk at closure between EUR 19.22 and 19.79 million.

In conclusion, based on the elements reported above, 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.

2.1.5. Declaration of Assurance

I, the undersigned,

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

In my capacity as authorising officer by delegation

Declare that the information contained in this report gives a true and fair view ⁽³⁴⁾.

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

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

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

Brussels, 31 March 2023.

Signed

ROBERTO VIOLA

⁽³⁴⁾ True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

2.2. Modern and efficient administration – other aspects

2.2.1. Human resource management

In order to ensure the effective management of human resources and to optimise the capacity to deliver on priorities set out in its strategic plan, CONNECT updated its local human resources (HR) strategy with a medium to long-term perspective (3–5 years).

CONNECT actively supported corporate programmes such as the junior professionals programme, ensuring a valuable pool of talent to contribute to our key policies and foster knowledge-sharing and collaboration across Commission services.

While promoting diversity and inclusion principles among others via its diversity & inclusion network, CONNECT focused efforts on supporting AD women for potential managerial careers. To this end, the DG complemented the corporate management development offer with targeted initiatives to build up a managerial pipeline of women. These targeted initiatives entailed in particular a pilot for a local female talent development programme which will be replicated throughout 2023.

CONNECT exceeded its target of three additional first female appointments at middle management level due by the end of 2022 (with two first female appointments to middle management posts already made in 2020, three in 2021 and a further two first female appointments in 2022). In addition, CONNECT focused on implementing the measures decided by the Commission to reinforce gender policy at all management levels (e.g. further focus on appointments of women to pre-management posts and designation of 55% female Heads of Unit to deputise for Directors). As a result, by end of 2022, CONNECT had 51% of its filled middle management positions occupied by women.

In accordance with the Commission's corporate policies, CONNECT adopted learning & development priorities with emphasis on the most relevant skills required by the new legislative and policy-making activities resulting from new political priorities to make *Europe fit for the Digital Age*. The annual learning and development needs analysis also integrated the new set of skills required to adapt to the new hybrid working arrangements, to ensure that people are properly equipped to deliver on political and operational priorities and for career development.

As regards well-being, the outcome of the 2021 staff survey reflected an overall improvement of CONNECT's score and a recognition of efforts made in this area, within the context of the corporate Fit@work programme. Additionally, the active diversity and inclusion network, chaired by a Director, regularly discussed topics of concern to staff and takes actions for improvement (e.g. annual diversity and inclusion days, working methods).

The results of the staff engagement index show that despite the challenges, the CONNECT employee engagement increased to 75%, higher than the Commission average (72%) and +7% compared to the 2018 Staff Survey.

In order to address the concerns of CONNECT staff raised in the 2021 Staff Survey, CONNECT set out a participatory process to come up with a follow-up action plan endorsed by the Management Team, currently under implementation and closely monitored.

In line with the guidance from DG Human Resources and Security to focus on only few priority actions, the Management Team decided to choose five concrete actionable proposals to address some of the main challenges in the DG related to workload, work-life balance, adjustment to the new ways of working in the dynamic collaborative environment, career and professional future.

CONNECT also pursued the 'We are CONNECT' staff engagement campaign to increase the sense of belonging to CONNECT and to ensure that colleagues are better aware of the DG activities and achievements. In the same vein, CONNECT also relaunched more frequently CONNECT University initiatives.

Besides increased communication efforts to adapt to new hybrid working arrangements as a result of the COVID-19 crisis, substantial internal communication efforts were also invested in order to keep Brussels-based staff timely informed and best prepared for the move to the new L-51 building over the summer.

CONNECT carefully monitored the allocation of human resources in light of political and operational priorities, CONNECT also closely monitored and followed-up on the resources implications stemming from the envisaged budget implementation modes as a result of the cost-benefit analysis related to the MFF 2021-2027 EU Programmes.

Several Directorates reported the need for skilled staff in some areas. A staffing reinforcement request was introduced and acknowledged by the Corporate Management Board to compensate the decrease of resources on CONNECT's research budget by an equivalent increase of staffing on CONNECT's operating budget to cope with increasing workload on the policy front and on the in-house implementation activities in areas where budget increased, whilst exhausting all internal redeployment possibilities and exploring all possible internal efficiency gains.

Finally, organisation chart changes entered into effect on 1 July 2022 to better address the DG's new responsibilities stemming from the digital services act (DSA) and the digital markets act (DMA). The DSA and the DMA aim to create a safer digital space where the fundamental rights of users of digital services are protected and to establish a level playing field for businesses to foster innovation, growth, and competitiveness, both in the European Single Market and globally.

In the course of 2023, further CONNECT organisation chart changes will be necessary to ensure CONNECT's organisational structure meets the challenges that the implementation of the DSA/DMA and the Digital Decade Policy Programme will bring, while achieving further efficiency gains and improving the ways of working together internally.

2.2.2. Digital transformation and information management

CONNECT is very active in inspiring, supporting and implementing the Commission digital strategy.

Within the implementation of the digital solution modernisation plan CONNECT has been active in the stakeholder management cluster by assisting Secretariat-General in the animation of four workshops that resulted in the drafting of a corporate business case on stakeholder management.

Another major line of action is to support policy making by leveraging staff skills on the use of data for their core activity. In addition, CONNECT continued providing services for better data analysis (DORIS public consultation dashboard, drive-in, chatbot, knowledge graph technology, machine learning services, etc.).

During 2022 CONNECT implemented a network of data stewards as a basic layer of a community of practice on data management. The data stewards use the common framework of collaboration as communication facility.

Within the digital strategy actions, CONNECT lead on the Right2Innovate. Central services picked up our ideas to promote innovation on local level shared across the departments creating a digital marketplace similarly to many public administrations. It results in the digital innovation framework with an innovation registry put in place at the corporate level.

Regarding collaborative working, drawing on the experience gained from the participation in the team supporting the roll out of M365 in the Commission and the new Welcome network domain, CONNECT prepared the adoption and implementation of the new ways of working with M365 and the transition of CONNECTed, our current intranet, and SharePoint on this platform.

Great attention is given to the processes for records, archives and document management that follow and apply corporate rules, procedures, and practices, with a particular attention to the digital preservation strategy. The network of document management correspondents (DMCs) acts as a bridge between the document management officer (DMO) and the services. With the dual role as CAD (Centre d'Administration des Documents) team leader, the DMO ensures that the individual services implement the rules, procedures, and practices and follow closely the actions of the digital preservation strategy.

Information security is an important challenge nowadays and is addressed with actions that tackle both the infrastructure, more by central services, and upskilling and awareness of staff. CONNECT launched a study to develop a roadmap of actions to improve the information security culture. By the end of 2022, the consultants, assisted by a steering board of interested services, had delivered the results of a staff survey launched earlier in the year to assess the state of security culture, this analysis will provide the baseline for developing a roadmap of actions.

An additional action in this domain is the constant follow-up and update of security plans for all our information systems.

Data Protection

The data protection coordination team (DPC Team) paid special attention on awareness-raising activities in 2022. They took three main forms.

Firstly, the DPC Team organized one training session per DG directorate, and tried to tailor them to their respective mandate. This allowed to train a high number of staff members and to significantly enhance awareness on data protection issues. As a consequence, an increased number of consultations from staff members who had never before contacted the DPC Team happened and allowed the identification of new areas of work (for example, internal coaching).

Secondly, the DPC Team kept updating its Data Protection Corner, which contains basic information on data protection (e.g. definition of concepts, lists of records, etc.) as well as all the documents prepared by the Data Protection Officer or containing information on regular tools (such as the processing of personal data in the Decide and Hermes-Ares-NomCom systems). The DPC Team also published generic privacy statements aimed at covering regular activities, such as CONNECT events involving only staff members, to alleviate the workload of colleagues who would otherwise need to spend time adapting specific privacy statements for these non-sensitive processing activities.

Finally, the DPC Team also prepared documentation for use by all CONNECT staff: these include guidance data controllership in procurement contracts, a note on consent, etc.

With the adoption of the digital services act (DSA), the DPC Team started working to identify the processing activities that will derive from the DG's role in supervising and enforcing the act. In concrete terms, for instance, the DPC Team started providing advice in relation to the adoption of a whistleblowing tool. In addition, the DPC Team also started gathering information to speed-up the process of adopting a decision on restricting the rights of data subjects.

The DPC Team has also monitored specific files and advised on how to ensure compliance with data protection rules. For instance, it has made great progress on digital services infrastructures (DSIs) (several DSIs are now almost compliant) and information and technology projects developed by CONNECT that involve the processing of personal data, such as the European Union Digital COVID Certificate (EUDCC) are fully compliant. As to the EUDCC, it has to be noted that the DPC Team was closely involved, in its advisory role, with the joint-controllers working group, which gathers Member States.

The DPC Team kept working on the adoption of data protection records to cover processing activities for which no record existed, either because the processing activity did not exist or because there was not enough information to create the record (single authentication system for Wifi4EU, for instance). The distribution of data protection roles has been made clear for those cases of corporate decentralised records.

The Team also worked on reviewing existing records, as part of an annual exercise launched by the Data Protection Officer (DPO) office. Following an update of the data protection record system (DPMS), a new version of all adopted data protection records must

be created once a year to ensure the record still describes accurately the on-going processing activity. This exercise allowed the DPC Team to identify records which were (or will soon be) archived after the end of the processing activity at stake.

As requested by the DPO, the DPC Team has identified all processing activities where the DG is acting as service provider either internally to the Commission (Newsroom, Futurium, Kohesio, etc.) and/or as service provide to other EU institutions (Movie Database for EACEA, for instance), and has prepared the necessary legal documents.

2.2.3. Sound environmental management

CONNECT implemented several initiatives contributing to the Commission objective of reducing the environmental footprint and to become climate neutral by 2030, namely in the fields of energy, water, paper consumption, waste management and reduction of CO₂ emissions:

- Move to a new greener building, in terms of energy consumption and waste reduction;
- Promote and facilitate alternative transportation through several bike hubs available in CONNECT's new L-51 building and in surrounding buildings;
- Communication of environmental content via the Green@CONNECT intranet space (6 blogposts with environmental content) and through the CONNECT Newsletter and the Diversity & Inclusion network;
- Promotion of the Mobility week in September 2022 during which CONNECT staff were encouraged to choose for sustainable means of urban mobility.

2.2.4. Examples of economy and efficiency

The Brussels-based move to the new L-51 building over Summer led to economies in terms of office space occupation.

Indeed, the brand-new office is the perfect opportunity to maximise the benefits of the hybrid working arrangements and to engage CONNECT staff and managers in the transformation process of our working methods towards more flexibility and collaboration.

Thanks to increased collaborative spaces supported by adequate IT and videoconferencing facilities, CONNECT experiences more efficient collaboration when colleagues meet in the office, while offering the opportunity to stay at home to focus on non-collaborative tasks, thanks to the flexibility granted by the new working time decision.

On-site reviews used to be frequent and can now more easily take place via videoconferencing facilities. Within this context, a reduced claim for missions and meetings was made in the context of the budgetary procedure, also in light of the DG's pledge to greening the administration.