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NOTE

From:	Presidency
To:	Delegations
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Subject:	Proposal for a Regulation of the European Parliament and of the Council establishing the Digital Europe programme for the period 2021-2027 - Examination of the Presidency text

1. Introduction

Delegations will find in Annex a revised text of the proposal on the Digital Europe Programme, focusing on **articles 1 to 8, 16 and Annex 1**. The modifications are based on the discussions in the WP TELE of 17 September and on delegations' written comments. This document will be discussed in the WP TELE on **either 9 or 16 October**.

For ease of reference amendments to the Commission proposal are marked in **bold** and the deletions in ~~strikethrough~~.

2. Overview of modifications introduced in the document (in chronological order)

a/ Article 2: Definitions

In **definition 2(e)** on 'Digital Innovation Hubs' (hereafter: 'DIHs') **and throughout the text** the word 'European' has been added to distinguish the DIHs under the DEP Regulation from those financed from other sources. Amendment to **recital 11** (see footnote) has been proposed to explain this issue. The reference to 'SMEs and the public sector' has been added to highlight the importance of the DIHs for those actors. In addition, a possible **recital** has been proposed in a footnote to clarify the issue of consortia of legal entities.

Definition 2(f) on 'advanced digital skills' has been further complemented to address delegations' comments regarding the lack of precision in the definition. To this end, a reference to the other four specific objectives of the proposal has been introduced.

New **definition 2(g)** on 'cybersecurity' has been included. It has been inspired by the corresponding definition in the Cybersecurity Act (currently in trilogues) and in the recent proposal on Cybersecurity Competence and Coordination Centres.

New **definition 2(h)** on 'Digital Service Infrastructures' has been included. It is aligned with the corresponding definition of CEF Telecom Guidelines.

b/ Article 3: Programme objectives

Art. 3(1) chapeau has been amended to emphasise the importance of the competitiveness of Europe, the cross-border and cross-sectoral aspects as well as the links with other EU funding programmes.

In **art. 3(1)(a)** the word 'reinforce' has been replaced with 'strengthen and promote'.

In **art. 3(2)** the word 'interrelated' has been added to underline the link between the five specific objectives.

c/ Article 4: High Performance Computing

Further precisions have been introduced in **art. 4(a)** with regard to data-driven and application oriented infrastructure and easy access to SMEs.

In **art. 4(b)** the reference to 'all' scientific and industrial value chain segments has been replaced by 'various aspects' thereof.

Art. 4(c) has been modified to keep a clear distinction between DEP and Horizon Europe.

d/ Article 5: Artificial Intelligence

Art. 5(a) has been amended to address delegations' comments regarding compliance, quality, privacy and ethical considerations. In addition, a possible recital text has been added in a footnote to clarify the concept of libraries of algorithms.

In **art. 5(b)** a text has been added to cover 'civil society' and to highlight benefits to European society and economy.

e/ Article 6: Cybersecurity

Art. 6(a) and (b) now refer also to 'build-up' of, respectively, cybersecurity equipment and knowledge.

In **art. 6(c)** the reference to 'the latest' cybersecurity solutions has been replaced by 'effective' solutions 'according to the state of the art' as the latest solutions are not necessarily the most appropriate. In addition, the word 'European' has been introduced to underline the European dimension in this context.

Art. 6(d) now includes a reference to 'measures developing a cybersecurity culture within organisations'.

f/ Article 7: Advance Digital Skills

The wording of **art. 7(a), (b) and (c)** has been made more consistent and refers now only to students and workforce (which comprises the other, more specific, groups). References to the age of target groups have also been removed.

g/ Article 8: Deployment, best use of digital capacities and Interoperability

In **art. 8(a)** the list of sectors has been replaced by a reference to Annex 1.

According to **art. 8(d)** the 'easy' access to testing and piloting should also be offered to 'businesses'.

Art. 8(e) has been further developed in response to delegations' comments.

In **art. 8(f)** a reference to 'digital government solutions' has been included.

Art. 8(i) has been slightly reworded to refer not only to the DIH network but also to DIHs as such.

i/ Article 16: European Digital Innovation Hubs

It has been specified in **art. 16(2) chapeau** that Member States shall designate the candidate entities 'in accordance with their national procedures'.

Designation criteria in **art. 16(2)(a) and (b)** have been further detailed by adding references to relevant provisions of the DEP proposal and the financial viability criteria in **art. 16(2)(c)** has been further elaborated.

Art. 16(3) and (4) now make sure that the Commission takes utmost account of Member States' opinions when selecting the initial and subsequent DIHs. In addition the word 'widest' has been replaced by 'broad' in **art. 16(3)** which seems to be more realistic.

New **art. 16(4a)** ensures substantial autonomy for DIHs to define their organisation, composition and working methods.

In **art. 16(5)** the word 'may' has been replaced by 'shall'.

Art. 16(6)(a) now also mentions the fact that DIHs should be involved in raising awareness and providing expertise and know-how.

In **art. 16(6)(c)** the word 'including' has been replaced by 'in particular'. The word 'individual' has been deleted.

j/ Annex 1

The text in **part 1.1** has been aligned with **art. 4(a)**.

It has been specified in **part. 1.5** that the networking concerns 'at least' one HPC Competence Center per Member State.

In **part 2. chapeau**, it has been specified that the reinforcement and networking concern not only existing but also newly established AI testing and experimentation facilities.

A reference to open and document data format has been included in **part 2.1**.

Further details regarding access to libraries of algorithms have been provided in **part. 2.2**.

A reference to 'transport' has been included in **part 2.3**.

In **part 3. chapeau**, it has been specified that the DEP should stimulate not only building but also reinforcement and acquisition of essential capacities.

The text in **part 3.3** has been aligned with art. 6(c).

Minor linguistic improvements have been introduced in **part 4**.

In **part 4. 3rd subparagraph** the word 'high-end' has been replaced with 'advanced' to align the terminology.

Additional details have been included in **part. 5.I.2.1**.

Reference to 'data storage and computing' has been included in **part. 5.I.2.2**.

Examples of applications have been included in **part. 5.I.4**.

Reference to 'education and research' has been included in **part. 5.I.5**.

ANNEX

Article 1

Subject matter

This Regulation establishes the Digital Europe programme ('Programme').

It lays down the objectives of the Programme, the budget for the period 2021 - 2027, the forms of European Union funding and the rules for providing such funding.

Article 2

Definitions

For the purposes of this Regulation, the following definitions shall apply:

(a) 'Blending operation' means actions supported by the EU budget, including within blending facilities pursuant to Article 2(6) of the Financial Regulation, combining non-repayable forms of support and/or financial instruments from the EU budget with repayable forms of support from development or other public finance institutions, as well as from commercial finance institutions and investors.

(b) 'Legal entity' means any natural person, or legal person created and recognised as such under national law, Union law or international law, which has legal personality and which may, acting in its own name, exercise rights and be subject to obligations , or an entity without a legal personality in accordance with Article 197(2)(c) of the Financial Regulation;

(c) 'Third country' means a country that is not member of the Union;

(d) 'Associated country' means a third country which is party to an agreement with the Union allowing for its participation in the Programme pursuant to Article [10]; "international organisation of European interest" means an international organisation, the majority of whose members are Member States or whose headquarters are in a Member State;

(e) '**European** [1] Digital Innovation Hub' means legal entity[2] designated or selected in an open and competitive procedure in order to fulfil the tasks under the Programme, in particular providing access to technological expertise and experimentation facilities, such as equipment and software tools to enable the digital transformation of the industry**, notably SMEs and the public sector**.

(f) 'Advanced digital skills' are those skills and competences **requiring technical knowledge and experience** necessary to **understand,** design, develop, manage, **test,** deploy**, use** and maintain the technologies**, products and services** supported by this Regulation **as referred to under Article 3(2)(a), (b), (c) and (e)**.

(g) 'Cybersecurity' means the protection of network and information systems, their users, and other persons against cyber threats.

(h) 'Digital Service Infrastructures' means infrastructures which enable networked services to be delivered electronically, typically over the internet.

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[1] Recital 11 is proposed to be amended with the following sentence: *'In order to clarify the distinction between Digital Innovation Hubs complying with the eligibility criteria under this Programme and Digital Innovation Hubs established following the Communication of Digitising European Industry (COM(2016) 180 final) and financed by other sources, Digital Innovation Hubs financed under this Programme should be called European Digital Innovation Hubs.'*

[2] A recital is proposed to provide clarifications on consortium of legal entities: *'A consortium of legal entities may be designated as European Digital innovation hubs following the provision in Article 197.2(c) of the Financial Regulation that allows entities which do not have legal personality under the applicable national law should be entitled to participate in calls for proposals, provided that their representatives have the capacity to undertake legal obligations on behalf of the entities and that the entities offer guarantees for the protection of the financial interests of the Union equivalent to those offered by legal persons.*'

Article 3

Programme objectives

1. The Programme has the following general objective: to support the digital transformation of the European economy and society**,** ~~and~~ bring its benefits to European citizens and businesses**, and improve the competitiveness of Europe in the global digital economy. This requires a holistic, cross-sectoral and cross-border support**. The Programme**, implemented in close coordination with other Union funding programmes as applicable,** will:

   (a) ~~reinforce~~ **strengthen and promote** Europe's capacities in key digital technology areas through large-scale deployment,

   (b) widen their diffusion and uptake in areas of public interest and the private sector.

2. The Programme will have five **interrelated** specific objectives:

   (a) Specific Objective 1: High Performance Computing

   (b) Specific Objective 2: Artificial Intelligence

   (c) Specific Objective 3: Cybersecurity and Trust

   (d) Specific Objective 4: Advanced Digital Skills

   (e) Specific Objective 5: Deployment, best use of digital capacity and interoperability

Article 4

High Performance Computing

The financial intervention by the Union under Specific Objective 1. High Performance Computing shall pursue the following operational objectives:

(a) deploy, coordinate at the Union level and operate an integrated **demand-oriented and application driven** world-class exascale[3] supercomputing and data infrastructure in the Union that shall be **easily** accessible on a non-commercial basis to public and private users **notably SMEs** and **in the framework of** ~~for~~ publicly funded research purposes;

(b) deploy ready to use/operational technology resulting from research and innovation to build an integrated Union high performance computing ecosystem, covering ~~all~~ **various aspects in the** scientific and industrial value chain segments, including hardware, software, applications, services, interconnections and digital skills;

(c) deploy and operate a post-exascale[4] infrastructure, including the integration with quantum computing technologies and ~~develop new~~ research infrastructures for computing science.

Article 5

Artificial Intelligence

The financial intervention by the Union under Specific Objective 2. Artificial Intelligence shall pursue the following operational objectives:

(a) build up and strengthen core artificial intelligence capacities **and knowledge** in the Union, including **quality** data resources and libraries of algorithms[5] **while guaranteeing a human-centric and inclusive approach respecting European values**. ~~i~~In compliance with data protection legislation, **artificial intelligence based solutions and data made available shall respect the principle of privacy and security by design and shall take into account relevant ethical principles**;

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3 Billions of billions of floating operations per second

4 A thousand times faster than exascale

5 A recital may be added explaining the concept of 'libraries of algorithms': Libraries of algorithms may cover a large set of algorithms, including simple solutions such as classification algorithms, neural network algorithms or planning or reasoning algorithms, or more elaborated solutions, such as a speech recognition algorithms, navigation algorithms embedded in drone or in an autonomous car, AI algorithms built-in robots enabling them to interact with and adapt to their environment.

(b) make those capacities accessible to all businesses**, civil society** and public administrations **to maximise their benefit to European society and economy**;

(c) reinforce and network existing artificial intelligence testing and experimentation facilities in Member States;

Article 6

Cybersecurity and Trust

The financial intervention by the Union under Specific Objective 3. Cybersecurity and Trust shall pursue the following operational objectives:

(a) support, together with Member States, the **build-up and** procurement of advanced cybersecurity equipment, tools and data infrastructures in full compliance with data protection legislation;

(b) support the **build-up and** best use of European knowledge, capacity and skills related to cybersecurity;

(c) ensure a wide deployment of ~~the latest~~ **effective** cybersecurity solutions **according to the state of the art** across the **European** economy;

(d) reinforce capabilities within Member States and private sector to help them meet Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union[6] **including through measures aiming at developing a cybersecurity culture within organisations**.

6 OJ L 194, 19.7.2016, p. 1–30

Article 7

Advanced Digital Skills

The financial intervention by the Union under Specific Objective 4. Advanced Digital skills shall support the development of advanced digital skills in areas supported by this programme, thus contributing to increase Europe's talent pool, fostering greater professionalism, especially with regard to high performance computing, big data analytics, cybersecurity, distributed ledger technologies, robotics and artificial intelligence. The financial intervention shall pursue the following operational objectives:

(a) support the design and delivery of long-term trainings and courses for students~~, IT professionals~~ and the workforce;

(b) support the design and delivery of short-term trainings and courses for ~~entrepreneurs, small business leaders and~~ the workforce**, in particular SMEs**;

(c) support on-the-job trainings and ~~traineeships~~ **placements** for students~~, young entrepreneurs and graduates~~ **and the workforce**.

Article 8

Deployment, best use of digital capacities and Interoperability

The financial intervention by the Union under Specific Objective 5. Deployment, best use of digital capacities and Interoperability shall achieve the following operational objectives:

(a) ~~ensure that~~ **support** the public sector and areas of public interests, such as ~~health and care, education, judiciary, transport, energy, environment, cultural and creative sectors, can~~ **those listed in Annex 1 to** deploy and access ~~state-of-the-art~~ **necessary** digital technologies, in particular high performance computing, artificial intelligence and cybersecurity;

(b) deploy, operate and maintain trans-European interoperable Digital Service Infrastructures (including related services) in complementarity with national and regional actions;

(c) facilitate the development, update and use of solutions and frameworks by European public administrations, businesses and citizens, including the re-use of interoperability solutions and frameworks;

(d) offer to public administrations **and business easy** access to testing and piloting of digital technologies, including their cross-border use;

(e) support the uptake **by the Union industry, notably SMEs** of advanced digital and related technologies, including in particular high performance computing, artificial intelligence, cybersecurity**, other leading edge** and future ~~emerging~~ technologies**, such as distributed ledgers** ~~by the Union industry, notably SMEs~~;

(f) support the design, testing, implementation and deployment of interoperable digital solutions **including digital government solutions**, for EU level public services delivered through a data-driven reusable solutions platform, fostering innovation and establishing common frameworks in order to unleash the full potential of the public administrations' services for European citizens and businesses;

(g) ensure a continuous capacity at the Union level to observe, analyse and adapt to fast-evolving digital trends, as well as sharing and mainstreaming best practices;

(h) support cooperation towards achieving a European ecosystem for trusted infrastructures using distributed ledger services and applications, including support for interoperability and standardisation and fostering the deployment of EU cross-border applications;

(i) build up and strengthen the ~~network of~~ **European** Digital Innovation Hubs **and their network**.

…

Article 16

***European** Digital Innovation Hubs*

1. During the first year of the implementation of the Programme, an initial network of **European** Digital Innovation Hubs shall be established.

2. For the purpose of the establishment of the network mentioned in paragraph 1, each Member State shall designate**, in accordance with their national procedures,** candidate entities ~~through an open and competitive process,~~ on the basis of the following criteria:

   (a) appropriate competences related to the functions of the **European** Digital Innovation Hubs **specified in Article 16(6) and competences in one or several areas identified in Article 3(2)**;

(b) appropriate management capacity, staff and infrastructure **necessary to carry out the functions identified in Art 16(6)**;

(c) operational and legal means to apply the administrative, contractual and financial management rules laid down at Union level;

(d) appropriate financial **viability, demonstrated, where appropriate, through** guarantees, issued preferably by a public authority, corresponding to the level of Union funds it will be called upon to manage.

3. The Commission shall adopt a decision on the selection of entities forming the initial network **taking utmost account of the opinion of each Member State before the selection of a European Digital Innovation Hub in its territory**. These entities shall be selected by the Commission from candidate entities designated by Member States on the basis of the criteria mentioned in paragraph 2 and the following additional criteria:

(a) the budget available for the financing of the initial network;

(b) the need to ensure by the initial network a coverage of the needs of industry and areas of public interest and a comprehensive and balanced geographical coverage.

4. Additional **European** Digital Innovation Hubs shall be selected on the basis of an open and competitive process, **and taking utmost account of the opinion of each Member State before the selection of a European Digital Innovation Hub in its territory,** in such a way to ensure ~~the widest~~ **a broad** geographical coverage across Europe. The number of entities of the network shall be proportional to the population of a given Member States and there shall be at least one **European** Digital Innovation Hub per Member State. To address the specific constraints faced by the EU outermost regions, specific entities may be nominated to cover their needs.

4a. European Digital Innovation Hubs shall have substantial overall autonomy to define their internal organisation, composition, and working methods.

5. The **European** Digital Innovation Hubs ~~may~~ **shall** receive funding in the form of grants.

6. The **European** Digital Innovation Hubs ~~which receive funding~~ shall be involved in the implementation of the Programme to:

(a) **raise awareness and** provide digital transformation **expertise, know-how and** services - including testing and experimentation facilities - targeted towards SMEs and midcaps, also in sectors that are slow in the uptake of digital and related technologies;

(b) transfer expertise and know-how between regions, in particular by networking SMEs and midcaps established in one region with **European** Digital Innovation Hubs established in other regions which are best suited to provide relevant services;

(c) provide thematic services, ~~including~~ **in particular** services related to artificial intelligence, high performance computing and cybersecurity and trust to the administrations, public sector organisations, SMEs and midcaps. ~~Individual~~ **European** Digital Innovation Hubs may specialise in specific thematic services and do not need to provide all thematic services mentioned in this paragraph;

(d) provide financial support to third parties, under the specific objective 4, Advanced Digital Skills.

ANNEX 1

ACTIVITIES

Technical description of the programme: initial scope of activities

The initial activities of the Programme shall be implemented in accordance with the following technical description:

Specific Objective 1. High Performance Computing

The Programme shall implement the European strategy on HPC by supporting a full EU ecosystem that provides the necessary HPC and data capabilities for Europe to compete globally. The strategy aims to deploy a world-class HPC and data infrastructure with exascale capabilities by 2022/2023, and post exascale facilities by 2026/27, endowing the Union with its own independent and competitive HPC technology supply, achieving excellence in HPC applications and widening HPC availability and use.

Initial activities shall include:

1. A joint procurement framework for an integrated network of world-class HPC including exascale supercomputing and data infrastructure. It will be **easily** accessible on a non-~~economic~~ **commercial** basis to public and private users **notably SMEs** and ~~for~~ **in the framework** publicly funded research purposes.

2. A joint procurement framework of a post-exascale supercomputing infrastructure, including the integration with quantum computing technologies.

3. EU-level coordination and adequate financial resources to support the development, procurement and operation of such infrastructure.

4. Networking of Member State HPC and data capacities and support for Member States wishing to upgrade or acquire new HPC capacities.

5. Networking of HPC Competence Centers, **at least** one per Member State and associated with their national supercomputing centers to provide HPC services to industry (in particular SMEs), academia and public administrations.

6. The deployment of ready to use/operational technology: supercomputing as a service resulting from R&I to build an integrated European HPC ecosystem, covering all scientific and industrial value chain segments (hardware, software, applications, services, interconnections and advanced digital skills).

Specific Objective 2. Artificial Intelligence

The Programme shall build up and strengthen core Artificial Intelligence capacities in Europe including data resources and repositories of algorithms and making them accessible by all businesses and public administrations as well as reinforcement and networking of existing **and newly established** AI testing and experimentation facilities in Member States.

Initial activities shall include:

1. Creation of Common European Data spaces that aggregate public information across Europe and become a data input source for AI solutions. The spaces would also be open to public and private sector. For increased usage, data within a space should be made interoperable as much as possible, **notably by agreeing on a data format that would be open and documented,** both in the interactions between public and private sectors, within sectors and across sectors (semantic interoperability).

2. Development of common European libraries of algorithms that would be **easily** accessible to all **based on fair, reasonable and non-discriminatory terms**. Companies and public sector would be able to identify and acquire whichever solution would work best for their needs.

3. Co-investment with Member States in world class reference sites for experimentation and testing in real setting focusing on the applications of AI in essential sectors such as health, earth/environment monitoring, **transport and** mobility, security, manufacturing or finance, as well as in other areas of public interest. The sites should be open to all actors across Europe and connected to the Network of Digital Innovation Hubs. They should be equipped with large computing and data handling facilities as well as latest AI technologies including emerging areas ~~such as~~ **inter alia** neuromorphic computing, deep learning and robotics.

Specific Objective 3. Cybersecurity and trust

The Programme shall stimulate the **reinforcement,** building **and acquisition** of essential capacities to secure the EU's digital economy, society and democracy by reinforcing the EU's cybersecurity industrial potential and competitiveness, as well as improving capabilities of both private and public sectors to protect European citizens and businesses from cyber threats, including supporting the implementation of the Network and Information Security Directive.

Initial activities, under this objective, shall include:

1. Co-investment with Member States in advanced cybersecurity equipment, infrastructures and know-how that are essential to protect critical infrastructures and the DSM at large. This could include investments in quantum facilities and data resources for cybersecurity, situational awareness in cyberspace as well as other tools to be made available to public and private sector across Europe.

2. Scaling up existing technological capacities and networking the competence centres in Member States and making sure that these capacities respond to public sector needs and industry, including in products and services that reinforce cybersecurity and trust within the DSM.

3. Ensuring wide deployment of ~~the latest~~ **effective** cybersecurity and trust solutions **according to the state of the art** across the Member States. This includes ensuring security and safety by design for products.

4. Support to close the cybersecurity skills gap by e.g. aligning cybersecurity skills programmes, adapting them to specific sectorial needs and facilitating access to targeted specialised training courses.

Specific Objective 4. Advanced Digital skills

The Programme shall support easy access to advanced digital skills, notably in HPC, AI, distributed ledgers (e.g. blockchain) and cybersecurity for the current and future labour force by offering **inter alia** students, recent graduates, and ~~existing~~ **current** workers, wherever they are situated, with the means to acquire and develop these skills.

Initial activities shall include:

1. Access to on the job training by taking part in traineeships in competence centres and companies deploying advanced **digital** technologies.

2. Access to courses in advanced digital technologies which will be offered by universities in cooperation with the bodies involved in the Programme (topics will include AI, cybersecurity, distributed ledgers (e.g. blockchain), HPC and quantum technologies).

3. Participation in short-term, specialised professional training courses that have been pre-certified, for example in the area of cybersecurity.

Interventions shall focus on ~~high-end~~ **advanced** digital skills related to specific technologies.

All interventions will be designed and implemented primarily through the **European** Digital Innovation Hubs, as defined in Article 15.

Specific Objective 5. Deployment, best use of digital capacities and Interoperability

I. Initial activities related to the digital transformation of areas of public interest shall include:

Projects serving the deployment, the best use of digital capacities or interoperability shall constitute projects of common interest.

1. Modernisation of administrations:

1.1. Support Member States in the implementation of the Principles of the Tallinn Declaration on e-Government in all policy domains, creating where necessary, the registries needed and interconnecting them in full respect of the General Data Protection Regulation.

1.2. Support the design, piloting, deployment, maintenance and promotion of a coherent eco-system of cross-border digital services infrastructure and facilitate seamless end-to-end, secure, interoperable, multi-lingual, interoperable cross-border or cross-sector solutions and common frameworks within public administration. Methodologies for assessing the impact and benefits shall also be included.

1.3. Support the assessment, updating and promotion of existing common specifications and standards as well as the development, establishment and promotion of new common specifications, open specifications and standards through the Union's standardisation platforms and in cooperation with European or international standardisation organisations as appropriate.

1.4. Cooperate towards a European ecosystem for trusted infrastructures using distributed ledgers (e.g. blockchain) services and applications, including support for interoperability and standardisation and fostering the deployment of EU cross-border applications.

2. Health[7]

2.1. Ensure that EU citizens can access, share, use, and manage their personal health data securely across borders irrespective of their location or the location of the data. Complete the eHealth Digital Service Infrastructure and extend it by new digital services, **related to disease prevention, health care and cure**, support **their** deployment**, building on the EU and Member States' activities such as the development** of ~~the~~ **a** European exchange format for electronic health records.

[7] COM(2018) 233 final, on enabling the digital transformation of health and care in the Digital Single Market; empowering citizens and building a healthier society

2.2. Make available better data for research, disease prevention and personalised health and care. Ensure that European health researchers and clinical practitioners have access to necessary scale of resources (shared data spaces, **including data storage and computing,** expertise and analytical capacities) to achieve breakthroughs in major as well as in rare diseases. The target is to ensure a population-based cohort of at least 10 million citizens. A milestone is 1 million of sequenced genome by 2022.

2.3. Make digital tools available for citizen empowerment and for person-centred care by supporting the exchange of innovative and best practices in digital health, capacity building and technical assistance, in particular for cybersecurity, AI and HPC.

3. Judiciary: Enable seamless and secure cross-border electronic communication within the judiciary and between the judiciary and other competent bodies in the area of civil and criminal justice. Improve access to justice and juridical information and procedures to citizens, businesses, legal practitioners and members of the judiciary with semantically interoperable interconnections to national databases and registers as well as facilitating the out-of-court dispute resolution online. Promote the development and implementation of innovative technologies for courts and legal practitioners based on artificial intelligence solutions which are likely to streamline and speed-up procedures (for example "legal tech" applications).

4. Transport, **mobility,** energy and environment: Deploy decentralised solutions and infrastructures required for large-scale digital applications such as **connected automated driving, Umanned Aerial Vehicles, smart mobility concepts,** smart cities or smart rural areas in support of transport, energy and environmental policies.

5. Education and culture: Provide creators and creative industry in Europe with access to latest digital technologies from AI to advanced computing. Exploit the European cultural heritage ~~as a vector~~ to **support education and research and to** promote cultural diversity, social cohesion and European ~~citizenship~~ **society**. Support the uptake of digital technologies in education.

All the above activities may be partly supported by **European** Digital Innovation Hubs through the same capacities developed to assist the industry with their digital transformation (see point II).

Additionally a set of Digital Single Market support activities will be supported which will include a pan-European network of Safer Internet Centres to foster digital literacy and raise awareness and among minors, parents and teachers regarding risks minors may encounter online and ways to protect them, and to tackle the dissemination of child sexual abuse material online; measures aimed at combatting intentional disinformation spread; an EU observatory for the digital platform economy as well as studies and outreach activities.

II. Initial activities related to the digitization of industry:

1. Contribution to the upscaling of the infrastructure and technology facilities (equipment, software and tools) of the network of **European** Digital Innovation Hubs to ensure access to digital capacities to any business, notably SMEs in any region across the EU. This includes notably:

1.1. Access to Common European Data space and AI platforms and European HPC facilities for data analytics and compute intensive applications

1.2. Access to AI large scale testing facilities and to advanced cybersecurity tools

1.3. Access to advanced skills

2. Activities will be coordinated with, and will complement the innovation actions in digital technologies supported notably under the Horizon Europe Programme as well as investments in **European** Digital Innovation Hubs supported under the European Regional and Development Funds. Grants for market replication may also be provided from the Digital Europe Programme in line with state aid rules. Support for access to finance further steps in their digital transformation will be achieved with financial instruments making use of the InvestEU scheme.