



Annual Activity Report

2023

Directorate-General for Communications
Networks, Content and Technology

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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.

Digital technologies have become 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 2023, CONNECT implemented an overall budget of EUR 2 256.99 million. The DG implemented directly 48.45% of the overall budget and delegated budget implementation tasks mainly to executive agencies, to joint undertakings such as the Chips Joint Undertaking, the Smart Networks and Services Joint Undertaking (SNS) 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) are 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. The implementation of the *InvestEU* programme is delegated to DG Economic and Financial Affairs and deployed by several financial institutions acting as implementing partners.

CONNECT interacts with many other Commission DGs. There is a particularly close cooperation 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* is CONNECT's main guide towards the achievement of the digital transformation of our society and economy by 2030, with the first State of the Digital Decade Report published in 2023.

2023 was marked by achievements that had been developed during the previous years of this Commission's term.

The **Digital Services Act (DSA)** and the **Digital Markets Act (DMA)** adopted in 2022 are groundbreaking Regulations setting a comprehensive and modern legal framework to ensure the safety of users online and to create a fair and open online platform economy.



The Regulations started being partially applied fostering a safer online space and ensuring an innovative, open and digital market. In addition to taking important administrative and technological steps to ensure readiness of the for their full implementation (from the beginning of 2024), CONNECT worked on the first designations, in April, under the DSA, of the 17 very large online platforms and two very large online search engines. In addition, in December 2023, three further very large online platforms, notably three adult platforms, we designated under the Act. Together with DG Competition, CONNECT also designated six gatekeepers and 22 core platform services under the DMA.

Other important pieces of legislation which entered into force in the course of the year were the **European Chips Act** and the **Data Governance Act**. They will, respectively, bolster Europe's competitiveness and resilience in the field of semiconductor technologies

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

and applications, and will set a new standard for trustworthy data management across the European Union.

CONNECT worked intensively with the European Parliament and the Council to reach agreement on new legislation that will significantly change the regulatory landscape of the Union, namely the **Artificial Intelligence (AI) Act**, the **Data Act** and the **Cyber Resilience Act**. The aim of the first is to provide AI developers, deployers and users with clear requirements and obligations regarding specific uses of AI. It also seeks to reduce administrative and financial burden for business, in particular small and medium-sized enterprises. The Data Act harmonises the rules on fair access to and use of data playing a key role in the digital decade and helping to shape the rules for the digital economy and society. Finally, the Cyber Resilience Act will bolster cybersecurity rules to ensure more secure hardware and software products.

For the Regulation establishing a **European Digital Identity**, co-legislators reached a provisional political agreement on the text at technical level on 8 November 2023.

Through all these new legislations, the Commission is fostering the Union's internal digital market based on European values.

The DG also took actions to deal with the current geopolitical situation relating to the Russia's war of aggression against Ukraine and the Hamas terrorist attack on Israel. CONNECT provided weekly cybersecurity input to the Integrated Situational Awareness and Analysis reports and worked with the European Media Digital Observatory hubs to combat disinformation.



The DG continued to **support Ukrainian people** to limit the impact of the conflict by, firstly, facilitating the fourth prolongation of the voluntary agreement between EU and Ukrainian operators ensuring connectivity for refugees from Ukraine. Furthermore, various exchanges took place in view of the third edition of the EU-Ukraine cyber dialogue (co-chaired by European External Action Service and CONNECT). CONNECT has worked with Ukraine to align with the eIDAS Regulation and to provide for a transition to the new Digital Identity Regulation with the perspective of granting Ukraine internal market treatment under the EU-UA Association Agreement.

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 (2023): 3		

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 (2023): The estimated impact of the data economy on the EU GDP was 4.2% in 2023		

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 (2023): 4 networks of testing and experimentation facility sites totalling 36 national testing and experimentation facilities TEFs		

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	5 actions launched
Latest known results (2023): 4 actions 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 (2023): 1.43% – 1.46%	

⁽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.

⁽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.

C. Key conclusions on internal control and financial management

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 components and principles are present and functioning well overall, but some improvements are needed as minor deficiencies were identified related to principle 12 'The Commission deploys control activities through corporate policies that establish what is expected and in procedures that put policies into action' in connection to risks related to the combination of financing involving the Recovery and Resilience Facility and cost based funding schemes.

In addition, CONNECT has systematically examined the available control results and indicators, including those from supervised 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 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. Improvements are necessary concerning principle 12 in connection to the risks related to the combination of financing involving the Recovery and Resilience Facility and cost-based funding schemes. Where possible, CONNECT took actions to address situations where there was no clear delineation of cost between the RRF and Digital Europe. Close cooperation with DG Economic and Financial Affairs allowed to clarify the requirements and address issues with Member States. CONNECT has put in place measures to eliminate/limit the impact of these risks. The Director-General, in his capacity as Authorising Officer by Delegation, has signed the Declaration of Assurance.

D. Provision of information to the Commissioner

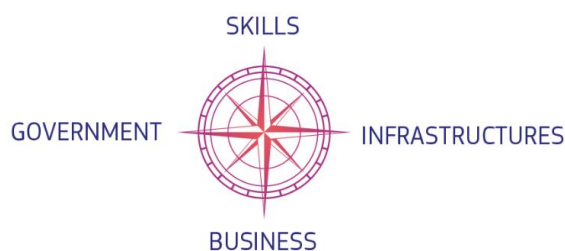
In the context of the regular meetings during the year between CONNECT and the Commissioner on management matters, the main elements of this report and assurance declaration, envisaged have been brought to the attention of Commissioner Thierry Breton, responsible for the Internal Market.

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 *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, 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 particular small and medium-sized enterprises, 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 **digital economy and society index (DESI)**, a dashboard of indicators ⁽⁴⁾ fully integrated in the Digital Decade strategy, measuring Europe's performance across key digital transformations fields such as skills, infrastructures, digitalisation of business and digitalisation of public services.

In CONNECT, policymaking is closely interlinked with financing from EU funding schemes and financial instruments. In 2023, 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

⁽⁴⁾ [DESI 2023 dashboard for the Digital Decade - Digital Decade DESI visualisation tool \(europa.eu\)](#).

helping the recovery and driving the digital transformation of Europe ⁽⁵⁾. *InvestEU* programme started its implementation, with several financing and investment operations on strategic digital technologies, digital connectivity, and media and 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. The digital share of all Recovery and Resilience Plans – excluding the REPowerEU chapters - amounts to 26%, exceeding the 20% digital target.

The DG has entrusted the implementation of parts of programmes under its responsibility to **executive agencies**. Based on the information possessed by the DG, no substantial issues were reported that would affect the implementation of programmes entrusted to them. The feedback provided by the executive agencies 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. For detailed information as regards CONNECT's supervision on executive agencies see section 2.1.1 Control results.

Furthermore, CONNECT is responsible for the supervision of the decentralised agencies and other entrusted entities. Information in its possession does not reveal any particular issues. For details see section 2.1.1 and in the annexes.

With a view to implement the criteria for a strengthened common control approach on the **reliability of performance information on EU financial programmes**, CONNECT has put in place an assurance process based on the control framework and the procedures to identify possible significant weaknesses. This assurance covers the implementation of data governance and data policies at the Commission and all financial programmes and entrusted entities involved. No issues were identified.

The success of CONNECT's activities depend significantly on actions of Member States. Therefore, it continued its effort together with other Commission services in monitoring the application of EU law, referring cases to the European Court of Justice when needed.

Infringement cases were successfully closed concerning six Member States for lack of transposition of the European Electronic Communications Code. In addition, because of the lack of implementation of their obligations under Article 15 of the Platform to Business Regulation, six infringement cases (with reasoned opinion sent to two Member States) were opened in 2023. CONNECT closed six infringement procedures in the area of the

⁽⁵⁾ 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 2024](#). The updated programme statements will be available in the proposal for Draft budget of the European Union for the financial year 2025.

Audiovisual Media Services Directive, following the adoption of the transposing measures by the Member States concerned. The Commission referred four Member States to the Court of Justice for failing to transpose the Open Data Directive into national law. Following initiation of infringement procedures before the Court against certain Member States for lack of transposition of the Directives on copyright in the Digital Single Market and on online television and radio programmes, only one Member State was yet to complete transposition by the end of the year. At year end, 19 cases initiated by CONNECT were pending before Court, most of them for non-communication of transposition of directives into national law.

Relations with stakeholders are very important and communicating with the European citizens plays a central role for CONNECT. In addition to press releases and exchanges with journalists, the DG sought to create a direct link with citizens. CONNECT did this in particular by boosting the efforts on communication outreach, multilingual communication, and leveraging new channels. This implied supplementing news-related items on legislative initiatives (including Chips Act, Artificial Intelligence Act, electronic ID, data and European Media Freedom Act) with further focus on pro-active communication of non-news related to



implementation of initiatives, effects of adopted policies and success stories, aiming to reach a wider, non-technical audience outside Brussels. To achieve the latter, we leveraged our new and continuously improved multi-lingual Digital Strategy website, produced more audio-visual materials in different languages and more engaging social media content. CONNECT promoted content via an increased use of the DigitalEU social media channels, as well as more innovative channels such as the Digital EU Ambassadors, collaboration

with influencers (from selected Member States), third-party endorsement and paid promotion. For the wider audience CONNECT also leveraged corporate accounts, important events on digital in four Member States (Germany, Poland, Italy and Portugal) and participated in the EU Open Day. In campaign terms, we dedicated efforts to an awareness raising around the implications of platform legislation (DSA and DMA). We further continued communication around cybersecurity, high-performance computers and not least the Metaverse initiative and the associated citizens’ panel and aimed to leverage the European Year of Skills.

<p>Specific objective 1</p> <p>Europe’s strategic autonomy is ensured in critical technology areas</p>	<p>Related to spending programmes: Horizon Europe, Digital Europe and Connecting Europe Facility – Digital</p>
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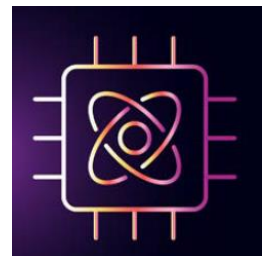
Investment in critical technologies and in disruptive innovation is essential to achieve Europe’s open strategic autonomy and to reach the Digital Decade Policy Programme objectives agreed with Member States. More specifically, the programme sets multiple digital targets in the area of digital leadership and sovereignty, including in reference to the availability of quantum computing, the number of European unicorns as well as the

semiconductor production, with the objective to be at the cutting-edge in these areas by 2030. The **first State of the Digital Decade Report**, published on 27 September 2023, provided a state of play and recommended actions.

CONNECT continued its support to the **European High Performance Computing Joint Undertaking** (EuroHPC JU) to deliver a world class data infrastructure in Europe. In 2023, the EuroHPC JU inaugurated two additional systems: the MareNostrum 5 pre-exascale supercomputer in Spain and the Deucalion petascale supercomputer in Portugal. In addition, the procurement contract for JUPITER – the first exascale European supercomputer – located in Germany was signed. These new systems increase, by at least a factor of four, the available computing power of the EU that will be available to users from academia, industry and the public sector across Europe, and will place Europe as a world supercomputing power. The procurement and installation of five additional mid-range supercomputers to be located in Ireland, Greece, Hungary, Poland and Sweden is in progress.

Together with the EuroHPC JU, the DG continued efforts in the development of new high-end low-power processors. The **European processor** initiative will help to create a state-of-the-art European semiconductor ecosystem, ensuring the security and resilience of our future supply chains.

One of the targets of the Digital Decade in quantum technologies is for Europe to have its first **computer with quantum acceleration** by 2025. In June 2023, hosting agreements were signed with the six sites where Europe's first quantum computers will be integrated into the EuroHPC JU's supercomputers. These new machines are expected to be operational by 2025. To this end, procurement procedures were launched in Germany and Poland.



The **Quantum Technologies Flagship** continued its second phase funded by *Horizon Europe*, with the aim of achieving further outstanding research and of converting this research into commercial applications, for example in the area of promising quantum computing platforms. The focus was on developing Europe's quantum ecosystem and on strengthening links with the European quantum communication infrastructure, the EuroHPC JU, and the European Chips Act.

The **European Quantum Communication Infrastructure** (EuroQCI) will ultimately enable public administrations to transmit and store information and data very securely, and safeguard critical infrastructure and encryption systems across the EU. New actions supported under *Digital Europe* started the deployment of the EuroQCI infrastructure with 26 national projects to deploy experimental national quantum communication networks, and six industrial projects to lead the development of European quantum communication technologies. Work continued to prepare a *Connecting Europe Facility – Digital* call for actions to support cross-border terrestrial links between national quantum communication networks, and the deployment of optical ground stations for space links. The **Union Secure Connectivity programme** (infrastructure for resilience, interconnectivity and security by

satellite - IRIS²) was adopted in early 2023 and includes as an objective to gradually integrate the EuroQCI into a global space-based secure connectivity system for high-speed internet and secure governmental services. CONNECT worked on its implementation together with DG Defence Industry and Space.

In September 2023, the **graphene flagship** successfully concluded ten years of research and innovation activities which were summarised in the publication 'Ten years of research, innovation and collaboration: the Graphene Flagship and the 2DM community'. Under Horizon Europe, the Flagship now brings together 118 academic and industrial partners in 12 research and innovation projects and one coordination and support action. In 2023, the 2D experimental pilot line, successfully progressed.

The **Human Brain** flagship project successfully ended in September 2023. A key outcome and legacy of the project is the digital research infrastructure EBRAINS, which gathers high-quality research data, tools and computing facilities and aims to support collaborative brain research. Further development of services of the EBRAINS research infrastructure will be supported by the project **EBRAINS 2.0**, funded by *Horizon Europe*. In 2023, preparatory work continued for a new European partnership on brain health.

The **Future Battery Technologies** (Battery 2030+) long term research initiative uses digital technologies, big data and artificial intelligence to accelerate research into high performing, smart and sustainable batteries. The first results include a first version of the battery material acceleration platform and new approaches to battery sensing and self-healing capabilities. New projects will support the second phase of implementing the main priorities identified in the Battery 2030+ roadmap.

Connectivity is an enabler of digital capacities. Under *Connecting Europe Facility – Digital*, CONNECT, together with the Health and Digital Executive Agency (HaDEA), launched calls for proposals covering 5G along transport corridors, 5G and edge cloud for smart communities and a backbone connectivity for the Digital Global Gateways) to strengthen the deployment of ultra-fast, secure and sustainable digital infrastructures. Furthermore, and as mandated by the Council Recommendation on the Resilience of Critical Infrastructures, CONNECT conducted two studies on the security and resilience of submarine cable infrastructures. In line with the Council Recommendation, and responding to various calls from Member States and industry, CONNECT also started to develop an initiative on the security and resilience of submarine cables.



One significant step to prepare Europe for the critical 6G technologies was reached on 24 October 2023, with the financial autonomy of the **Smart Network and Services Joint Undertaking** (SNS JU). The JU will work in the fields of new radio spectrum use, artificial intelligence extensive end-to-end use, security, specific technologies like non-terrestrial networks and develop the concept of sustainable 6G. After consultation with Member

States, associated countries and a large community of stakeholders, CONNECT worked with the Joint Undertaking and the 6G-IA (its private member) on the SNS JU research and innovation work programme for 2024. CONNECT and SNS JU also engaged in the development of a global 6G vision with international partners and standardisation organisations.

With the entry into force today of the European Chips Act, Europe takes a decisive step forward in determining its own destiny. Investment is already happening, coupled with considerable public funding and a robust regulatory framework. We are becoming an industrial powerhouse in the markets of the future – capable of supplying ourselves and the world with both mature and advanced semiconductors

Commissioner Thierry Breton

An important contribution to Europe's open strategic autonomy was the entering into force in September 2023 of the **European Chips Act**. Private investments of over EUR 100 billion for projects to set up factories were announced, some with the expectation to receive state aid.

Following the entry into force of the Chips Act, the Key Digital Technologies Joint Undertaking was transformed into the **Chips Joint Undertaking** (Chips JU). With an EU budget of EUR 4 175 billion and a similar amount from participating States, the JU launched its first calls on pilot lines during the Chips for Europe event in December 2023, marking its official launch. The Chips JU approved its work programme for 2024 which includes a first call for a RISC-V automotive hardware platform. This will be a multi-year initiative that may be extended to other industrial verticals. A working group composed of stakeholders from industry continued drafting a roadmap for the next years. As part of the open European software-defined vehicle initiative, CONNECT will help to ensure that Europe continues mastering the complete automotive value chain.

In the framework of the **Photonics Public-Private Partnership**, 15 collaborative research and innovation projects will develop technologies for next generation components and systems, and a flagship project to transfer photonics technologies to small and medium-sized enterprises and middle capitalisation companies started. To pick up on new technology and industry trends, the Commission convened stakeholders to draft two White Papers: one on photonic integration of devices and another on photonic hardware for virtual worlds.

The concept of Europe's open strategic autonomy also covers the development of technologies that will help Europe to deal with climate change and to help local communities in using digital technologies for the direct benefit of citizens. To this end, CONNECT works with different partners in the **Destination Earth** project. This project develops 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, such as extreme weather monitoring and climate predictions to react to environmental crises. The complete digital twin/replica of the Earth will be composed of a number of thematic digital twins of the earth system. Implementation activities started in 2022 and the first version of the system, including the core service platform, the first two digital twins (extreme natural disasters, climate change adaptation) and the data lake, were launched in mid-2023 with operational capacity



servicing an initial set of users. This marked the start of the second phase of implementation, focused on ramping up the user base and the service.

LORDIMAS, a digital maturity assessment tool at the local level, and product of collaboration with Living-in.EU, was officially unveiled in October. LORDIMAS empowers local and regional governments across Europe to assess their digital progress, foster open data sharing and promote more efficient governance.

Artificial Intelligence (AI) procurement clauses for cities and communities were developed jointly by CONNECT, DG Internal Market, Industry, Entrepreneurship and SMEs and the Living-in.eu initiative. The clauses were developed for pilot use in the procurement of AI with the aim to establish responsibilities for trustworthy, transparent, and accountable development of AI technologies.

The **first blueprint for the data space for smart and sustainable cities and communities** was launched by a *Digital Europe* project in September 2023. The blueprint is now being deployed and will be revised in the next few years by the continuation projects.

The procurement of a **local digital twins' toolbox** was launched during 2023. The toolbox should be developed within the next 30 months, and will help cities and regions wanting to develop their local digital twins via open interoperable tools.

CONNECT continued working with **GÉANT** (an association that operates the dedicated high bandwidth pan-European research and education network serving more than 50 million researchers and students)..

The **next generation internet** (NGI) initiative continued to push the EU internet open-source agenda along two trajectories. First, through its funding of open-source internet technologies that are community-driven, NGI became the main EU reference point for the Digital Commons policy, which champions the development and maintenance of digital resources that are collectively created and for which the governance is distributed. This policy is gaining traction across the EU and internationally as part of United Nation's plan for a Global Digital Compact. At EU level, a core group of Member States delivered preliminary work for the establishment of a European digital infrastructure consortium (EDIC) on digital commons which should be operational by 2025. Second, by delivering a broad range of solutions/tools that allow EU priorities to be implemented: users' choice and empowerment as per the European Declaration for Digital Rights and Principles; digital identity; decentralised social media; supporting the Digital Services Act and the Digital Markets Act implementation, with solutions to be considered by gatekeepers for example for app store or instant messaging. In addition, the NGI vision for an internet that is open, secure, decentralised and interoperable, and the support to the European open-source community of innovators fed the policy on Web 4.0 and virtual worlds. In this respect NGI open-source technologies already contributed to some key features of Web 4.0, by delivering solutions supporting middleware trusted commons for self-sovereign identities, crypto transactions, and post-quantum crypto.

CONNECT, together with DG Informatics and the European Blockchain Partnership, continued the operation of a pan **European blockchain based infrastructure** (EBSI), implementing cross border public services. CONNECT also conducted preparatory work for the EUROPEUM-EBSI EDIC to be launched in 2024. This EDIC will bring forward the work of the EBSI. CONNECT also launched the European regulatory sandbox for blockchain, providing a safe and confidential environment for companies to explain their products and services, while engaging with relevant regulators. In this context the first cohort of 20 use cases was launched in September.

The **European startup nations alliance** (ESNA) became fully operational with the appointment of both a full-time management board and an advisory board of 25 leaders from the startup ecosystem. Moreover, 18 of the 27 signatory countries of the original EU Startup Nations Standard declaration formally joined ESNA.

<p style="text-align: center;">Specific objective 2</p> <p>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</p>	<p>Related to spending programme: Horizon Europe, Digital Europe and Connecting Europe Facility – Digital</p>
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It is not uncommon that data produced in the EU is stored and processed outside Europe, for example through the use of broadly used cloud services. This can mean that the data's value is also extracted outside of the Union. To increase the value that EU organisations can extract from data generated in the EU, CONNECT acted on multiple fronts, such as adopting key performance indicators to monitor the progress made by the Union and its Member States towards the data-related targets of the Digital Decade Policy Programme, such as the use of big data and cloud computing services by European enterprises.

A significant milestone was reached in realising the EU's Data Strategy with the finalisation of negotiations with the co-legislators on the **Data Act** and the entry into application of the **Data Governance Act**, setting a new standard for trustworthy data management across the EU.

As part of the implementation of the Data Governance Act, the **European Data**

Innovation Board (EDIB) has been set up, and a first meeting took place in December 2023. EDIB is crucial to ensure uniformity and efficacy in data management and sharing practices across the Union.



These developments together with the current rollout of **Common European Data Spaces** represent a significant leap in realising the EU's vision for a unified and innovative single market for data, opening up new

avenues for growth and collaboration for start-ups, small and medium-sized enterprises and bigger businesses.

In 2023, a comprehensive framework to monitor and annually report on the progress towards achieving the **eHealth target** was developed. Member States are progressing well in providing citizens access to their electronic health records with an EU27-average score of 72% out of 100%. The composite indicator covers four layers beyond the implementation of electronic access services and is in line with European Health Data Space Regulation proposal and European Electronic Health Records Exchange Format Recommendations.

The European Ombudsman recognised the work of CONNECT and DGs Justice and Consumers, and Health and Food Safety, by granting the Award for Good Administration 2023 in the category of Excellence in Innovation for the EU digital COVID certificate. CONNECT continued the operation of the **EU digital COVID certificate** (EU DCC) infrastructure. Two new equivalence Decisions were adopted to connect the last third countries, bringing the total number connected countries to 78. With the improved epidemiological situation and COVID-19 not being a public health emergency of international concern any longer, digital COVID certificates were only required by few non-EU countries for international travel. When the EU DCC Regulation expired on 30 June 2023, a decision was taken not to extend it. CONNECT and DG Health and Food Safety led discussions with the World Health Organisation (WHO), aiming at the uptake of the EU DCC into the global digital health certification network (GDHCN), a global system established by the WHO in June 2023. The uptake of the EU DCC ensures the long-term sustainability of the digital COVID certificates system and scales up its international dimension. The EU DCC infrastructure therefore remained operational to support EU DCC countries in their voluntary transition to the GDHCN. At year end, the EU DCC infrastructure ceased all activities, and the majority of EU Member States (and EU DCC third countries) are now either fully connected or in the process of connecting to the GDHCN.

The Commission approved in December 2023, under EU state aid rules, the **important project of common European interest (IPCEI) Next Generation Cloud Infrastructure and Services** to support research, development and first industrial deployment of advanced cloud and edge computing technologies across multiple providers in Europe. The seven Member States involved will provide up to EUR 1.2 billion in public funding, which is expected to unlock additional EUR 1.4 billion in private investments. As part of this IPCEI, 19 companies, including small and medium-sized enterprises, will implement 19 highly innovative projects.

During the year, CONNECT completed a comprehensive process to procure **SIMPL**, the smart middleware platform that will allow stakeholders within a data ecosystem (such as a data space) to collaborate in a trusted manner, facilitating the emergence of a European cloud federation.

Under the *Horizon Europe* call '**From Cloud-to-Edge-to-IoT for European Data**', the EU has made good progress in advancing the internet of things (IoT) towards a sophisticated, secure, and trustworthy infrastructure that seamlessly integrates the real and virtual worlds. This initiative has successfully completed several large-scale pilot projects emerging from digital research and innovation efforts, across key vertical sectors of energy, mobility and agriculture. These innovation actions have not only demonstrated the practical

application of IoT in these sectors but have also set the stage for further technological advancements.

CONNECT prototyped **DOME**, the **EU online marketplace for federated cloud-to-edge based services** that will offer a single point of access and improve visibility of trusted European cloud service providers and their offerings. CONNECT further prepared the EU cloud rulebook and guidance for the public procurement of cloud services to offer a coherent framework around the different applicable rules (including self-regulation) for cloud services.

Furthermore, CONNECT worked on the models to estimate and map the volume of cloud data flows and their economic values, and established the Edge Computing Observatory.

CONNECT procured the **European Open Science Cloud (EOSC) service platform**, an open digital infrastructure, which will be the first reference node of the EOSC federation promoting open science policy of EU. It will provide data, tools and services for the entire research life cycle for promoting open science and large-scale interdisciplinary scientific cooperation in Europe. The contractors started preparing the managed services delivery of the platform, which should start operations in the second quarter of 2024.

The Commission published in January 2023 the **Implementing Regulation on High Value Datasets**. Based on the Open Data Directive, this Regulation established a list of datasets with a high reuse potential held by the public sector. By 9 June 2024, Member States will have to make them available via application programming interfaces for free, in a machine-readable format and downloadable in bulk where appropriate. The Commission provided implementation advice to Member States and developed a new standard for metadata that will be key for better findability of the datasets.

CONNECT has coordinated, together with the Secretariat-General, the Commission initiatives supporting the deployment of **common European data spaces** in strategic sectors and domains of public interest. This includes a data spaces support centre (DSSC) that coordinates all relevant actions on data spaces, including interoperability of data sharing between sectors. The DSSC will also function as the operational arm of the European Data Innovation Board, which held its first meeting in December 2023.

The **preparatory actions in mobility, tourism and agriculture** supported under *Digital Europe*, and in **energy** under *Horizon Europe*, are yielding positive outcomes, notably on the developments of common European data space building blocks.



The contract to create the **common European language data space** started in January 2023. CONNECT's active efforts to encourage Member States to form a multi-country project around large language models (LLMs) led to a formal request of over 10 Member States to create the ALT-European digital infrastructure consortium (EDIC). It will pool extensive language data covering at least all EU official languages, and support EU

industries to adopt European LLMs, a key subset of general-purpose artificial intelligence models.

Significant progress was made on the **Common European Reference Framework (CERF) for energy saving applications** under the EU's digitalisation of energy action plan. This initiative, supported by *Horizon 2020* and *Digital Europe*, successfully developed and implemented interoperable energy-saving applications across several Member States. The key achievements include the deployment of the Interoperable Recommender, operational since September 2023, and the widespread use of CERF-compliant applications in countries like Italy, Greece, and Portugal, with expansions to seven additional EU and associated countries. The EU is now focusing on the second generation of CERF, aiming to integrate real-time data and custom features, further backed by the *Digital Europe*.

<p>Specific objective 3</p> <p>Artificial intelligence that is human-centric, ethical, sustainable and that respects EU values</p>	<p>Related to spending programme: Horizon 2020, Horizon Europe and Digital Europe</p>
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Artificial intelligence (AI) has emerged as one of the key building blocks to the digital transformation. Therefore, making sure that AI is human centric, empowers people, reinforces societies and contributes to the green transition is at the heart of the Digital Decade Policy Programme. Clear objectives have been agreed with the Member States, notably to promote a human-centred, fundamental-rights-based, inclusive, transparent and open digital environment. The declaration on digital rights and principles, which is fully associated to the policy programme, also includes some clear commitments to ensure that artificial intelligence is at the service of people and increase their well-being while respecting their freedom of choice.

CONNECT has actively participated as an honest broker in the co-legislative process on the proposal for a **regulatory framework for artificial intelligence (Artificial Intelligence Act)**. It has subsequently played a mediating role in the trilogue which led to an agreement on 8 December 2023.

The DG continued promoting the implementation of the actions set out in the coordinated plan on artificial intelligence. The new expert group of Member States on artificial intelligence met once in its high-level formation and six times in the different subgroups.

The EU's AI Act is the first-ever comprehensive legal framework on Artificial Intelligence worldwide. So, this is a historic moment. The AI Act transposes European values to a new era. By focusing regulation on identifiable risks, today's agreement will foster responsible innovation in Europe. By guaranteeing the safety and fundamental rights of people and businesses, it will support the development, deployment and take-up of trustworthy AI in the EU. Our AI Act will make a substantial contribution to the development of global rules and principles for human-centric AI.

President Ursula von der Leyen

The **European partnership on artificial intelligence, data and robotics** (ADRA) has grown to comprise more than 100 members, in addition to the communities already



mobilized by the three founding organisations. It produced a near-final draft of its new strategic research, innovation and deployment agenda. The first large physical event (ADR Forum) of November 2023 saw a strong participation of the European AI, data and robotics communities. Several meetings and events brought together the different stakeholder communities that contribute to the convergence of data spaces, European Digital Infrastructure Consortia (EDICs), generative AI, and testing and experimentation facilities, including dedicated collaborative workshops at the 2023 Data Week event. The consortium in charge of the **European artificial intelligence on demand platform** under *Digital Europe* started its work on 1 January 2024. Two additional networks of artificial intelligence excellence centres were created in September 2023. The testing and experimentation facilities contract started in January 2023.

The **4th AI Alliance Assembly** took place on 16 and 17 November 2023 in Madrid.

In the international arena, the specific cooperation established with Japan and India was continued and cooperation with the United States of America (through the Trade and Technology Council) and with Canada was further deepened.

<p>Specific objective 4</p> <p>A fair, competitive and resource efficient digital economy</p>	<p>Related to spending programme: Horizon Europe, Digital Europe and Connecting Europe Facility – Digital</p>
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The European vision for a digital economy and society in 2030, as established in the Digital Decade Policy Programme, consists of a strong, rule-based digital single market with a digital regulatory environment in place to strengthen the European digital ecosystem, and European undertakings able to compete fairly along global value chains, with embedded European values. It also encompasses excellent digital infrastructures, respect to the environment, digital empowered and capable citizens, and a digital skilled workforce. This is expressed in the policy programme’s digital objectives which take into account the interests of citizens, businesses and of society at large.

The **Digital Markets Act** (DMA) which was adopted in mid-2022 aims to protect contestability and innovation in digital markets by prohibiting certain unfair practices by large gatekeeper platforms. To achieve this, CONNECT worked with DG Competition on the first designations of six gatekeepers and 22 core platform services who will have to comply with relevant obligations by March 2024. In parallel, the Commission also opened five market investigations under the DMA.

The **Digital Services Act** (DSA), adopted late 2022, aims to create a safer online environment for consumers and companies in the European Union by protecting consumers’

fundamental rights, defining clear responsibilities for online platforms, and preventing the spread of illegal content and disinformation. The Commission designated 22 very large online platforms (VLOPs) and very large online search engines (VLOSEs) in 2023 (17 VLOPs and two VLOSEs in April following three more VLOPs in December, notably three adult platforms). For the 19VLOPs and VLOSEs designated in April, the rules started applying in August 2023. Following their nomination, VLOPs submitted their first risk assessment reports and also published their first transparency reports. CONNECT is thoroughly assessing the risk assessment reports and transparency reports to determine VLOPs' compliance with DSA obligations.

The Commission services have issued several formal requests for information to most VLOPs and VLOSEs to retrieve additional information to assess VLOPs compliance with specific DSA obligations.

On 18 December 2023, the European Commission opened formal proceedings to assess whether X may have breached the DSA rules in areas linked to risk management, content moderation, dark patterns, advertising transparency and data access for researchers.



Today, Europe throws its hat in the ring to become a world leader in Web 4.0 and virtual worlds. Europe has what it takes to lead the next technological transition: innovative start-ups, rich creative content and industrial applications, a strong role as a global standard-setter, and an innovation-friendly and predictable legal framework.

Commissioner Thierry Breton

The **EU initiative on Web 4.0 and virtual worlds** was adopted on 11 July 2023 and aims to ensure an open, secure, trustworthy, fair and inclusive digital environment for EU citizens, businesses and public administrations.

Operational since 2023, the **European Digital Innovation Hubs** (EDIHs) network emerged from *Digital Europe* with a view to supporting small and medium-sized enterprises (SMEs), mid-caps and public sector organisations in their digital transformation. The EDIHs network are one-stop shops offering a variety of services like test-before-invest for new ideas, training sessions to level up skills, funding advice, and opportunities to make new connections. They leverage artificial intelligence, cybersecurity, and internet of thing expertise, powered by universities, research groups, and private companies. Of paramount importance, by enhancing coordination, the EDIH network ensures that SMEs find the right digitalization services seamlessly, irrespective of the entry point (client journey concept).

The EDIH network comprises over 200 hubs (151 funded through *Digital Europe*, the others - Seals of Excellence - funded through national and regional resources). EDIH services are available in all EU Member States, enabling any EU SME to receive support in their digitalisation journey. In 2023, its first full year of operations, the EDIHs facilitated over 2 200 digital maturity assessments aiming to evaluate the level of digitalisation of companies and enabling tailored support. In the same period, EDIHs organised over 800 events, provided over 2.400 services reaching almost 9 000 individual companies in line with the planning for the first full year of operations. The objective is to reach about 100 000 companies until 2027.

Radio spectrum plays a pivotal role in the functioning of various wireless technologies, especially in modern communications which impact our daily lives, drive economic

development, and support technological advancements. Preparatory work for the review of the Radio Spectrum Policy Programme has advanced with the completion of an external study in support of the impact assessment. As radio spectrum stimulates investment and innovation, this policy plays an important role in the ongoing reflection on the connectivity strategy.

The Radio Spectrum Committee (RSC) delivered a positive opinion on the Commission Implementing Decision on harmonisation of spectrum for mobile communications on board vessels (including 5G). Further, the RSC discussed the draft Commission Implementing Decisions on the harmonisation of the 40.5–43.5 GHz frequency band and on the harmonisation of spectrum for ultra-wideband technology equipment. The authorisation of the three 5G pioneer bands (700 MHz, 3.6 GHz, 26 GHz), has progressed, most notably in the 700 MHz and the 3.6 GHz bands. CONNECT monitored the situation and will continue to do so to assess on a case-by-case basis whether to invoke its enforcement powers.

The Commission services have set out, in collaboration with Member States in the context for the Digital Decade Policy Programme, a roadmap for the development of a methodology leading to the future definition of KPIs for the monitoring of Service Quality of 5G fixed and mobile services. At the beginning of 2024, the Body of European Regulators for Electronic Communications (BEREC) agreed to conduct the related technical work. In addition, BEREC and the Commission agreed on a timetable in view of a possible revision of the KPI delegated Act at the end of 2025.

CONNECT worked on a **proposal for a 'Gigabit Infrastructure Act', a draft Gigabit Recommendation**, and an exploratory consultation on the future of the electronic communications sector and its infrastructure that aim to facilitate and stimulate the roll-out of very high-capacity networks. It will reduce 'red tape' and the costs and administrative burden associated with the deployment of gigabit networks. It also has the objective to simplify and digitalise permitting procedures. With these new rules, operators will be able to swiftly deploy networks through simplified, digitised and less costly procedures.



CONNECT continued to **monitor the implementation of the roaming rules** and worked on the planned review of the Commission Implementing Regulation on fair use policies and the sustainability mechanism.

The external study aimed to support the **evaluation of the Body of European Regulators for Electronic Communications (BEREC) and the BEREC Office's performance** was delivered in December 2023.

The European view for a digital economy and society cannot be achieved without taking into consideration the sustainability issues it creates. One example is in the field of data centres which are essential for the functioning of the digital world. CONNECT pursued its effort towards making **data centres climate-neutral, highly energy efficient and**

sustainable by 2030. This materialised first through the development of a measurement framework for data centres energy performance as part of the Energy Efficiency Directive, through the publication of a data centre assessment framework to help operators demonstrating compliance with the Taxonomy Regulation and, finally, through a continuous dialogue with self-regulatory initiatives in that area.

As mandated by the **action plan on Digitalising the Energy System**, CONNECT conducted a study with the Joint Research Centre (JRC) on developing common indicators on the sustainability of telecommunications networks, to be finalised in the beginning of 2024. The study is to form the basis for a Code of Conduct to be developed by 2025.

As mentioned above, digital empowered and capable citizens, and a digital skilled workforce is an essential part of the European vision for digital economy and society in 2030. CONNECT continued to pursue the objectives set out in the Digital Decade Policy Programme 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. CONNECT put a particular focus on supporting advanced digital skills to address the substantial shortage of information and communication technology specialists in Europe. Funding opportunities were launched for specialized education programs and training opportunities for the acquisition of advanced digital skills in specific sectors. CONNECT also worked towards the establishment of the **Cybersecurity Skills Academy** as well as for the provision of funding opportunities for strengthening skills essential for the semiconductor ecosystem. CONNECT continued to support existing successful initiatives, including the EU Code Week (where more than 71 000 activities were organised in 2023) and the activities of the Digital Skills and Jobs Platform and its National Coalitions and their communities.

CONNECT contributed to two Council Recommendations, adopted on 23 November 2023, on the key enabling factors for successful digital education and training, and on improving the provision of digital skills and competences in education and training, including on advanced digital skills.

A major study has been launched into **digitalisation of business in the EU Member States**. The study will gather data and evidence on Member State's national and regional digitalisation of business strategies, initiatives and actions and track their progress towards achieving the Digital Decade targets for digitalisation of businesses. The study will last three years and will produce country reports, an EU analysis report, make recommendations and gather best practices.

CONNECT supported the implementation of the **EU strategy on standardisation** in different ways. First, CONNECT published the Rolling Plan for ICT standardisation 2023, and developed, together with the expert group "European Multi-Stakeholder Platform on ICT standardisation" the 2024 version. Secondly, CONNECT developed two new *Horizon Europe* calls focused on digital standardisation, promoting a common vision for the global standardisation of key digital technologies, and promoting the EU standardisation model

across the world. In May 2023, CONNECT adopted a mandate for standardisation in Artificial Intelligence.

CONNECT is following the work for the **digital euro**, in particular with regard to the interactions with the European digital identity wallet and other digital policies including the Digital Markets Act, as well payments and financial technology.



Together with DG Internal Market, Industry, Entrepreneurship and SMEs, CONNECT finalised a study on the evolution of cross-border e-commerce and obstacles encountered by traders when operating cross-border, taking also into account the impact of the pandemic. Moreover, it carried out with the Joint Research Centre a webscraping exercise aiming at assessing the impact of delivery limitations applied in different national versions of websites of multinational traders. Finally, it continued to monitor the enforcement of the Regulation.

As part of the implementation of the internet security part of the 2020 Security Union Strategy and the 2020 Cybersecurity Strategy, CONNECT launched the **DNS4U Project** aiming at deploying autonomous European resolution capabilities. CONNECT supported the work on the NIS Cooperation Group in developing implementing guidelines on article 28 (domain name registration data) of the NIS2 Directive. Together with the Joint Research Centre, the DG launched the internet security standards website mapping deployment across the EU and advanced the work on devising policy options for increasing their uptake. CONNECT also increased its participation and coordination with Member States efforts to uphold EU objectives in discussions relevant to internet standards in the Internet Engineering Taks Force (IETF) and the International Telecommunications Union (ITU).

The establishment of the multistakeholder advisory group for Regulation (EU) 2019/517 on the implementation and functioning of the **.eu top-level domain name** has been postponed and is now planned for 2024 due to other priorities linked to implementation of the legal framework.

The **Recovery and Resilience Facility** is providing key contribution to achieving the Digital Decade targets and objectives. Estimates show that up to EUR 117 billion of the RRF funding will directly contribute to reaching the Digital Decade targets. At least 13% of those investments are directly supporting the connectivity goals.

Moreover, in 2023, the Commission selected 37 projects to be financed under the digital strand of the **Connecting Europe Facility**. The total budget of EUR 252 million will be allocated among projects for the deployment of 5G infrastructure for local communities and along major European transport corridors, as well as for the deployment of submarine cables, improving the security and resilience of backbone networks within and to the EU.

The investment period of the **Connecting Europe Broadband Fund** ended in July 2023 and no new projects will be added to the portfolio of the fund. During 2023, the CEBF projects brought fibre cable to 249 049 new premises.

CONNECT acted in multiple international fora to foster the Union's vision of the digital world around the globe. As requested by the 2023 **Council Conclusions on Digital Diplomacy**, CONNECT increased coordination with EU Member States to strengthen EU representation in key multistakeholder fora. Through dialogue between the High-Level Group on Internet Governance (HLIG) and the Digital Diplomacy Networks, CONNECT and European External Action Service prepared input on key processes (such as the UN Global Digital Compact) that led to official EU positions (endorsed in Council). In addition, CONNECT represented and upheld the Commission's positions in all the key internet governance fora. Together with DG International Partnership and the European External Action Service, CONNECT supported the work of the new UN Technology Envoy Office. In the context of the Web 4.0 and the virtual worlds Communication, the set out a series of actions for the governance of virtual worlds, including the establishment of a dedicated multistakeholder process to devise possible governance frameworks (beyond the mandate of existing internet governance institutions).

CONNECT successfully facilitated the voluntary agreement between 22 EU and seven Ukrainian operators, which was prolonged for a fourth time to ensure **connectivity for refugees from Ukraine** until 9 July 2024. In cooperation with the relevant services, in particular DG Trade, CONNECT coordinated and finalised the negotiations with Ukraine on the amendment decision to incorporate the EU roaming *acquis* in the EU-Ukraine Association Agreement.

Similarly to Ukraine, Moldova and Georgia have requested and received positive replies from the Commission to initiate the process to join the roam-like-at-home area. CONNECT successfully cooperated with DG Trade to amend the EU-Moldova Association Agreement and incorporate the roaming *acquis*. Moreover, CONNECT facilitated in cooperation with the Moldovan authorities a voluntary declaration between EU and Moldovan mobile operators that will ensure lower roaming tariffs between the EU/EEA and the Republic of Moldova in the short term. Georgia and the Commission are in the process of agreeing on the contents of the amendment decision of the Association Agreement to incorporate the roaming *acquis*.

One of the priority actions of the **Western Balkan Growth Plan** adopted by the Commission in November 2023 is to explore solutions for a long-term roaming arrangement to include the Western Balkans in the EU roam-like-at-home area. The voluntary declaration between EU and Western Balkan operators to lower retail roaming charges has been successfully implemented by the signatories.

The Commission has been building **international digital partnerships** between EU and like-minded countries with Trade and Technology Councils with the United States of America and India (the latter launched in 2023) and Digital Partnerships with Canada (launched in 2023), Japan, Korea and Singapore (launched in 2023) that match the four pillars of Digital Compass: skills, infrastructures, transformation of business and of public services.



The Commission promoted its approach to **digital governance in multilateral fora**. For instance, the G7 endorsed the International Guiding Principles on Artificial Intelligence and a voluntary Code of Conduct for AI developers, that reflect the core concepts of the EU Artificial Intelligence Act. UNESCO published Guidelines for platform governance that generally reflect the principles and architecture of the Digital Services Act. In the Latin America and the Caribbean (LAC) region, the EU-CELAC Summit held on 17-18 July endorsed and announced the EU-LAC Global Gateway Investment Agenda. At bilateral level, the second EU-Argentina Digital Dialogue took place on 21-22 June. The Commission held a Regulatory Dialogue on digital policies with Western Balkan countries on 30 June 2023, on the occasion of which, *Digital Europe* Association Agreements were signed with Montenegro, North Macedonia, Serbia, and Albania and with Türkiye on 31 August. The Commission also continues implementing the EU-Africa partnership on digital transformation. Digital Economy Packages were launched with Nigeria, the Democratic Republic of the Congo and Kenya.

To protect the EU interests regarding spectrum in international fora, the Commission worked on a Council Decision to establish the Union's position at the International Telecommunication Union's World Radiocommunication Conference of 2023 (WRC-23). Despite tough negotiations, the EU Member States maintained unity in defending the EU interests and the WRC-23 outcome is positive and largely in line with the EU position.

Specific objective 5

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

Related to spending programme:
Horizon Europe, Digital Europe

In a world where digital plays a central role in citizens' and business' lives, ensuring security and resilience of the digital space is a precondition to foster the necessary trust which drives the future of the digital transformation. Developing a cyber-secure and resilient Europe is therefore a must. As established in the Digital Decade Policy Programme, digital objectives cover the need for secure digital technologies and services, the need to improve resilience to cyberattacks, as well as ensuring trusted and secure environments to access, for example, public services. In particular, the objective to promote digital identities for all Union citizens is one of the digital decade targets.

The proposal for the **Cyber Solidarity Act** was adopted on 18 April 2023. In December 2023, both the Parliament and the Council adopted their mandates to start the trilogue negotiations, in view of securing adoption under this Parliament's mandate. The Act provides that actions under the Regulation will be funded by *Digital Europe*.

As regards the **Directive on measures for a high common level of cybersecurity across the Union (NIS2 Directive)**, CONNECT has continued to provide support to Member States in the preparation of the transposition process. The guidelines on the application of the *lex specialis* clause were adopted on 13 September 2023 and published together with guidelines and templates for establishing lists of important and essential entities by the Member States. Preparations for the necessary implementing acts advanced,

with involvement of the NIS Cooperation Group. A first meeting of the Critical Entities Resilience Group and the NIS Cooperation Group took place in 2023, coordinating efforts for the preparations for the transposition and implementation of the two directives.

CONNECT contributed to the preparations of the Council Conclusions on the EU Policy on Cyber Defence adopted on 23 May 2023 that welcomed the 2022 **Joint Communication on the EU Policy on Cyber Defence**. CONNECT co-drafted, together with DG Defence Industry and Space, the External Action Service (EEAS), and the European Defence Agency the implementation plan of the EU Policy on Cyber Defence, adopted in July 2023.

CONNECT has worked with relevant Commission services, the EEAS, the NIS Cooperation Group and the European Union Agency for Cybersecurity to develop a **methodology for EU level risk assessments and scenarios from cyber security perspective**. Work is advanced for the communications and electricity sectors, and will be supplemented by an assessment of cybersecurity risks relevant to wind energy installations and related infrastructure.

The **Cyber Skills Academy Communication** was adopted on 18 April 2023. It relies on four pillars: fostering knowledge generation through education and training, better channelling of funds and increased visibility for funding opportunities, stimulating stakeholders to take action through pledges, and defining indicators to monitor market evolution and setting targets, hand in hand with Member States. Significant progress was made for all four pillars of the Academy.



The **Cyber Situation and Analysis Centre**, launched in January 2023, has produced weekly cybersecurity input to the Integrated Situational Awareness and Analysis Reports with respect to Russia's ongoing war of aggression against Ukraine and, since October 2023, with respect to the situation in the Middle East arising from the Hamas terrorist attack on Israel. It has also supported the Commission's contribution to other operational cybersecurity activities, such as the BlueOLex 2023 **table-top cyber exercise** with EU CyCLONe, and the elections EU cybersecurity exercise with DG Justice and Consumers, the European Parliament, and Member States cyber and elections authorities.

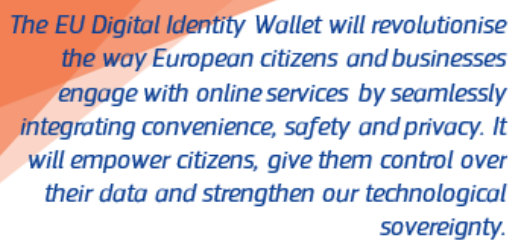
Following a call for expression of interest, two Member States consortia were selected in 2023 to set-up **cross-border security operations centres** via joint procurement tenders and grants. CONNECT signed the corresponding grants, joint procurement agreements and hosting and usage agreements at the end of 2023. CONNECT, in coordination with European Cybersecurity and Competence Centre, is preparing with both consortia the tender specifications of the joint procurements.

In the field of certification, the draft implementing act setting the **EU Common Criteria scheme** has been adopted at the end of January 2024. In addition, extensive work was undertaken in relation to the **European cloud security certification scheme**, under

preparation by the European Union Cybersecurity Agency. CONNECT chaired the relevant discussions in the European Cybersecurity Certification Group.

For the **Cyber Resilience Act** (CRA) proposal, co-legislators reached an agreement on the regulation on 30 November 2023. The Act is expected to enter into force in the course of 2024 with a transition period of three years for the application of its essential requirements.

As regards the **e-Privacy Regulation**, CONNECT continued to support co-legislators in the legislative process.



The EU Digital Identity Wallet will revolutionise the way European citizens and businesses engage with online services by seamlessly integrating convenience, safety and privacy. It will empower citizens, give them control over their data and strengthen our technological sovereignty.

Commissioner Thierry Breton

Finally, as regards the Regulation establishing a **European Digital Identity**, co-legislators reached a provisional political agreement on the text on 8 November 2023, which was endorsed by the lead Parliamentary Committee, in December 2023. Formal adoption and entry into force are expected in early 2024.

CONNECT continued to **cooperate with the European Union Agency for Cybersecurity** (ENISA) in view of the implementation of the Cybersecurity Act. The agency supported Member States to prepare for and to respond to cybersecurity incidents. A contribution agreement was signed in December 2023 with ENISA to continue this action with an estimated cost of EUR 20 million.

The **European Cybersecurity Competence Centre** (ECCC) has built up operational capacity and will become fully autonomous in the course of 2024. The network of National Coordination Centres in Member States is building capacities and strengthening links with national cybersecurity communities.

CONNECT also worked in the international arena to foster Europe's cybersecurity. Several **cyber dialogue events** (co-chaired by European External Action Service and CONNECT) took place with the United States of America, the United Kingdom, Japan, and India. Exchanges with other likeminded countries such as Moldova, the Western Balkan countries, Canada and South America and African countries also took place.

Specifically in **support of Ukraine**, a framework for a non-binding working arrangement between the European Union Cybersecurity Agency and the Ukrainian cyber agencies was approved by the Commission in June 2023, and the working arrangement focussing on common situational awareness, cyber awareness and capacity building, best practices exchange and knowledge and information sharing was signed on 13 November 2023.

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 programme:
Horizon Europe and Creative Europe
- MEDIA

The Digital Decade Policy Programme and the Declaration on Digital Rights and Principles are aimed at building a society that can trust digital products and online services, that can identify disinformation, that is fully accessible for everyone, in which children are protected in the online space and learn how to understand and navigate through the information available online. It also seeks to ensure the respect of freedom of expression and the right to diverse, trustworthy and transparent information, and to pursue a clear objective of ensuring that online participation in democratic life is possible for everyone.

CONNECT started the enforcement of the Digital Services Act (DSA), including with a focus on the processes very large online platforms have in place regarding the handling of disinformation. The DSA is a global-first legal standard for tackling disinformation while protecting freedom of expression and information. Its main regulatory tool is the supervised risk management framework for larger online platforms. As part of the enforcement of the DSA, and following the Hamas terrorist attack on Israel, CONNECT issued several requests for information (RFIs) with a focus on the platforms' processes to deal with the wave of disinformation triggered by the crisis. It also opened its first formal proceedings against X in which one grievance focuses on the effectiveness of measures taken to combat information manipulation on the platform.

The DG continued to support the work of the signatories of the **2022 Code of Practice on Disinformation**, which continued to grow from 34 to 44 signatories. CONNECT started monitoring the way they implement their commitments, based on reports submitted in January and September 2023. A monitoring mechanism, involving European Digital Media Observatory hubs and European Regulators Group for Audiovisual Media Services has been developed to support the Commission's assessment of the Code implementation, including in the context of the Digital Services Act enforcement.



Through the **Code of Practice Taskforce** chaired by the Commission, signatories worked on various important topics, bringing tangible results (e.g. related to the challenges posed by generative artificial intelligence, preparing to protect elections from disinformation campaigns, and in the context of ongoing disinformation surrounding Russia's war of aggression against Ukraine). The Taskforce also delivered structural indicators capable of measuring prevalence and sources of disinformation across major online platforms in the EU.

Six new national and regional **European Digital Media Observatory (EDMO) hubs** became operational in 2023. They complement the existing eight, and extend EDMO's reach and geographical coverage to the whole EU. Through the Observatory, CONNECT supported independent fact-checkers and academic researchers, whose work is crucial to debunk and expose false claims, manipulated content, provide more insight in the phenomenon of disinformation and support media literacy initiatives. The work by EDMO and the hubs has been instrumental in analysing disinformation on the Russia's war of aggression against Ukraine. Through its network of fact-checkers EDMO also provides evidence regarding disinformation spreading across major online platforms regarding relation to the Israel-Hamas conflict.

In its quest against disinformation, CONNECT launched five dedicated research and innovation projects. With a budget amounting to EUR 28 million, from 2022-2027, they aim at creating artificial intelligence-based tools to detect deep-fakes and tampered content, in the form of videos, images and voice.

CONNECT contributed to the adoption of the **Defence of Democracy package** on 12 December 2023 to tackle the threat of foreign interference with more transparency, while encouraging civic engagement and citizens' participation in our democracies. The package builds on the European Democracy Action Plan, which was designed to promote free and fair elections, strengthen media freedom and counter disinformation.

Media freedom and pluralism is essential for the digital society. The co-legislators reached a political agreement on the **European Media Freedom Act** on 15 December 2023. The Act includes unprecedented safeguards for media and journalists against political



Media pluralism and independence are a pillar of EU democracy, and the European Media Freedom Act will be a powerful tool to protect them, while fostering an environment where media can grow and operate freely across borders.

Commissioner Thierry Breton

interference, as well as rules ensuring that media can operate more easily across borders, without undue pressure and benefiting from the digital transformation of the media space. The Act creates a new independent European Board for

Media Services, comprised of national media regulators or bodies, to strengthen cooperation at EU level, including against third country misinformation, and to help implement the rules.

CONNECT contributed to the media freedom and pluralism pillar of the Rule of Law 2023 Report, focusing on core areas such as 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.

CONNECT launched an independent external study to assess the application by Member States of the **Recommendation on Safety of Journalists**. Country fact sheets present the result of the desk research, the online survey and the targeted interviews. The study was published in February 2024 and proposed a set of key indicators and a monitoring and

evaluation methodology which will be used in future reporting exercises and is expected to enhance completeness and consistency of reporting under the Recommendation.

CONNECT also monitored a number of pilot projects and preparatory actions to support media freedom and pluralism.

The report on the application of the **Audiovisual Media Services Directive** (AVMSD) covering the period 2019-2022 provided an assessment of the conformity with EU law of national transposition acts and assessed several drafts of the Ukrainian media law and law on advertising in order to support Ukraine for the alignment of Ukrainian law to the AVMSD.

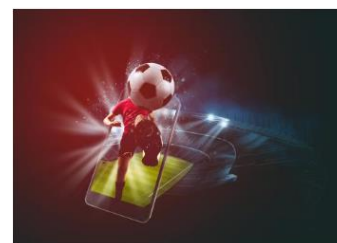
Creative Europe continues to be an essential programme to support the audiovisual community. For the 13 calls published by the European Education and Culture Executive Agency, applicants requested EUR 333 million (compared to EUR 389 million in 2022). Under the cross-sectoral strand, four calls for proposals attracted 224 applications, which requested EUR 147 million in funding.

MedialInvest was launched in 2022, followed by the publication of a call for expression of interest addressed to financial institutions. The call, managed by the European Investment Fund, will remain open until 2027. The first investment agreement, for a value of up to EUR 25 million (expected to raise up to EUR 70 million in equity investment) was presented to the public in September 2023, at the San Sebastian Film Festival.

The contract for a **European carbon emissions calculator for audiovisual productions** was signed in November 2023 and the kick-off meeting was held in December.

The **European Media Industry Outlook** was published in May and presented by Commissioner Breton at the Cannes Film Festival. Under the multimedia budget line, the pan-EU TV programming in multiple languages (Euronews), the coverage of EU affairs through a radio network (Euranet Plus), the data-driven news on EU affairs (European Data Journalism Network), and the multilingual content across European platforms (European newsroom of press agencies) were funded.

CONNECT worked on the field of copyright and related rights, as this is an important element for the proper functioning of media sector. The Commission adopted on 4 May 2023 the **Recommendation on combating online piracy of sports and other live events**, which encourages Member States and market players to increase efforts to combat unauthorised streaming of live events. It provides indications on how the remedies available in EU law can be used.



In addition, it continued **monitoring the implementation of the Directive on copyright** in the digital single market and the Directive on online television and radio programmes, by starting the assessment of the conformity of national transposition measures notified by Member States.

CONNECT launched a study to support the evaluation of the **Marrakesh Directive and Regulation** which facilitate the use of certain copyright-protected works for persons who are blind, visually impaired or otherwise print-disabled, and continued its analyses on the impact of the RAAP judgment for the remuneration of third country recorded music played in the EU, by publishing a study providing an overview of the national rules and market practices linked to the collection and distribution of the single equitable remuneration for music performers and producers, and by carrying out a targeted consultation to gather additional evidence from stakeholders on the impacts of a possible regulatory change.

Ensuring an inclusive and safe online environment continued to be an integral part of CONNECT's vision for a digital society. The conformity checks concerning the implementation of the Directive on web accessibility in the public sector continued and work on a **comprehensive EU code of conduct on age-appropriate design** started. This work was delayed to ensure coordination with the priority work of the Commission on enforcement of the Digital Services Act. Throughout 2023, BIK+ continued to support children, carers and educators throughout the EU, reaching over 30 million people via the co-funded Safer Internet Centres and the BIK portal.

Two new **S+T+ARTS** projects support the use of artificial intelligence and high-performance computing tools and facilities for artistic experimentation in fields such as media, disinformation, extended reality environments, climate change, food security, urban development, and factory automation.

2. INTERNAL CONTROL AND FINANCIAL MANAGEMENT

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 ⁽⁶⁾. 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 for which payments have been incurred during the reporting year 2023.

The second subsection deals with the other components of organisational management: human resources, digital transformation and information management and sound environmental management.

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 sub-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);

⁽⁶⁾ 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. Control results

This section reports on the control results used by management to support the assurance on the achievement of the internal control objectives (ICO) ⁽⁷⁾. CONNECT 's assurance building, and materiality criteria are outlined in annex 5.

The CONNECT's relevant control systems are in respect of the most significant activities of the DG, i.e. grant management and budget entrusted to other DGs and entities. 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.

CONNECT's portfolio of activities **includes as of 2023 the Digital Services Act and Digital Markets Act** enforcement activities. The DG put in place the structures, governance, reporting lines and specific controls. This will be continued and further developed during the next year(s).

As regards CONNECT's expenditure during 2023, payments made in respect of **grant management** represented 94% of CONNECT's payments made under direct management. Therefore, grant management represents the main relevant control system of the DG ⁽⁸⁾ in direct management and will receive special attention in this report.

In 2023, CONNECT implemented an **overall budget of EUR 2 256.99 million**. CONNECT implemented directly 48.45 % of the overall budget (EUR 1 093.55 million). The remaining 51.55 % of the overall budget was implemented by entrusted entities which have been delegated budget implementation tasks by CONNECT (EUR 1 163.44 million). The latter is covered by the second relevant control system of the DG, detailed in Annex 6.

⁽⁷⁾ 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.

⁽⁸⁾ Annex 6 presents the relevant control systems of the DG in detail.

2023 was the **third 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 second year in which more significant payments were made. The payments made for these programmes have not yet reached their highest volume.

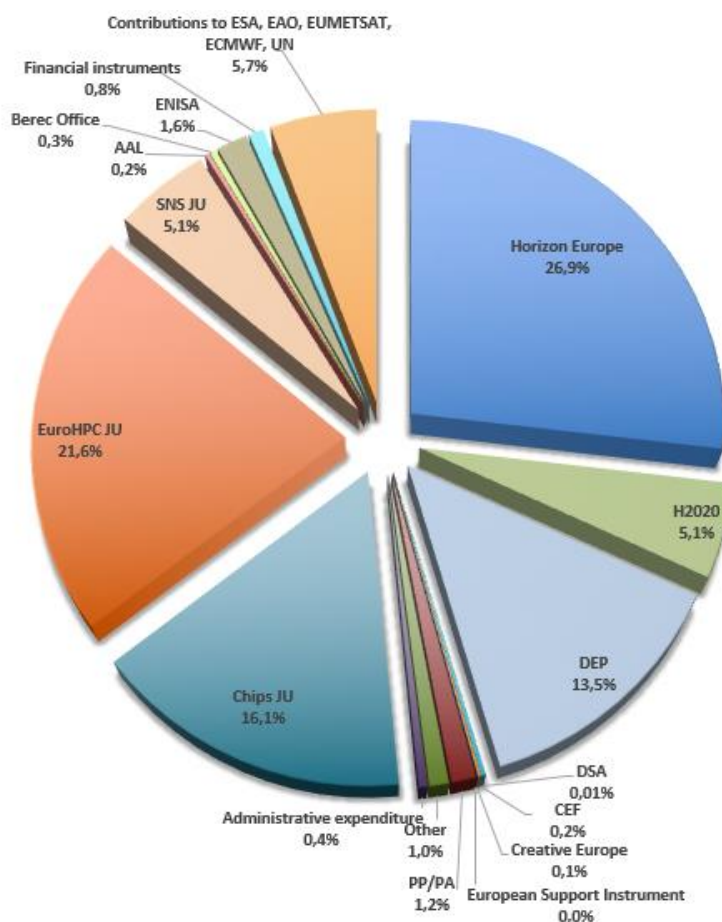
At the same time, the payments made for the legacy programmes are decreasing as the programmes are phasing out. Consequently, the overall amount of the total payments made during 2023 slightly decreased compared to the previous year, i.e. EUR 2 331.65 million in 2022.

Budget implemented by CONNECT (EUR million)	
Horizon Europe (HE)	606,02
Horizon 2020 (H2020)	114,44
Digital Europe (DEP)	304,76
Digital Service Act (DSA)	0,34
Connecting Europe Facility 2-Digital (CEF 2-Digital)	0,41
Connecting Europe Facility 1-Telecom (legacy)	4,31
Creative Europe-Media	2,95
Creative Europe-Media (legacy)	-
Emergency Support Instrument (ESI)	0,45
Pilot Projects and Preparatory Actions (PP/PA)	27,82
Other	22,16
Administrative expenditure	9,90
Sub-Total	1.093,55
Budget implementation tasks entrusted to other DGs and entities (EUR million)	
1- Implementing Bodies	
Chips Joint Undertaking (Chips JU)	362,64
European High-Performance Computing Joint Undertaking (EuroHPC JU)	488,59
European Smart Networks and Services Joint Undertaking (SNS JU)	115,72
Ambient Assisted Living (AAL) Association (H2020)	5,38
Body of European Regulators for Electronic Communications (BEREC) Office	7,70
European Union Agency for Cybersecurity (ENISA)	37,18
Financial instruments (CCSGF,CEBF)	18,32
Contributions to ESA, EAO, EUMETSAT, ECMWF, UN	127,90
2- Cross delegations to other Commission DGs	
DIGIT, PMO	-
Sub-Total	1.163,44
TOTAL	2.256,99

Note 1: CONNECT implemented Horizon budget in the name of the Smart Networks and Services (SNS) Joint Undertaking until its financial autonomy on 24/10/2023.

Note 2: CONNECT implemented Digital Europe programme budget in the name of European Cybersecurity and Competence Centre, entity which is not yet autonomous.

Note 3: The amounts in the table above represent the 'payments made' during the year.



Overview of 2023 CONNECT budget implementation (as payments made)

CONNECT is **parent DG for four Executive Agencies** which processed operational payments during 2023 for a value of EUR 525.29 million linked to CONNECT activities.

Executive Agency (EA)	Operational payments implemented by the EAs linked to CONNECT activities
HADEA	214,26
REA	18,64
EISMEA	82,12
EACEA	210,27
TOTAL (EUR million)	525,29

CONNECT's revenue during 2023 amounted to EUR 47.7 million out of which EUR 45.2 million was related to the Digital Services Act enforcement activities.

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): no such cases.

- Cases of flat-rates >7% for indirect costs (FR art 181.6):
 - There were no cases of flat-rates >7% for indirect costs in 2023 other than those allowed under Horizon 2020 and Horizon Europe rules for participation ⁽⁹⁾, providing that indirect eligible costs are determined by applying a flat rate of 25% of the total direct eligible costs (FR art 181.6);
 - 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 for the 2021-2024 was determined by an external audit firm, specifically appointed for this, at 17.92%.
- Cases of 'Derogations from the principle of non-retroactivity' pursuant to Article 193 of the Financial Regulation:
 - There were ten cases in respect of Horizon Europe;
 - In all above cases however, no costs were incurred prior to the date of submission of the grant application are 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 ⁽¹⁰⁾ 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**.

2.1.1. Effectiveness of controls

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

⁽⁹⁾ 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.

⁽¹⁰⁾ 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.

account the multiannual character of programmes and the nature of the payments concerned.

Details related to aspects of legality and regularity of transactions for the programmes implemented directly by CONNECT or delegated for implementation to entrusted entities are included in annex 7.

1) Control objective

The Research and Innovation (R&I) Family operates on a common audit strategy intended to contribute to the legality and regularity of expenditure on a multi-annual basis, including detection and correction of non-systemic and systemic errors.

For *Horizon 2020*, the Common Audit Service (CAS) of the Common Implementation Centre (CIC) carries out all audits, including those concerning grants managed by the Executive Agencies and the Joint Undertakings. This is a major step towards ensuring efficiency gains, a harmonised approach, legal certainty, equality of treatment of beneficiaries and the least audit burden on beneficiaries.

The Horizon Europe Audit Strategy is risk-based and draws on the achievements of lessons learnt from *Horizon 2020*.

The **main indicators** on legality and regularity ⁽¹¹⁾ of EU Framework Programmes for Research and Innovation are:

- The **cumulative representative detected error rate**, based on errors detected by ex-post audits on a Common Representative Sample of cost claims across the R&I Family; and
- The **cumulative residual error rate**, which is the extrapolated level of error after corrective measures have been implemented by the Commission services following the audits, accumulated on a multi-annual basis.

The **targets** set for this control system are, respectively:

- For *Horizon 2020*, to ensure that the cumulative residual error rate remains within a range of 2-5 %, aiming to be as close as possible to 2%. Progress against *Horizon 2020* targets is assessed annually based on the results of the implementation of the ex-post audit strategy and taking into account the frequency and importance of the detected errors along with cost-benefit considerations regarding the effort and resources needed to detect and correct the errors.
- For *Horizon Europe* ⁽¹²⁾, *Digital Europe*, *Creative Europe – Media*, *Connecting Europe Facility (CEF) II - Digital* and *CEF legacy*, *Emergency Support Instrument*

⁽¹¹⁾ These indicators are described in Annex 5.

⁽¹²⁾ No representative error rate for Horizon Europe will be available in 2022 and 2023 as the ex-post audit campaign for the Programme is planned to be launched in the beginning of 2024.

(ESI), *Pilot Projects & Preparatory Actions (PP/PA)* to ensure that cumulative detected and residual error rates do not exceed 2%.

It should be noted, however, that due to its multi-annual nature, the effectiveness of the ex-post control strategy of the R&I Family can only be measured and assessed fully in the final stages of the EU Framework Programme, once the ex-post audit strategy has been fully implemented, and errors, including those of a systemic nature, have been detected and corrected.

2) *Assessment of the control results of budget implemented directly by CONNECT*

Horizon 2020 Framework Programme

The Common Audit Service finalised audits on 648 participations corresponding to 100.9% of the 2023 target for *Horizon 2020*.

The Commission methodology for calculating the Horizon 2020 error rates is in line with the European Court of Auditors' (ECA) observations in their 2018 and 2019 Annual Reports, and is described in Annex 5 'Materiality criteria'. Use of the methodology yielded the following error rates for Horizon 2020¹³ on 31 December 2023:

- **Cumulative representative detected error rate** for the Framework Programme: **2.57%** ⁽¹⁴⁾;
- **Cumulative residual error rate** for the Framework Programme: **1.55% (1.59% for CONNECT)** ⁽¹⁵⁾.

In line with the Financial Statement ⁽¹⁶⁾ accompanying the Commission's proposal for the *Horizon 2020* Regulation, a reservation is not necessary for the related expenditure if the cumulative residual error rate for the programme falls within the target range of 2-5%. In 2023, and despite the above-mentioned caveats, CONNECT cumulative residual error rate

⁽¹³⁾ The Horizon 2020 audit campaign started in 2016. At this stage, five Common Representative Samples with a total of 788 expected results have been selected. By the end of 2023, cost claims amounting to EUR 49.2 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 4 707 participations were finalised by 31/12/2023 (of which 648 in 2023).

⁽¹⁴⁾ Based on the 581 representative results out of the 788 expected in the five Common Representative Samples.

⁽¹⁵⁾ It should be noted that in 2021 most of Horizon 2020 grants managed by DG Research and Innovation were delegated to Executive Agencies. Hence, this figure is based only on the actions that remained with the DG.

⁽¹⁶⁾ The legislative financial statement accompanying the Commission's proposal for the Horizon 2020 regulation states: 'The Commission considers therefore that, for research spending under Horizon 2020, a risk of error, on an annual basis, within a range between 2-5% is a realistic objective taking into account the costs of controls, the simplification measures proposed to reduce the complexity of rules and the related inherent risk associated to the reimbursement of costs of the research projects. The ultimate aim for the residual level of error at the closure of the programmes after the financial impact of all audits, corrections and recovery measures will have been taken into account is to achieve a level as close as possible to 2%.'

for *Horizon 2020*, calculated at 1.59 %, 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 Research and Innovation Framework Programmes are multi-annual, the error rates, and the residual error rate in particular, should be considered within a time perspective. Specifically, the implementation of the audit results over time will tend to lower the cumulative residual error rate thus increasing its difference with the representative detected error rate.

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 in its Annual Reports, the Common Implementation Centre of DG Research and Innovation, in close cooperation with central Commission services, defined actions aimed at significantly simplifying the rules, and paving the way for an important reduction of the error rate in *Horizon Europe* such as the use of a Corporate Model Grant Agreement and a Corporate Annotated Grant Agreement for all Programmes directly managed by the Commission. Other actions under implementation also targeting *Horizon 2020* grants and beneficiaries, 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 SMEs and newcomers), and enhanced training to external audit firms performing audits on behalf of the Commission. Focusing on the most common errors, these actions will be straightforward and achieve higher impact ⁽¹⁷⁾.

Horizon Europe Framework Programme

2023 was the third year of implementation of the *Horizon Europe* Framework Programme. No representative error rate for *Horizon Europe* is available in 2023 as the ex-post audit campaign for the Programme is planned for launch in 2024, once a meaningful number of payments is available for audit. 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, a 2% ⁽¹⁸⁾ detected and residual error rate will be considered for CONNECT.

Digital Europe

2023 was the third year of implementation of *Digital Europe* and the second 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

⁽¹⁷⁾ The CAS continues to analyse the root causes of errors that have been identified and targeted actions are taken to address any identified weaknesses. Further information on the implementation of the action plans established to reduce the error rates of Horizon 2020 and Horizon Europe can be found in Annex 7.

⁽¹⁸⁾ These rates correspond to the objective set for Horizon Europe.

controls in place for the programme are similar to the ones of the Horizon programmes, CONNECT decided to take a cautious approach and estimate the detected and residual error rate for 2023 at 2% ⁽¹⁹⁾.

Creative Europe – Media

The payments made by CONNECT for *Creative Europe - Media* (i.e. EUR 2.95 million) during 2023 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 2023 for *CEF II - Digital* (i.e. EUR 0.41 million) and *CEF Telecom* (i.e. EUR 4.31 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 made for grants of EUR 0.20 million and the financial impact of EUR 0.03 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 made for grants of EUR 25.49 million and the financial impact of EUR 0.63 million, the *de-minimis* rule applies.

3) Assessment of control results related to budget implemented by entrusted entities and CONNECT's supervision/coordination role

CONNECT has entrusted parts of its budget to other Commission services, to the Chips Joint Undertaking ⁽²⁰⁾, to the European High Performance Computing (EuroHPC) Joint Undertaking; and to the Smart Networks and Services Joint Undertaking, to the Agency for Support for BEREC (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 Key Digital Technologies (KDT) 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 1 163.44 million**. In addition, EUR 525.29 million were delegated by CONNECT to Executive Agencies. 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 system.

Entity	Legal form	Payments made (EUR million)
Chips	Joint Undertaking	362.64
Smart Networks and Services	Joint Undertaking	115.72
European High-Performance Computing (EuroHPC)	Joint Undertaking	488.59
Agency for Support for BEREC (BEREC Office)	Decentralised Agency	7.70
European Union Agency for Cybersecurity (ENISA)	Decentralised Agency	37.18
Ambient Assisted Living (AAL) Association	Private Law Body	5.38
European Investment Bank (CEF Debt Instrument)	Financial Instrument	0
European Investment Fund - Cultural and Creative Sectors Guarantee Facility (CCSGF)	Financial Instrument	7.69
Cube Infrastructure Managers S.A. - Connecting Europe Broadband Fund (CEBF)	Financial Instrument	10.63
Contributions to ESA, EAO, EUMETSAT, ECMWF, UN	Contribution Agreements	127.90
TOTAL		1 163.44

Entity	Legal form	Payments made (EUR million)
European Research Executive Agency (REA)	Executive Agency	18.64
European Innovation Council and SMEs Executive Agency (EISMEA)	Executive Agency	82.12
European Education and Culture Executive Agency (EACEA)	Executive Agency	210.27
European Health and Digital Executive Agency (HaDEA)	Executive Agency	214.26
TOTAL		525.29

⁽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.

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.

Executive Agencies

The **executive agencies (i.e. REA, EACEA, EISMEA and HaDEA)** for which CONNECT is parent DG reported in their 2023 annual reports that they have in place cost-effective control systems and reported positive control results for the year 2023. More details are available in the executive agencies' AARs.

HaDEA did not issue any reservation on assurance. Out of the programmes managed, *CEF Telecom DSI legacy programme 2014-2020* (delegated by CONNECT) had a residual error rate above 2% (2.4%) at the end of 2023. It decreased from 3.28% at the end of 2022. HaDEA lifted the existing reservation, as the cumulative conditions of the de-minimis rule were met.

EISMEA lifted a reservation previously issued on reputational grounds concerning the late implementation and weaknesses affecting the governance and control systems of the investment component of the EIC accelerator scheme within the EIC Programme. Since EISMEA implemented all mitigating actions identified in the joint action plan agreed with DG RTD and CONNECT and communicated to the Internal Audit Service, the reservation was lifted.

REA issued a reputational reservation due to the high level of known and suspected irregularities in the multi-beneficiary grants part of the *Promotion of agricultural products programme* (AGRIP). AGRIP is not delegated by CONNECT. CONNECT's supervision related to the programmes delegated to the Agency is considered effective.

The supervision arrangements for the executive agencies are described in detail in Annex 7, section 1, point B.

Joint Undertakings

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

The **Smart Networks and Services Joint Undertaking** (SNS JU) became financially autonomous on 24 October 2023. Before that date, CONNECT was responsible for its operations.

With the entry into force of the European Chips Act and the accompanying Amendment to the Single Basic Act, both on 21 September 2023, the Key Digital Technologies Joint Undertaking (KDT JU) became the **Chips Joint Undertaking** (Chips JU). In addition to KDT's previously delegated activities, Chips JU will also implement activities for the *Digital Europe programme*.

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 in 2023.

On 21 December 2023, ENISA signed a contribution agreement with CONNECT to implement an action under the *Digital Europe*, whose estimated cost is EUR 20 million fully financed under the main *Digital Europe* work programme 2023-2024. The implementation period for this action may extend until end 2026. The payments made during 2023 amounted to EUR 12 million.

Other entrusted entities

As of July 2021, the Ambient Assisted Living (AAL) Association programme entered into the 'phasing out' period until 31 December 2027, the definitive closure of the programme, as laid down in the Delegation Agreement. There was no annual review carried out in 2023 in view of the phasing out.

The **European Cybersecurity Network and Cybersecurity Competence Centre (ECCC)**, established on 20/05/2021 ⁽²²⁾, will be responsible for parts of *Digital Europe* and *Horizon Europe*. CONNECT is responsible for ECCC's operations until it will become autonomous which is planned for the second half of 2024. During 2023, it included the evaluation of the calls for proposals, the grant preparation and signature and project management. 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 (ESA), the European Organisation for the Exploitation of Meteorological Satellites (EUMESAT) and the European Centre for Medium-Range Weather Forecasts (ECMWF) (entrusted entities) to entrust budget implementation tasks in respect of the Destination Earth initiative. CONNECT relies on the control systems of these entities which were pillar assessed (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 2023, a total of EUR 127.67 million was paid to these entrusted entities.

CONNECT signed a contribution agreement with the United Nations Department of Social and Economic Affairs (UNDESA) on 27/05/2021 to delegate the implementation of one of the actions of the Communication of the Commission 'Internet Policy and Governance:

⁽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.

Europe's role in shaping the future of Internet Governance'. A payment of EUR 0.20 million was effected during 2023. 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 09/12/2022 with the European Audiovisual Observatory (EAO) for the implementation of the action entitled 'EA07 — Information and Research on the Audiovisual Sector'. In 2023, a total of EUR 0.04 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 2023. In particular, CONNECT considers that the reporting of the European Investment Bank and European Investment Fund is sufficient and provides relevant information.

4) Overview of CONNECT's risk profile

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.

Overall, CONNECT has strong internal control processes aimed at ensuring the adequate management of the risks relating to the legality and regularity of the underlying transactions, considering the multiannual character of programmes as well as the nature of the payments concerned.

5) Table (X): Estimated risk at payment and at closure

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. The full detailed version of the table (including notes) is presented in Annex 9.

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

DG CNECT	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	%		
Grants: Horizon Europe (HE)	602.47	28.31	0.57	2.00%	0.00	0.00%	0.57	2.00%		
Grants: Horizon 2020 (H2020)	111.29	562.47	14.46	2.57%	5.51	0.98%	8.94	1.59%		
Grants: Digital Europe (DEP)	271.51	1.96	0.04	2.00%	0.00	0.00%	0.04	2.00%		
Grants: Creative Europe-Media	1.13	1.83	0.04	2.00%	0.00	0.00%	0.04	2.00%		
Grants: Creative Europe-Media (Legacy)	0.00	0.00	0.00	0.00%	0.00	0.00%	0.00	0.00%		
Grants: Emergency Support Instrument (ESI)	0.20	1.00	0.03	3.00%	0.00	0.00%	0.03	3.00%		
Grants: Pilot Projects and Preparatory Actions (PP/PA)	25.49	24.38	0.73	3.00%	0.11	0.43%	0.63	2.57%		
Grants: Other	18.65	20.89	0.42	2.00%	0.09	0.43%	0.33	1.57%		
Procurement	50.97	51.12	0.26	0.50%	0.00	0.00%	0.26	0.50%		
Other	11.64	11.64	0.06	0.50%	0.00	0.00%	0.06	0.50%		
Entrusted Entities: AAL (H2020)	5.38	0.88	0.02	2.57%	0.01	0.98%	0.01	1.59%		
Entrusted Entities: BEREC Office - subsidy	7.70	7.40	0.00	0.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: ENISA - subsidy	25.18	23.93	0.00	0.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: ENISA - Contribution agreement DEP	12.00	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: EuroHPC JU/CEF: Procurement	50.00	0.00	0.00	0.50%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: EuroHPC JU/H2020	69.02	69.02	1.77	2.57%	0.68	0.98%	1.10	1.59%		
Entrusted Entities: EuroHPC JU/HE	140.16	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: EuroHPC JU/DEP	229.41	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: Chips JU/HE	275.00	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: Chips JU/H2020	13.83	13.83	0.36	2.57%	0.14	0.98%	0.22	1.59%		
Entrusted Entities: Chips JU/DEP	73.81	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: Smart Network and Services JU (SNS)/DEP	115.72	0.00	0.00	2.00%	0.00	0.00%	0.00	0.00%		
Entrusted Entities: EIF, Cube Infrastructure Managers S.A. (CCSGF, CEBF Financial Instruments)	18.32	18.32	0.09	0.50%	0.00	0.00%	0.09	0.50%		
Entrusted Entities: ESA/EAD, EUMETSAT, ECMWF, UN	127.90	12.92	0.06	0.50%	0.00	0.00%	0.06	0.50%		
DG total	2 256,98	849,89	18,90	2,22%	6,53	0,77%	12,37	1,46%		

The estimated overall risk at payment for 2023 expenditure is between EUR 18.68 million and EUR 18.90 million, representing 2.20%-2.22% of the DG's total relevant expenditure. It 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. The conservatively estimated future corrections for 2023 expenditure amount to EUR 6.53 million, representing 0.77%.

The difference between those two, results in the estimated overall risk at closure ⁽²³⁾ of between EUR 12.16 million and EUR 12.37 million, representing 1.43%-1.46% of the DG's total relevant expenditure for 2023.

The estimated overall risk at closure for 2023 (EUR 12.16 and EUR 12.37 million) is lower than the estimated overall risk at closure for 2022 (EUR 19.22 and 19.79 million) mainly because of a decrease in the 2023 relevant expenditure of EUR 849.89 million as compared to the 2022 relevant expenditure of EUR 1 218.77.

⁽²³⁾ This is the AOD's best, conservative estimation of the expenditure authorised during the year that would remain not in conformity of applicable regulatory and contractual provisions by the end of implementation of the programme.

This is because of a decrease in the 2023 payments made of EUR 2 256.99 million as compared to the 2022 payments made of EUR 2 331.65 million and in the 2023 cleared prefinancing of EUR 517.18 million as compared to the 2022 cleared prefinancing of EUR 676.06 million. On the other hand, the 2023 new prefinancing increased to EUR 1 924.27 million compared to 2022 new prefinancing of EUR 1 788.94 million. The estimated overall amount at risk at payment (EUR 18.68 and EUR 18.90 million) is also lower than last year (EUR 29.88 – 30.44 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.

6) Preventive and corrective measures

As regards the corrections carried out in 2023, CONNECT has in place an effective mechanism for correcting errors, through ex-ante and ex-post controls, resulting in preventive and corrective measures, amounting to EUR 2.63 million and EUR 1.11 million respectively. The amount of preventive and corrective measure is similar to the amount of last year with EUR 1.38 million and EUR 1.26 million respectively. This represents an increase of preventive measures and decrease of corrective measures compared to 2022, with EUR 1.25 million and EUR 0.15 million respectively, which is mostly explained by increased number of credit notes received for the procurement contract files.

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 yearly monitored and reported to management. All necessary actions have been implemented, except one sub-action which is still ongoing, the target date for its implementation has been extended to 2024. Another sub-action was removed, as not applicable anymore.

CONNECT also contributed to the revised Commission's anti-fraud strategy action plan ⁽²⁴⁾ which was revised in July 2023, notably to action 32 on Media Freedom. CONNECT followed up on OLAF's financial recommendations. In the period 2019-2023, OLAF issued six ⁽²⁵⁾ financial recommendations to CONNECT, which the DG followed up at 100% with the following results: two (33%) were fully implemented, for one (17%) the recovery order was issued against the entity concerned which is currently in liquidation, and three recommendations (50%) are under analysis, with the recovery being processed.

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, 2019 and 2023 to respond to new challenges. The implementation of the

⁽²⁴⁾ COM(2023) 405 final and SWD(2023) 245 final.

⁽²⁵⁾ CONNECT was notified about the close of an investigation for which OLAF Final Report and the related recommendations will be transmitted to CONNECT at a later stage.

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.

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 2023, CONNECT has taken action in the following areas targeting fraud prevention, detection and correction:

- Ethical behaviour of staff ⁽²⁶⁾;
- Awareness of fraud risks ⁽²⁷⁾ 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.

In 2023, two fraud risk awareness raising training sessions were organised by CONNECT in June and December totalling 58 participants.

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.

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, SNS and Chips 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.

⁽²⁶⁾ Ethics related training sessions.

⁽²⁷⁾ Awareness of fraud risks training sessions.

c) Safeguarding of assets and information

The **assets** reported by CONNECT in the balance sheet 2023 mainly concern short term and long-term pre-financing under direct and indirect management (mostly related to research grants and contribution agreements under *Horizon Europe* and *Digital Europe*); and also financial instruments, the Connecting Europe Broadband Fund and the Cultural and Creative Sectors Guarantee Facility. Details on the controls in place are included in section 2.1.1 and Annex 7.

The **intangible assets** reported in the balance sheet 2023 are IT software amounting to EUR 14.31 million. They are related to:

- the EU Digital COVID Certificate (EU DCC) IT system, whose value amounts to EUR 9.52 million. It was developed to facilitate free movement between connected countries during the COVID-19 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-19 vaccination, test and recovery EU Digital COVID Certificates. After the expiration of the EU DCC Regulation on 30 June 2023, and in accordance with Council Recommendation (EU) 2023/1339, the EU DCC infrastructure remained operational to support EU DCC countries in their voluntary transition to the World Health Organization's Global Digital Health Certification Network, which took up the EU DCC standards and system. To ensure the same control objectives during the transition to the World Health Organization's Global Digital Health Certification Network, identical controls have been put in place to ensure a reliable and secure IT system from the expiration of the EU DCC Regulation until the end of the EU DCC operations on 31 of December 2023 in line with Council Recommendation (EU) 2023/1339 ⁽²⁸⁾. The conclusion is that no security incidents with a significant impact on the confidentiality, integrity or availability of information systems were reported during the year. CONNECT considers that the safeguarding of this asset is effective and appropriate.
- two assets under construction:
 - The first asset under construction is related to IT projects which will establish and maintain a modern, reliable and secure IT system, supporting the implementation and operation of the Digital Services Act. Their capitalised cumulative costs amounted to EUR 2.35 million.

In 2023, CONNECT maintained a robust control framework for its Information Technology (IT) projects, including those for the Digital Services Act (DSA). The primary control objective was to ensure that all

⁽²⁸⁾ [COUNCIL RECOMMENDATION \(EU\) 2023/1339 of 27 June 2023 on joining the global digital health certification network established by the World Health Organization and on temporary arrangements to facilitate international travel in view of the expiry of Regulation \(EU\) 2021/953 of the European Parliament and of the Council](#)

IT systems adhere to the highest standards of corporate IT and information security. This was achieved through compliance with established governance, risk management, and compliance protocols. The IT security plans laid out the security measures and identified any residual risks. Throughout 2023, no significant weaknesses were detected. The controls in place have not only proven to be effective but have also delivered tangible benefits, enhancing the reliability and security of CONNECT's IT projects, including those for the Digital Services Act (DSA).

- The second asset under construction is the EU Digital Identity Wallet ⁽²⁹⁾, with capitalized costs of EUR 2.43 million. The applicable legislation requires Member States to offer Wallets to all its citizens and business by 2026. The asset is a template of the European Digital Identity Wallet that can be used by implementers, such as the large-scale pilots currently funded under the Digital Europe Programme to pilot use cases for the Wallet, and later on by Member States when implementing the Wallets. The template is developed following the Security by Design and Privacy by Design principles. Effective controls were put in place for assessing the security and privacy protections. No security incidents have been reported in 2023. The project and the template are also assessed in terms of compliance with the General Data Protection Regulation. There were no reported issues in 2023. CONNECT considers that the safeguarding of this asset is effective and appropriate.

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

As regards **off-balance sheet items**, the contingent liabilities reported by CONNECT in 2023 (EUR 132.2 million) represent the amount available for the Cultural and Creative Sectors Guarantee Facility (EUR 95.9 million) and the open balance of the guarantee paid to the EIB for the project PBI, later merged and currently called CEF debt instrument (EUR 36.3 million). The 'other significant disclosures' (EUR 3 524.6 million) reported in 2023 are related to the open RAL for research grants in *Digital Europe*, *Horizon Europe* and *Connecting Europe Facility II - Digital* programmes 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. Controls are in place and deemed effective.

⁽²⁹⁾ The EU Digital Identity Wallet template (under construction) is established as per Commission recommendation (EU) 2021/946 of 3 June 2021 on a common Union toolbox for a coordinated approach towards a European Digital Identity Framework and the amended eIDAS regulation establishing a framework for a European Digital Identity.

As regards safeguarding of information, the control objective is to ensure that confidential and/or sensitive information is not disclosed, or its integrity breached (data altered) due to security of IT systems and/or information processes not being fully effective.

Under the umbrella of the data governance, data policies, and information security, the controls in place include the implementation of procedures to set the right governance structure (i.e. nomination of data stewards), protect information, awareness raising of staff on the importance of information security and a reporting/risk assessment mechanism for disclosures. The benefits of these controls include constant awareness of staff, and a reporting system that triggers follow-up action to prevent similar events from happening in the future.

The analysis of the available control results has not shown any weakness that could have a material impact on the information held by CONNECT. CONNECT therefore concludes that it has reasonable assurance on the effectiveness of the internal control objective ‘Safeguarding of assets and information’.

d) Reliability of reporting

CONNECT implements a significant part of its budget through indirect management. It therefore relies on the reports provided by the relevant implementing bodies and considers that, overall, the reporting received is reliable and adequate for drawing assurance conclusions.

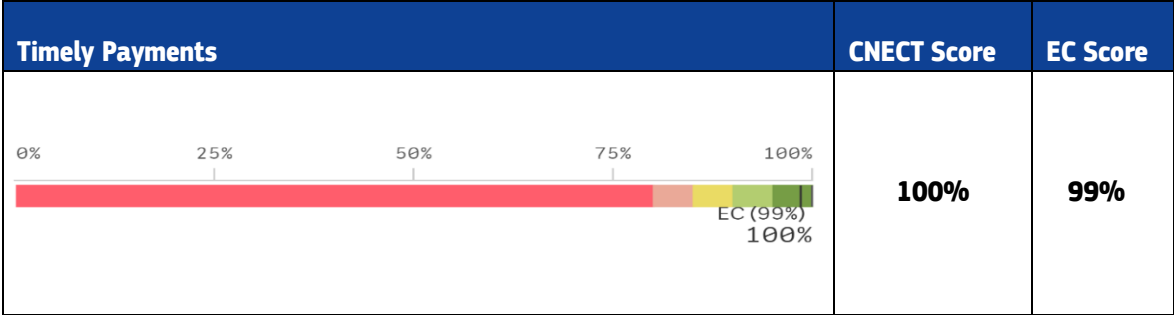
2.1.2. Efficiency of controls

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	2023
1	Average time-to-inform	123 days	94 days
2	Time-to-grant	239 days	230 days
3	Timely payments ⁽³⁰⁾	100%	100%
	Time-to-pay monitors / experts	8.4 calendar days	9 calendar days
4	See previous section on Legality and Regularity		

⁽³⁰⁾ As from 2020, the ‘timely payments’ indicator is used to report on the ‘time-to-pay’ indicator.

The time-to-inform and time-to-grant indicators relate to the grants of the *Horizon Europe* and *Digital Europe* programmes. As in the previous years, CONNECT made all its payments on time, the result for the efficiency indicator ‘timely payments’ during 2023 reaching 100%, which is higher than the average EC score. For more information refer to Annex 4 (Financial Scorecard).



Once again, thanks to the good collaboration of its staff, CONNECT achieved an implementation rate of 100%, which is better than the Commission’s average.

An example of an initiative to increase the economy and efficiency of controls is included in section 3.4.

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 positive conclusion can be reached for the budget implemented under **indirect management**. This is based on the reports and other available information related to the efficiency of the entities entrusted with budget implementation tasks.

CONNECT concludes, based on the information available, that the controls in place are efficient. The DG is continuously aiming to further enhance the efficiency of its controls. More detailed information about the efficiency of controls is presented in Annex 7, section 1, point D and Annex 4 (Financial Scorecard). In addition, an example of economy and efficiency in the activities of the DG is presented in section 3.4.

2.1.3. 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 31.10 million, corresponding to 3.02% of the total operational grant payments made in 2023 (EUR 1 030.94 million).

The increase of the overall cost of control rate as compared to last year is mainly due to the decrease of total operational grant payments from EUR 1 540.40 million in 2022 to EUR 1 030.94 million in 2023. The reasons for the decrease in the payments made was explained in the beginning of section 2.1.1 Control Results. It is mainly due to lower payments made related to the legacy programmes as they are phasing out. At the same time, the payments made to the programmes of the MFF 2021-2027 (*Horizon Europe, Digital Europe, Creative Europe - Media*) have not reached yet a high volume.

CONNECT costs of controls for direct grant management	Overall rate 2023	Overall rate 2022	Overall rate 2021	Overall rate 2020
Stage 1 – programming and evaluation	0.39%	0.26%	0.75%	0.27%
Stage 2 – contracting	0.32%	0.21%	0.58%	0.19%
Stage 3 – monitoring the execution	2.23%	1.45%	4.12%	1,40%
Stage 4 – ex-post controls and recoveries	0.08%	0.06%	0.15%	0.05%
TOTAL	3.02%	1.98%	5.60%	1.92%

Details of the estimated cost related to shared/pooled control activities carried out by the 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 5.30 million. This amount includes primarily personnel costs. This represents 0.46% of the operational payments made to these entities during 2023. The overall rate of the cost of control remains stable compared to previous years (see table below).

Entrusted Entity	Cost of control 2023 (m EUR)	Cost of control (%) 2023	Cost of control (%) 2022	Cost of control (%) 2021	Cost of control (%) 2020
Services through cross delegations (DIGIT, PMO) ⁽³¹⁾	NA	NA	3.20%	10.83%	0.11%
EuroHPC	0.83	0.17%	0.20%	0.64%	0.39%
Chips / KDT	0.92	0.25%	0.33%	0.40%	0.22%

⁽³¹⁾ 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.

ECCC ⁽³²⁾	0.66	NA	NA	NA	NA
SNS ⁽³³⁾	0.91	0.78%	NA	NA	NA
BEREC Office	0.30	3.90%	3.88%	4.76%	3.70%
ENISA	0.26	0.69%	1.22%	0.53%	1.60%
Ambient Assisted Living (AAL) Association	0.18	3.33%	0.92%	1.08%	1.22%
CCS GF (Guarantee fund)	0.07	1.63%	1.33%	1.33%	0.81%
CEBF (Equity instrument)	0.23				
CEF Broadband Fund (Debt instrument)	0.00				
ESA, EUMETSAT, ECMWF, UNDESA, EAO	0.96	0.75%	2.43 %	0.15%	NA
TOTAL ⁽³⁴⁾	5.30	0.46%	0.51%	0.48%	0.49%

The **cost incurred by CONNECT for the monitoring and the supervision of the four executive agencies** to which CONNECT is delegating budget implementation tasks amounts, approximately, to EUR 1.95 million. This represents 0.37% of the operational payments made (EUR 525.29 million) to these entities during 2023. The transfer of the payments to the four executive agencies is done by the Commission central service DG Budget.

Entrusted Entity	Cost of control 2023 (m EUR)	Cost of control (%) 2023	Cost of control (%) 2022	Cost of control (%) 2021	Cost of control (%) 2020
Executive agencies	1.95	0.37%	0.31%	0.26%	0.52%

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.

⁽³²⁾ As mentioned in section 2.1.1., all activities of the 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 the ECCC.

⁽³³⁾ All activities of the SNS JU were carried out by CONNECT until the SNS JU reached its autonomy in October 2023. Following its financial autonomy, the payments made to SNS JU amounted to 115.72 million.

⁽³⁴⁾ As of 2023, the total cost of controls for the monitoring and the supervision of the entrusted entities does not include the cost of control for the monitoring and the supervision of the Executive Agencies. This is reported separately in the following table.

2.1.4. Conclusion on the cost-effectiveness of controls

Cost-effectiveness of controls gives a measure on the achievement of all internal control objectives applicable to CONNECT's activities. CONNECT has in place cost-effective internal control systems considering:

- the estimated risk at closure, set out above;
- 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;
- the benefits arising from the control systems adopted: 1) quantifiable benefits, as presented above (i.e. section on preventive and corrective measures), 2) qualitative benefits, which cannot be quantified however are significant and relate to all stages of the programme management cycle;
- The DG's controls in place for 1) the portfolio of direct budget implementation tasks and for 2) its supervision role as regards the entrusted entities to which CONNECT delegates budget implementation tasks;
- the declaration of assurance without qualification/reservation.

Based on the most relevant key indicators and control results, CONNECT 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. The controls are well suited to fulfil the spending programmes' objectives and the internal control objectives effectively, and proportionate with the underlying risks, in an efficient manner and while keeping the cost of controls at an adequate level.

The DG's involvement in the governance of the entrusted entities did not show any significant weakness which could have a material impact on assurance as regards effectiveness of controls. HADEA reported a higher error rate on *CEF Telecom DSI legacy programme* for which the *de minimis* rule applies.

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 level of the cost of the control system compared to the level of expenditure, the cost-effectiveness of controls is considered adequate.

2.2. 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 two IAS audits, namely the audit on Horizon Europe governance and the audit on the design and set-up of the Digital Europe Programme.

At the end of 2023, CONNECT had five open recommendations stemming from the IAS' report on the design and set-up of the Digital Europe Programme (one 'very important' and four 'important'). CONNECT is working to implement those in the course of 2024. An action plan was established in agreement with the IAS and CONNECT is currently working on the implementation of all recommendations received. As a result of the assessment of the risks linked to the auditors' observations, CONNECT believes that they do not raise any critical assurance issues.

In its contribution to the 2023 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, except for the observations giving rise to the 'very important' recommendation received in the IAS audit on the design and set-up of the Digital Europe Programme. An action plan was established in agreement with the IAS and CONNECT is currently working on the implementation of all recommendations received.

European Court of Auditors (ECA)

CONNECT is mostly concerned by Chapter 5 of the Annual Report of the ECA for the financial year 2022, namely 'Single Market, Innovation and Digital'. The estimated error rate for this Chapter is 2.7% (compared to 4.4% in 2021). The Court concluded that the main cause of the errors lies in the declaration of personnel costs under *Horizon 2020*.

The ECA closed the performance audits on 'digitalisation of schools' and 'smart cities'. The following ECA audits are still ongoing: 'recovering of EU funds', 'artificial intelligence', 'geo-blocking', 'EU industrial policy on microchips', 'digitalisation of healthcare', 'whether the RRF contributes effectively to the overall digital transition of the EU', 'infringement procedures and enforcing EU law', 'conditions for safe and efficient digital payments in the EU' and 'reliability of accounts 2023 - systems audit CONNECT'.

At the end of 2023, CONNECT had three open ECA recommendations from the audit on e-Government.

Conclusion

As a result of the assessment of the risks underlying the auditors' observations together with the management measures taken or planned in response, CONNECT considers that the recommendations issued by the IAS and the ECA do not materially impact management's assurance.

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

2.3. 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 continuously assesses 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 2023 Directorates' Management Reports, the results of the internal control monitoring criteria, the analysis of various sources of information such as the register of exceptions and non-compliance events, the IAS and ECA recommendations and the risk register. 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 the components and principles are present and functioning well overall, but some improvements are needed as minor deficiencies were identified related to principle 12 *'the Commission deploys control activities through corporate policies that establish what is expected and in procedures that put policies into action'* in connection to risks related to the combination of financing involving the Recovery and Resilience Facility and cost based funding schemes.

2.4. 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 ⁽³⁵⁾, the conclusion of the annual assessment of the effectiveness of the internal control systems, the reports from the Executive Agencies (i.e. HADEA, REA, EACEA and EISMEA), the EIB/EIF, the Chips, SNS and EuroHPC Joint Undertakings, the BEREC Office and ENISA Decentralised Agencies.

CONNECT's assessment on legality and regularity ⁽³⁶⁾ concluded on the following:

For **Horizon Europe**, no representative error rate is available in 2023 as the ex-post audit campaign is planned for launch in 2024, 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 cautiously estimated to 2% ⁽³⁷⁾ for CONNECT.

For **Horizon 2020**, the audit results show a residual error rate of 1.59% 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% ⁽³⁸⁾.

For the **Emergency Support Instrument**, CONNECT estimated a detected error rate within the range of 2%-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. 3.00%). However, considering the limited amount of payments made for grants of EUR 0.20 million and the financial impact of EUR 0.03 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 the average recoveries and corrections were estimated at 0.43% of the relevant expenditure, the estimated residual error rate would remain above the 2% materiality criteria (i.e. 2.57%). However, given the limited payments for grants of EUR 25.49 million and the financial impact of EUR 0.63 million, the *de-minimis* rule applies.

HaDEA reported for *CEF Telecom DSI legacy programme 2014-2020*, delegated by CONNECT, a residual error rate above 2% (2.4%) at the end of 2023. HaDEA did not issue a reservation, as the cumulative conditions of the *de-minimis* rule were met. CONNECT noted

⁽³⁵⁾ Except for the observations giving rise to the 'very important' recommendation received in the IAS audit on the design and set-up of the Digital Europe Programme. An action plan was established in agreement with the IAS and CONNECT is currently working on the timely implementation of all recommendations received.

⁽³⁶⁾ Based on the audits carried out by the Common Audit Centre hosted by DG Research and Innovation.

⁽³⁷⁾ These rates correspond to the objective set for Horizon Europe.

⁽³⁸⁾ These rates correspond to the objective set for Digital Europe.

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 assurance.

The ECA annual report on the implementation of the EU budget for the 2022 financial year was issued in October 2023. CONNECT is included in the reporting of Chapter 5 'Single Market, Innovation and Digital'. The ECA concluded on an estimated overall level of error of 2.7% for the entire 2022 spending under chapter 5. The Court pointed out that the main cause of the errors lies in the declaration of personnel costs under Horizon 2020, specifically due to the complexity of rules declaring personnel costs. CONNECT was not singled out in the document.

Combination of financing from the performance-based Recovery and Resilience Facility (RRF) and cost-based spending programmes, such as *Digital Europe* need to be carefully prepared to avoid possible double funding issues. Where possible, CONNECT took actions to address situations where there was no clear delineation of cost between the RRF and Digital Europe. Close cooperation with DG Economic and Financial Affairs allowed to clarify the requirements and address issues with Member States. CONNECT, in collaboration with DG Economic and Financial Affairs and central services, designed and put in place measures to eliminate/limit the impact of this risk.

In its contribution to the 2023 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, except for the observations giving rise to the 'very important' recommendation received in the IAS audit on the design and set-up of the Digital Europe Programme. An action plan was established in agreement with the IAS and CONNECT is currently working on the timely implementation of all recommendations received.

Overall amount at risk at closure

For CONNECT, the estimated overall amount at risk at payment for the 2023 expenditure is between EUR 18.68 and 18.90 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 2023 expenditure amount to EUR 6.53 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 12.16 and 12.37 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.

2.5. Declaration of Assurance

Declaration of Assurance

I, the undersigned,

Director-General of the Directorate-General for Communication 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 ⁽³⁹⁾.

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 those of the Commission.

Brussels, 2 April 2024.

*Electronically signed
Roberto VIOLA*

⁽³⁹⁾ True and fair in this context means a reliable, complete and correct view on the state of affairs in the DG/Executive Agency.

3. MODERNISING THE ADMINISTRATION

3.1. Human resource management

CONNECT actively contributes to the 50% target of women in management positions at Commission level. CONNECT provides pre-management opportunities to talented AD-women and supports them in their career aspirations. This includes a local female talent development programme to build a managerial pipeline; the second round being successfully implemented in the first half of 2023. 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). New targets for first female appointments by end 2024 were adopted by the College in May 2023. CONNECT is confident that it will reach its new target of three. Although CONNECT did not make any female first appointment in 2023, as of today, CONNECT already (01/02/2024) appointed two women as new middle managers.

In accordance with the new corporate policy on learning and development, CONNECT relied on the corporate roll-out of learning packages for individual job profiles. Extra targeted learning and development initiatives were launched locally (e.g. Connect University sessions on latest digital policies and developments including the 2023 autumn school, career development programme for selected 60 staff, team coaching for identified Units etc.) to equip our staff with the necessary skills and engagement to deliver on our operational and political priorities.

Additionally, in 2023, the active diversity and inclusion network, chaired by a Director, discussed topics of concern including awareness raising with the main diversity Staff Associations and organised a well-attended Diversity and Inclusion conference on Open, safer and more inclusive working environment. CONNECT continued to be active in the DG's equality taskforce.

CONNECT continued to care for maintaining a high level of staff satisfaction within the DG. The results of the staff engagement index in the 2023 Commission staff satisfaction survey show that despite the challenges, the CONNECT employee engagement amounts to 73%, which is slightly higher than the Commission average (72,8%) and -2% points compared to the 2021 Staff Survey. Once the full survey results will be made available, CONNECT's Management Team will endorse, after having consulted staff, a development plan to address staff concerns and make the DG an even better place to work.

In terms of internal communication, CONNECT pursued the 'We are CONNECT' staff engagement campaign to increase the sense of belonging to the DG and to ensure that colleagues are better aware of the DG activities and achievements.

Within this context, CONNECT also invested in CONNECT University sessions, including an Autumn School, aiming at sharing knowledge about the digital transformation steered by CONNECT and enhancing the take up of digital skills both internally and externally.

CONNECT closely monitored the allocation of human resources in light of political and operational priorities, taking into account its yearly obligations in terms of resources reduction. In particular, the 2022 complementary allocation of resources was used to recruit in 2023 new profiles for the implementation of the Digital Services Act and the Digital Markets Act while at the same time CONNECT had to give away 24 posts end of 2022, mainly linked to the redistribution of resources to an enlarged family of research DGs.

While the pressure on the resources under the research budget continues, careful attention was given to seek ensuring a sufficient allocation to cope with increasing workload for policy and in-house implementation activities. No complementary allocation was decided by the Corporate Management Board in 2023. Additional efforts were required to convince central services to ensure that CONNECT is equipped with sufficient staff to steer the digital transition, one of the Commission's top priorities, and in particular in light of the new reinforced responsibilities of the DG as regards the chips act, cybersecurity, the Digital Services Act and the Digital Markets Act. Within this context, CONNECT only gave way part (7 out of 25) of posts due by end of 2023, mainly linked to the redistribution of resources to an enlarged family of research DGs.

As of 1 April 2023, the organisation chart of CONNECT was changed to meet the challenges of the implementation of the Digital Services Act and the Digital Markets Act and the Digital Decade Policy Programme. In particular, the mandate of Directorate F was changed to be entirely dedicated to the supervision of online platforms. As a consequence, some of its tasks were re-assigned within the DG; this had a particular impact on Directorate B which will focus on the digital decade and connectivity and integrate the coordination of CONNECT's contribution to the implementation of the Recovery and Resilience Facility and the European Semester as well as the connected country analysis related to digital policies.

3.2. Digital transformation and information management

CONNECT is very active in inspiring, supporting and implementing the Commission digital strategy and its various declination like the Data Strategy and more recently the actions related to the artificial intelligence revolution. This transformation requires lot of work in shaping a new digital culture.

Kohesio and related EU knowledge graph contributes directly to the digital transformation and transparency objectives of the Commission. This project is an innovation success story and shine a light on the DORIS team expertise in delivering on cutting edge technologies and collaboration with other Commission departments. The European Ombudsman awarded the 2023 prize for Good Administration to Kohesio and both the EU Parliament, and the European Court of Auditors expressed their appreciation for the platform.

Paperless initiative has evolved to embrace the broader goal of redefining collaboration in our new working environment consisting of (nomad) telework, open collaborative space and hotdesking. Among other innovations, we built a tool to speed up the resource-intensive access to documents procedure within the DG and replaced an old application used to

follow budget consumption inaugurating the use of M365's 'low code, no code' tool-builder, PowerApps.

The DORIS public consultations dashboard and the DORIS drive-in have been used corporate wide to process consultations from EU Survey as well as other documents based on business needs. Services have been upgraded according to the latest state of the art (e.g. named-entity recognition, now based on last-generation transformers models and fully multilingual following a collaboration with DG Translation and *Connecting Europe Facility - Digital*) and new ones have been added, such as the personally identifiable information detector which can be used to anonymise documents.

We have achieved a significant milestone improving communication, collaboration, and knowledge management within our organization through M365, and we have successfully transitioned our intranet into SharePoint Online, representing a pivotal moment in our digital infrastructure evolution. With the implementation of double encryption, M365 can now be securely used with sensitive non-classified data for seamless collaboration and communication. Looking ahead to 2024, the gradual phasing out of network drives and the introduction of mandatory training for all staff will ensure comprehensive understanding of our Digital Transformation Initiative.

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.

Leveraging the experience gained in developing the EU digital COVID certificate system, CONNECT is using the same development approach for the EU Digital Identity Wallet by providing an Open-source implementation in GitHub of software libraries, components, and a reference implementation of the wallet. The Member States will then make use of these components or libraries in their specific information technology systems.

In accordance with the Digital Services Act (DSA), providers of online platforms are required to submit statement of reasons to the DSA transparency database. The implementation of the database is a cloud-based solution on Amazon Web Services to facilitate the scale up of the solution.

An important security aspect relates to the information systems owned by CONNECT: IT Security plans must be created and be kept up to date. CONNECT has achieved the goal of conducting IT risk assessments in all of its systems that are under its responsibility. CONNECT also uses solutions for managing confidential information in highly secured way. On the staff skill side, the first iteration of the CONNECT Information security culture project was completed, resulting in a measurable improvement of colleagues agreeing to the importance of on the different information security aspects in their daily work. This also provided us with a list of high-level actions to focus on. Thanks to all these actions CONNECT met its GRC (Governance, Risk & Compliance) Commission objectives.

A major line of action is to support data-driven policy making by leveraging staff skills on the use of data for their core activity and promoting an internal network of data stewards

to exchange best practices, which is evolving into a community of practice. This network community is the basic layer to implement corporate principles for data governance like: keeping an updated inventory of datasets with clear id of data ownership, avoiding duplication of procurements, and sharing good practices. Alongside there were actions to offer training opportunities for staff creating training maps dedicated to cluster of users (policy officers, data stewards). In addition, CONNECT continued providing services for better data analysis as mentioned above.

Following the entry into force of Regulation (EU) 2018/1725, the Commission adopted a data protection action plan, which identifies the main objectives and priorities to ensure compliance with the data protection rules. CONNECT continued implementing the action plan and its review. This included adopting new data protection records (DPR) for newly identified processing activities as well as revising existing DPRs (and privacy statements). Many procurements contracts involved additional compliance work in the form of complex data protection analyses and specific data protection documentation, such as data protection risk assessments. In such files, data protection work is needed both during the drafting phase of the procurement and during contract implementation. In the context of the supervision and enforcement tasks set out in the Digital Services Act (DSA), CONNECT adopted an action plan focused on data protection and started implementing it. Work intensified notably on the tools to be used, drafting of DPRs, drafting of implementing acts with a data protection component, etc.

A digitally transformed and data-driven Commission goes hand in hand with enhancing CONNECT staff's data protection knowledge. Awareness-raising activities continued, and trainings were designed based on consultations received, and issues linked to specific CONNECT files. In particular, a training on data protection engineering was held with speakers from ENISA, the European Data Protection Supervisor, the European Data Protection Board and KULeuven. Another training covered data protection aspects of meetings and events.

3.3. 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:

- Following the move in the greenest of the Commission building in Brussels, staff in Luxembourg moved also to a more energy efficient building;
- Reduced both in Brussels and Luxembourg the energy consumption by lowering the temperature in the building during the month of August and during the end-of-year break;
- Made the virtual or hybrid meetings even easier with upgraded meeting rooms (SCIC and non-SCIC), more promotion around the IT tools and online collaboration (Webex, Teams, M365, etc);

- Renovated the bike parking (still ongoing);
- After moving to the new building in Luxembourg, more CONNECT staff managed to use the public transportation to go to the office;
- Recycled glass and now organic waste;
- Provided tips and tricks in CONNECT's newsletter on a monthly basis (Vélomai, or similar actions).

3.4. Examples of economy and efficiency

As of 1 April 2023, the organisation chart of CONNECT was changed to meet the challenges that the implementation of the Digital Services Act and the Digital Markets Act and the Digital Decade Policy Programme bring. In particular, the mandate of Directorate F was changed to be entirely dedicated to the supervision of online platforms. As a consequence, some of the current tasks of Directorate F were re-assigned within the DG; this had a particular impact on Directorate B which will focus on the digital decade and connectivity and integrate the coordination of CONNECT's contribution to the implementation of the Recovery and Resilience Facility and the European Semester as well as the connected country analysis related to digital policies.

Building on its dynamic collaborative environment, both in its Brussels and Luxembourg sites, CONNECT has increased its efficiency by maximising its potential for collaboration during office presence and focusing attention on non-collaborative tasks while working from home. This increased efficiency is further enhanced by the successful migration to SharePoint online, supporting the necessary transformation of our working methods.