



### 【欧州】 【Common】

Common - Digital Transition: The European Commission adopts amended Digital Europe Programme 2023-2024 for facilitating data access, pooling, and sharing for a more efficient, safe, and sustainable transport

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### 【概要:Summary】

The European Commission intends to use digitalisation and automation to make the transport systems more sustainable, efficient, and safer. Digitalisation and interoperability can improve the efficiency and sustainability of transport in the EU and the creation of European standards is important to also contribute to climate targets.

accelerate the EU's digital further transformation, the EU established the Digital Europe funding programme as part of the Multiannual Financial Framework, the EU's longterm budget. The Digital Europe Programme (DIGITAL) the first funding programme focusing primarily on the uptake of digital technology and the support of the digital transformation to the benefit of citizens and businesses across the EU. By complementing investments under other EU programmes, like the Horizon Europe, InvestEU, and the Connecting Europe Facility (CEF) among others, the Digital Europe Programme started in 2021, including the implementation of multiannual work programmes. The Digital Europe Programme (DIGITAL) is supporting the implementation of the mobility data space and European Digital Innovation Hubs,

which are expected to stimulate the broad adoption of advanced digital technologies by industry and in particular by SMEs.

The European Digital Innovation hubs should act facilitators for the latest digital capacities, including HPC, AI, cybersecurity, as for other existing innovative technologies. The Digital Innovation hubs will bring together industries, businesses, public administrations with businesses, particular start-ups and SMEs, that have marketready solutions to offer to cover the need of new technological solutions.

On 14 December 2023, the European Commission presented the Digital Europe Programme's 2023-2024 Work Programme, including the Common European mobility data space (EMDS), which aims to facilitate data access, pooling and sharing for a more efficient, safe, sustainable, and resilient transport. It also has the objective to contribute to the effective implementation of the Multi-Country Project (MCP) on European common data infrastructure and services. The action will support the creation of the common European mobility data space (EMDS), facilitate the access, sharing and reuse of data in the mobility and logistics sectors.





【記事:Article】

## The Digital Europe Programme's background and establishment

On 19 February 2020, the European Commission presented a strategy on shaping Europe's digital future, which was confirmed by the Council conclusions of 9 June 2020 (C(2021) 7914 final). While these decisions underline the importance of the digital transition, digitalisation and digital technologies, the COVID-19 pandemic has even more emphasised the great importance of this transition for daily life, societies, and economies. The pandemic has also accelerated the digital transition process (C(2021) 7914 final). Accordingly, since the digital transition is an important precondition for the EU's future prosperity and resilience, the EU has established the Digital Europe Programme to accelerate recovery after the COVID-19 Pandemic and to drive the digital transformation (European Commission 2020). The aim is to focus on bringing digital technology to businesses, citizens, and public administrations, and to foster the uptake of digital technology by businesses and citizens (European Commission n.d., European Commission 2023a). The Digital Europe Programme (DIGITAL) is the first funding programme of the EU focused on bringing digital technology to businesses and citizens. Based on Regulation (EU) 2021/694, the Digital Europe Programme aims at accelerating the economic recovery and drive the digital transformation of Europe (C(2021) 7914 final). The goal is to boost Europe's competitiveness and the green transition towards the 2050 climate neutrality target as well technological sovereignty (European Commission 2020). The Digital Europe Programme intends the support the digital transformation of industry and to foster better exploitation of the industrial potential of policies on innovation, research, and technological development, for the benefit of citizens and businesses across the EU (Regulation (EU) 2021/694).

The Digital Europe Programme is structured into five specific objectives reflecting the key High policy areas including Performance Computing; Artificial Intelligence; Cybersecurity and Trust; Advanced Digital Skills; and Deployment and Best Use of Digital Capacities and Interoperability across the economy and society (European Commission n.d., 7914 final). The C(2021)Digital Programme will reinforce the EU's critical digital capacities by focusing on these key areas, the deployment of these technologies and their best use for sectors such as energy, climate change and environment, manufacturing, mobility, agriculture, and health (C(2023) 8620 final Annex 2). As a key factor to foster the Europe's and resilience, future prosperity digitalisation will also fundamentally change the transport sector. To improve the transport sustainability sector's and safety connected and automated mobility, the Commission intends to use digitalisation and automation to make the transport systems more sustainable, efficient, and safer (European Commission 2023b). The Digital Europe Programme will reinforce the EU's critical digital capacities and their best use also for the mobility and transport sector (C(2023) 8620 final).

The planned total budget of €7.5 billion for the period 2021-2027 is expected to accelerate the economic recovery and to shape the digital transformation of Europe's society and economy, bringing benefits also to small and medium-sized businesses (European Commission 2023a, 2023c). The Digital Europe Programme's funding will be available for EU Member States as well as other countries associated to the Digital Europe Programme and it also targets upskilling to provide a workforce for these advanced digital technologies. Furthermore, since there is a need to support small and medium-sized enterprises





(SMEs) that intend to harness the digital transformation in their production processes, the support should allow SMEs to contribute to the growth of the European economy through an efficient use of resources (Regulation (EU) 2021/694). Therefore, it supports industry, SMEs, and public administration in their digital transformation with a reinforced network of European Digital Innovation Hubs (EDIH) (C(2021) 7914 final). The European Digital Innovation Hubs are expected to play a central role in the implementation of the Programme to stimulate the broad adoption of advanced digital technologies (Regulation (EU) 2021/694). The European Digital Innovation Hubs should act as facilitators to bring together industries, businesses, public administrations together with businesses, in particular start-ups and SMEs, that have market-ready solutions. The hubs should also develop appropriate synergies with relevant actions funded by Horizon Europe - the Framework for Research Programme and Innovation established by Regulation (EU) 2021/695 or by other research and innovation programmes, with European Institute of Innovation Technology (EIT) (Regulation (EU) 2021/694). The Regulation (EU) 2021/694 on establishing the

The Regulation (EU) 2021/694 on establishing the Digital Europe Programme entered into force on 11 May 2021, and has applied retroactively since 1 January 2021 (European Commission 2023a, Regulation (EU) 2021/694).

### 2. The Digital Europe Programme 2021-2022

The COVID-19 crisis has further highlighted the critical role of digital technologies and infrastructures and has accelerated the digital transition and demonstrated how important it is for Europe not to be dependent on systems and solutions coming from other regions of the world (C(2021) 7913 final). The work programme 2021-2022 covered Cybersecurity and Trust topics. In the transport sector, the emergence of semi-autonomous vehicles, the increasingly used

information and communications technology (ICT) and the use of AI techniques, potentially also increase the risks of cyberattacks, and therefore, cybersecurity plays an increasingly important role also in the transport sector.

The other three Work Programmes are devoted to 1) High Performance Computing (implemented under indirect management); 2) the network of European Digital Innovation Hubs; 3) Data, AI, Cloud, Quantum Communication Infrastructure, advanced digital Skills, and deployment activities for the best use of these technologies.

create, То interconnect strengthen cybersecurity European, national, regional level as well as within and across infrastructures, critical knowledge and cybersecurity threat intelligence needs to be shared between stakeholders in the Member States, cybersecurity threats need to be better monitored, and cyber-attacks need to be jointly responded (C(2021)7913 final). The emphasis on cybersecurity within the work programmes also underscores the growing importance of protecting digital infrastructure in the transport sector with its growing smarter mobility. cybersecurity measures are essential safeguard critical systems and data, ensuring the reliability and safety of digitalized transportation networks.

The budget for the cybersecurity actions covered by this 2021-2022 Work Programme was EUR 269 million, distributed as a budget of EUR 177 million for actions related to the shield" announced in the EU Cybersecurity Strategy, including Security Operation Centres (SOC). Furthermore, there is a budget of EUR 83 million for actions supporting the Implementation of relevant cybersecurity EU Legislation; and a budget of EUR 9 million for programme support actions, including evaluations and reviews (C(2021) 7913 final). Moreover, there is an indicative budget of EUR 170 million for actions supporting the deployment of the





Secure Quantum Communication Infrastructures (QCI) included in the Digital Europe Work Programme for 2021-2022 (C(2021) 7913 final).

create. interconnect and strengthen Cybersecurity at European, national, and regional level as well as within and across critical infrastructures, proposals should the creation, operation, support capacity increase and/or uptake of cybersecurity, to foster networking between them as well as their application in sectors including transport, among others (C(2021) 7913 final).

Action will aim to exchange knowledge between cybersecurity ranges and create common data repositories; support structured training and cybersecurity exercises to prepare cybersecurity defenders at both public and private organisations to enhance the protection and of critical infrastructures, resilience enterprises, and communications networks; enable the conduct of hybrid trainings to prevent, detect and mitigate cyberattacks, among others (C(2021) 7913 final).

#### 3. The Digital Europe Programme 2023-2024

# 3.1. The main work programme and the work programme 2024

The Work Programme (WP) of the Digital Europe Programme 2023-2024 aims to ensure the continuation, evolution and sustainability of actions that started during the first WP 2021-2022, taking into consideration the overall aim of capacity building (C(2023) 8620 final Annex I). However, the WP 2023/2024 had to be adjusted to new developments (C(2023) 8620 final annex). Regarding the Digital Europe Programme 2023-2024, the European Commission adopted the funding for objectives and specific topic areas were €553 million in 2023 (European Commission 2023b). On 14 December 2023, the European Commission also adopted the amended work programmes for 2024 outlining the objectives and specific topic

areas that will receive a total of about €763 million in funding (European Commission 2023a). programmes include work strategic investments that aim to improve Europe's technological sovereignty and bring digital solutions to market for the benefit of businesses, and public administrations, contributing to the objectives of the European Green Deal (European Commission 2023a). European Commission also aims to create an conducive environment to innovation investment in digital transport solutions, among others. Since digitalisation is an essential tool to make the entire transport sector more efficient and to facilitate a faster and smoother transition towards cleaner and smarter mobility including automated mobility, these programmes have implications for the transport sector, fostering innovation, efficiency, sustainability. Incorporating advanced data analytics and artificial intelligence (AI) technologies, the amended programs also promote greener and more efficient transport practices. The work programmes prioritize the integration of digital technologies to enhance connectivity, which has an impact on smart infrastructure and intelligent transportation systems. includes the implementation of cutting-edge solutions such as 5G networks and the Internet of Things (IoT) to optimize communication and coordination within the transport ecosystem. The main Work Programme is worth nearly €549 million for 2024 and covers specific deployment projects that use digital technologies such as supercomputers, data, AI, cloud, cybersecurity, and advanced digital skills (European Commission 2023a). Alongside the amended main work the Commission published programme, the amendment of the specific work programme focusing on cybersecurity, with a budget of €214 million for 2024 and will aim to support notably cvber threat detection and sharing.

implementation of cybersecurity EU legislation,





emergency preparedness for cyberattacks and mutual assistance, as well as national coordination centres. (European Commission 2023a). The work programmes will be executed mainly through grants and procurements.

The investment that the calls under the work programmes will generate will be almost double the amount from EU funding, as projects are expected to have a co-funded rate of 50% (European Commission 2023a). The calls are open to businesses, public administrations, and other entities from the EU Member States, EFTA/EEA countries, and countries associated to the Digital Europe Programme (European Commission 2023a).

Based on the Commission Implementing Decision on the financing of the Digital Europe Programme and the adoption of the work programme for 2023 - 2024 and amending C(2021) 7914, the Specific Objective 2 has three main work strands out of which the second is the deployment of a Data for EU strand with a focus on deploying sectorial common data spaces (C(2023) 8620 final, Annex 1). Regarding the Data for EU strand, to facilitate the development of the data market and the general capitalisation of data, the Commission is investing in common European data spaces in strategic economic areas such as transport and security, among others (C(2023) 8620 final, Annex 1).

### 3. 2. The energy data space of the Digital Europe Programme 's Specific Objective 2

Regarding Cloud. data and artificial intelligence, the Specific Objective 2 of the Digital Europe Programme, under the data for EU area, the European Commission is investing in common European data spaces in strategic economic areas and areas of public interest, such as the European Green Deal and transport (C(2023) 8620 final, Annex 1). The data spaces bring together data. data infrastructures and governance structures to facilitate secure data pooling and data sharing, which is a precondition for wider availability of data across and society. The data spaces the economy integrate data, data infrastructures, and governance structures with the purpose of facilitating secure pooling and sharing of data, which is essential for making data more widely accessible across the economy and society. The goal is to ensure fair access to data while adhering to EU regulations and values, enabling cross-border services and collaboration among diverse stakeholders (C(2023) 8620 final, Annex 1). Under the WP 2021-2022, the basis was laid for the development of 12 data spaces in line with the European data strategy.

Under the energy data space, this data space will be closely linked to other sector-specific data spaces, e.g. mobility and smart communities, and it will enable actors from various sectors such as building automation and electro-mobility to actively participate in the energy market, deliver energy services, and promote sector integration (the linking of the various energy carriers like electricity, gas, solid and liquid fuels with each other and with the end-use sectors, such as transport (C (2023)8620 final, Annex 1). Additionally, the programs allocate resources to promote digital skills development within the transport workforce (C (2023)8620 final, Annex 1).

## 3.3. The creation of a Common European mobility data space (EMDS)

Under the Common European mobility data space, the objective is to contribute to the effective implementation of the Multi-Country Project (MCP) on European common data infrastructure and services with a focus on mobility and transport (C(2023) 8620 final, ANNEX 1). The action will support the creation of the common European mobility data space (EMDS), which will facilitate the access, sharing and reuse of data in the mobility and logistics sectors, for a more





efficient, safe, sustainable, and resilient transport. It builds on initiatives and applications related to transport data and will be supported by the Digital Europe Programme to boost interoperability, security, and the availability and provision of data and services. The Digital Europe funding rate under the Common European mobility data space will be 50% (C(2023) 8620 final, ANNEX 1).

Considering the Common European mobility data space (EMDS)'s objective, the action outlined in C(2023) 8620 final is expected to make the mobility and transport system smarter, more environmentally friendly, and better adapted to the needs of its users (C(2023) 8620 final).

The objective is to support the implementation of the Communication on the creation of the EMDS and thereby to support the objectives of the Sustainable and Smart Mobility Strategy. The action should make the mobility and transport system smarter, more environmentally friendly, and better adapted to the needs of its users (C(2023) 8620 final).

The action should also contribute to the sustainability of common data infrastructure and promote its large-scale adoption and in line with the European Data Strategy, the action should contribute to creating a fair, competitive, and innovative data economy (C(2023) 8620 final, ANNEX 1). The awarded proposal will have to consider already existing data sharing initiatives at the European, national, and local to avoid duplication of existing initiatives. Furthermore, compliance is required with applicable EU legislation such as the ITS Directive and its Delegated Regulations and the implementation specifications of the Regulation (EU) 2020/1056 on electronic freight transport information (C(2023) 8620 final, ANNEX 1).

The awarded proposals need to address, firstly, the provision of operational support to the establishment of a sustainable collaboration structure between Member States and other actors, considering the potential creation of a European Digital Infrastructure Consortium (EDIC). Secondly, it should support the exchange of information on available infrastructures, solutions, tools, agreements, and standards related to the scope of the action, as well as the coordination across initiatives and projects in different countries and domains among the participants in the action and within the structure it seeks to establish (C(2023) 8620 final, ANNEX 1).

Thirdly, gaps in existing data and services infrastructure should be analysed and measures to support the deployment, operation and maintenance of data and service infrastructure enabling mobility and logistics data access and exchange at the European level needs to be proposed (C(2023) 8620 final, ANNEX 1).

Fourthly, through financial support to third parties, the development of cross-border use cases focusing on real-life use cases of mobility and logistics data sharing should be assisted. These use cases should be implemented in several Member States, and indicative areas for use cases are logistics, multimodal passenger mobility, cross-border sharing of e-mobility charging data and cross-border sharing of vehicle and driver data to check compliance with Urban Vehicle Access regulations, in particular Low Emission Zones (C(2023) 8620 final, ANNEX 1).

All activities under this project will require close collaboration and alignment with existing and evolving EU initiatives related to mobility and transport data such as the CEF technical assistance project, which aims at identifying and recommending common building blocks and governance models for the EMDS (C(2023) 8620 final, ANNEX 1). The deployment action for the common European mobility data space (deployEMDS), especially requires the development of data space building blocks and governance mechanisms, as well as piloting. (C(2023) 8620 final, ANNEX 1). The awarded proposal will have to build on





the outcomes of the preparatory action for the EMDS (PrepDSpace4Mobility) funded under WP 2021-2022, notably the inventory of existing mobility data ecosystems and the analysis of possible common building blocks for the EMDS (C(2023) 8620 final, ANNEX 1).

The awarded proposal will work in partnership

with the Data Spaces Support Centre to ensure alignment with other common European data spaces, and it is expected to work towards achieving financial sustainability beyond the duration of the project. The awarded proposal should ensure that the outcomes and deliverables of the project are owned or usable by a lasting structure supporting the implementation of the Multi-Country Project (MCP) in the mobility and transport sector C(2023) 8620 final, ANNEX 1). Moreover, mobility and transport infrastructure are critical infrastructures, subject to the NIS Directive and vital for the functioning of the economy, and it can also involve risks for human lives and health. Therefore, the EMDS itself could become a target for cyber-attacks by malicious actors. The EMDS and the activities of the project are likely to involve the exchange or use of sensitive data and information, such data on mobility patterns, commercially sensitive data on logistic flows, or securitysensitive data on transport infrastructure. Accordingly, the participation of non-EU entities entails the risk of this sensitive data and information being subject to legislation or pressure that obliges those non-EU entities to disclose this information to non-EU governments. The action will contribute to the deployment of the EMDS, which aims to play a central role in enabling data-driven services and processes in mobility and the transport sector, like. optimising logistics supply chains or supporting multimodal travels. Therefore, based on Article 12(6) of the Regulation (EU) 2021/694 the call is restricted based on the outlined security reasons. According to Article 12(6)of

Regulation (EU) 2021/694, if duly justified for security reasons, the work programme may also provide that legal entities established in associated countries and legal entities that are established in the EU but are controlled from third countries may be eligible to participate in all or some actions under Specific Objectives 1 and 2, but only if they comply with the requirements to guarantee the protection of the essential security interests of the EU and the Member States and to ensure the protection of classified documents information. Those requirements will be described in the work programme and if met, the participation of non-EU controlled entities is allowed, if they meet the conditions defined in this WP.

#### 4. Conclusion

The allocated budget of about €763 million for the European Commission's amended Digital Europe work programmes for 2024 reflects the EU's commitment to reinforce the digital capacities to foster innovation and digital solutions across various sectors, including mobility and transport. The main work programme includes a funding of €549 million for 2024 and covers specific deployment projects utilizing digital technologies such as supercomputers, data, AI, cybersecurity, and advanced digital cloud, skills. Additionally, the specific work programme on cybersecurity, with a budget of €214 million targets cyber threat emergency preparedness, and mutual assistance, among others.

The establishment of common European data spaces, including the energy data space and the Common European mobility data space (EMDS), underscores the commitment to accelerating the digitalization in the transport sector to facilitate the transition towards cleaner and smarter mobility, including automated systems, optimizing communication and coordination within the transport ecosystem. The 2024 Digital Europe





work programmes also consider the collaboration between public and private stakeholders to creating an innovation and investment friendly environment to enhancing efficiency, sustainability, and connectivity for establishing a smarter and more resilient mobility and transport sector.

With a funding rate of 50%, the Common European mobility data space (EMDS) seeks to contribute to the Sustainable and Smart Mobility Strategy, transport making the system smarter, environmentally friendly, and better adapted to user needs. While the deployment of the EMDS holds significant potential for data related services and processes, including optimizing chains logistics supply and supporting multimodal travels, the security of data related activities remains a concern. Even the EMDS itself could become a target for cyberattacks. Therefore, restrictive measures, as outlined in Article 12(6) of Regulation (EU) 2021/694, are underlining applied, the importance of safeguarding security interests in the development and deployment of digital solutions, also for data services and processes in the transport sector.

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