



Programmes managed by HaDEA

Department B, Digital, Industry and Space
Athens, Tuesday 14 May 2024

Katleen Engelbosch
Head of Department

Health
and Digital
Executive
Agency

Who we are



B Digital, Industry and Space
ENGELBOSCH Katleen
Head of Department



HaDEA/B: The programmes we manage

(MFF 2021-2027)

DGs	RTD Research & Innovation	CNECT Communications Networks, Content & Technology	GROW Internal market, Industry, entrepreneurship and SMEs	DEFIS Defence Industry & Space
Programmes	Horizon Europe Cluster 4 Digital, Industry, Space	CEF-Digital	Digital Europe Programme	
HaDEA Budget	€6.1 billion	€1.6 billion	€0.8 billion	
Legacy projects	Horizon 2020	WiFi4EU	CEF-Telecom - Digital Service Infrastructures	

CEF-Digital programme 2021-27



5G



Backbones



Coordination
and Support
Actions

Work Programme 2021-23: € 682 Million

(Calls 1 & 2 completed; Call 3 ongoing)

5G for
Transport Corridors

21 projects, € 52 million

Digital Global Gateways

31 projects, € 291 million

Operational Digital Platforms

Call in 2025

5G & Edge Computing for
Smart Communities

19 projects, € 57 million

Quantum Communication
Infrastructure

Call postponed to 2024

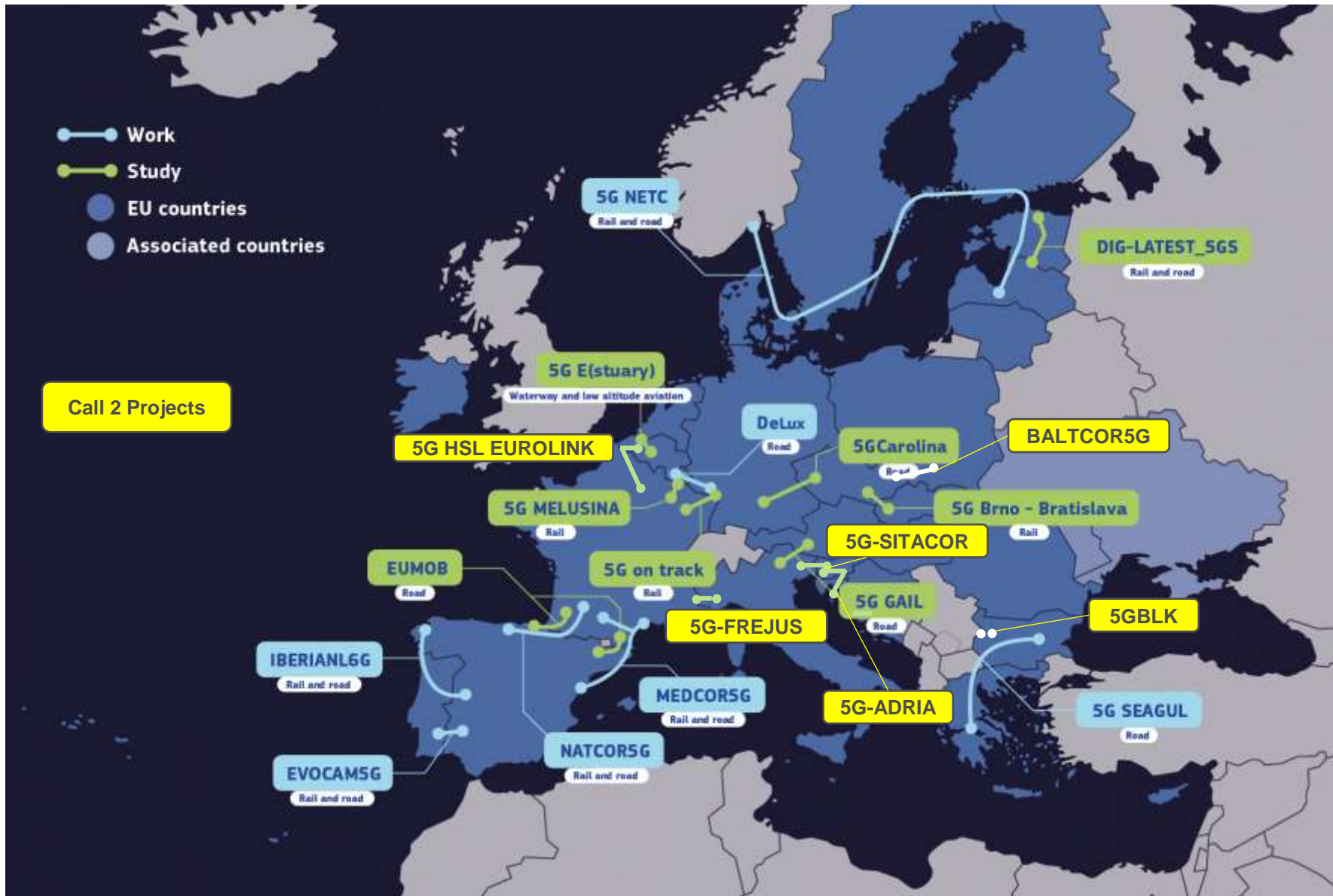
Support Actions

3 projects, € 7 million

Work Programme 2024-27: € 864 Million

Calls, topics and budgets TBD

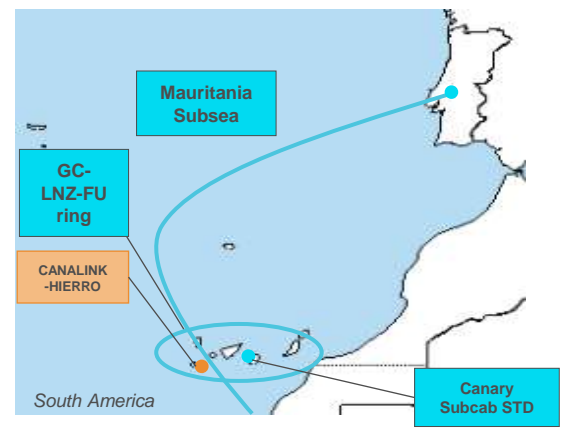
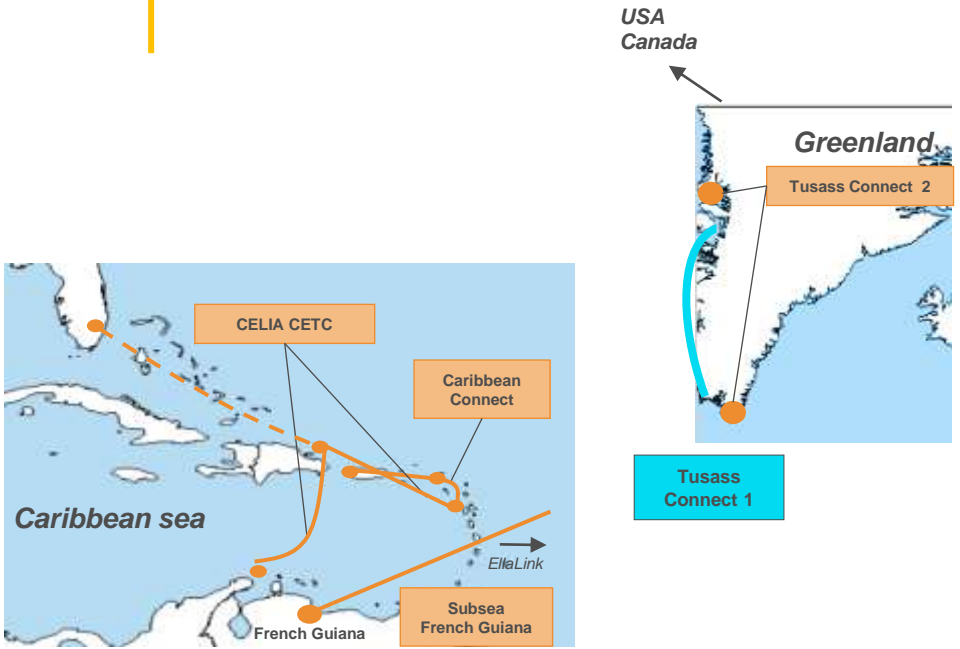
5G along transport corridors



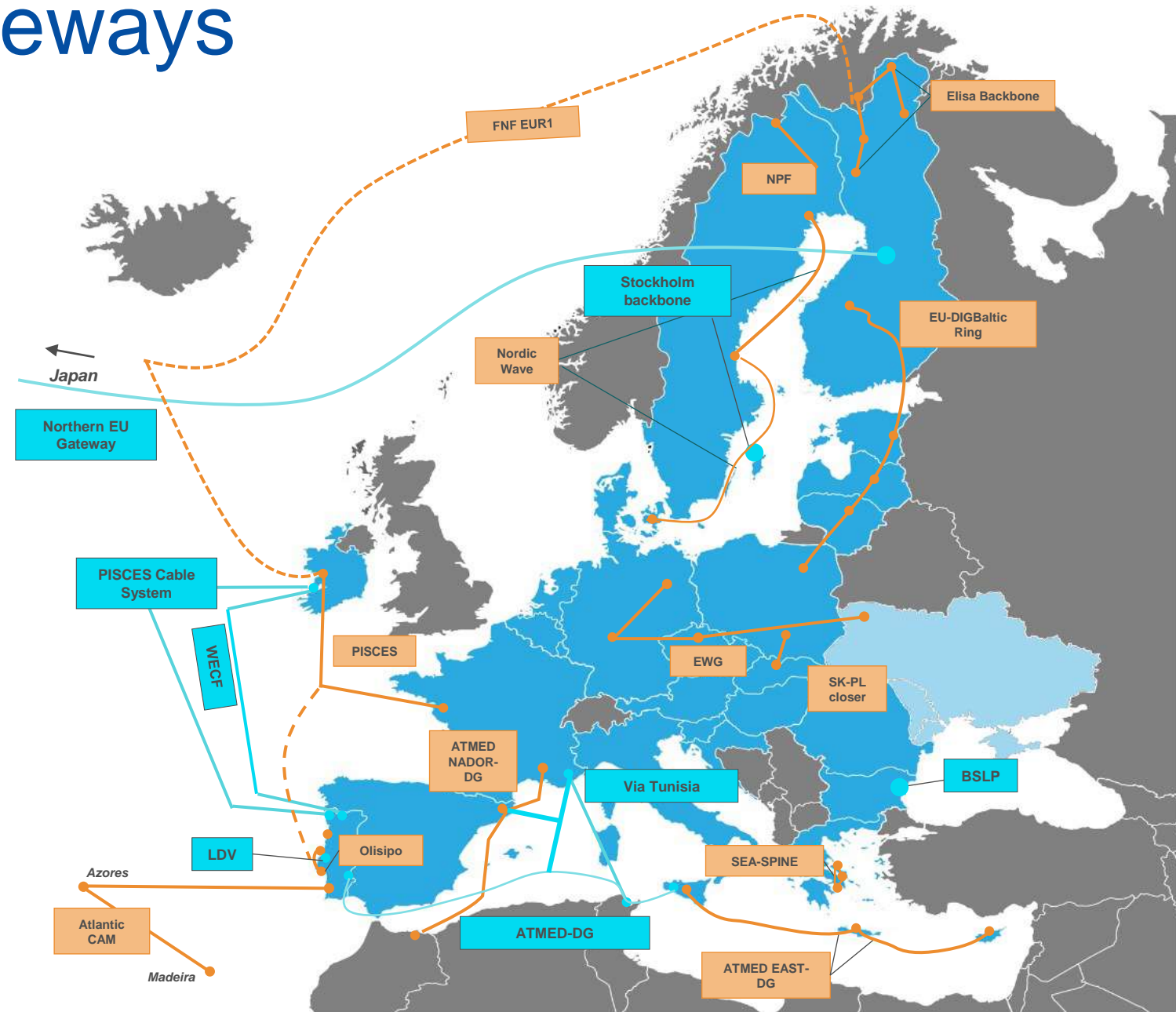
5G for Smart Communities



Digital Global Gateways



— Call 1
— Call 2



Cables in the map do not necessary represent the actual geographical locations

CEF-Digital in Greece

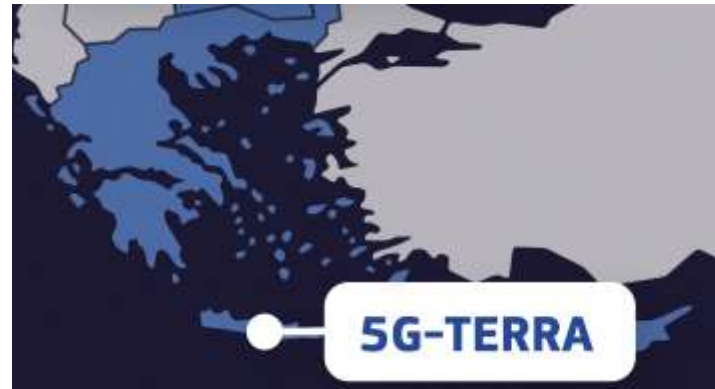
5G for Transport Corridors



5G SEAGUL:

- 5G seamless roaming for the Greece-Bulgaria cross-border corridor in the *Orient-East Med* TEN-T Corridor
- € 5.7 million of EU-funding (50%)
- Coordinator: Wings ICT (3 partners)

5G and Edge Computing for Smart Communities



5G-TERRA

- 5G infrastructure and services for public interest and social inclusion
- €4.9 million of EU-funding (75%)
- Coordinator: Wings ICT (4 partners)

Digital Global Gateways (submarine cables)



ATMED EAST-DG

- Connecting Greece and Cyprus to Italy and the Mediterranean data gateway
- €12 Million of EU-funding (50%)
- Monobeneficiary: AFR-IX Telecom

SEA-SPINE

- Build seven new submarine optical fibre links between 11 Greek islands
- €7.8 Million of EU-funding (30%)
- Coordinator: Wings ICT (3 partners)

2023 Calls – ongoing (indicative)

WHAT	WHEN
Call for proposals	October 2023 – February 2024
Evaluation Committee	June 2024
Grant Agreement Preparation (GAP)	August – November 2024
Programme Committee (Member States)	September 2024
Commission award decision	October 2024

Calls	Budget (€ million)
5G for Transport Corridors (works and studies)	100
5G + edge cloud for Smart Communities (works)	51
Backbone – Gateways (works and studies)	90
TOTAL	241

CEFDigital
NEW Calls
 for proposals
DEADLINE
 20 FEBRUARY 2024

#HaDEA #DigitalEU #CEFDigital

European Commission

WiFi4EU

public Wi-Fi for Europeans



30

participating
countries



8 802

awarded
municipalities



€132 m

Allocated
in vouchers



93 012

hotspots

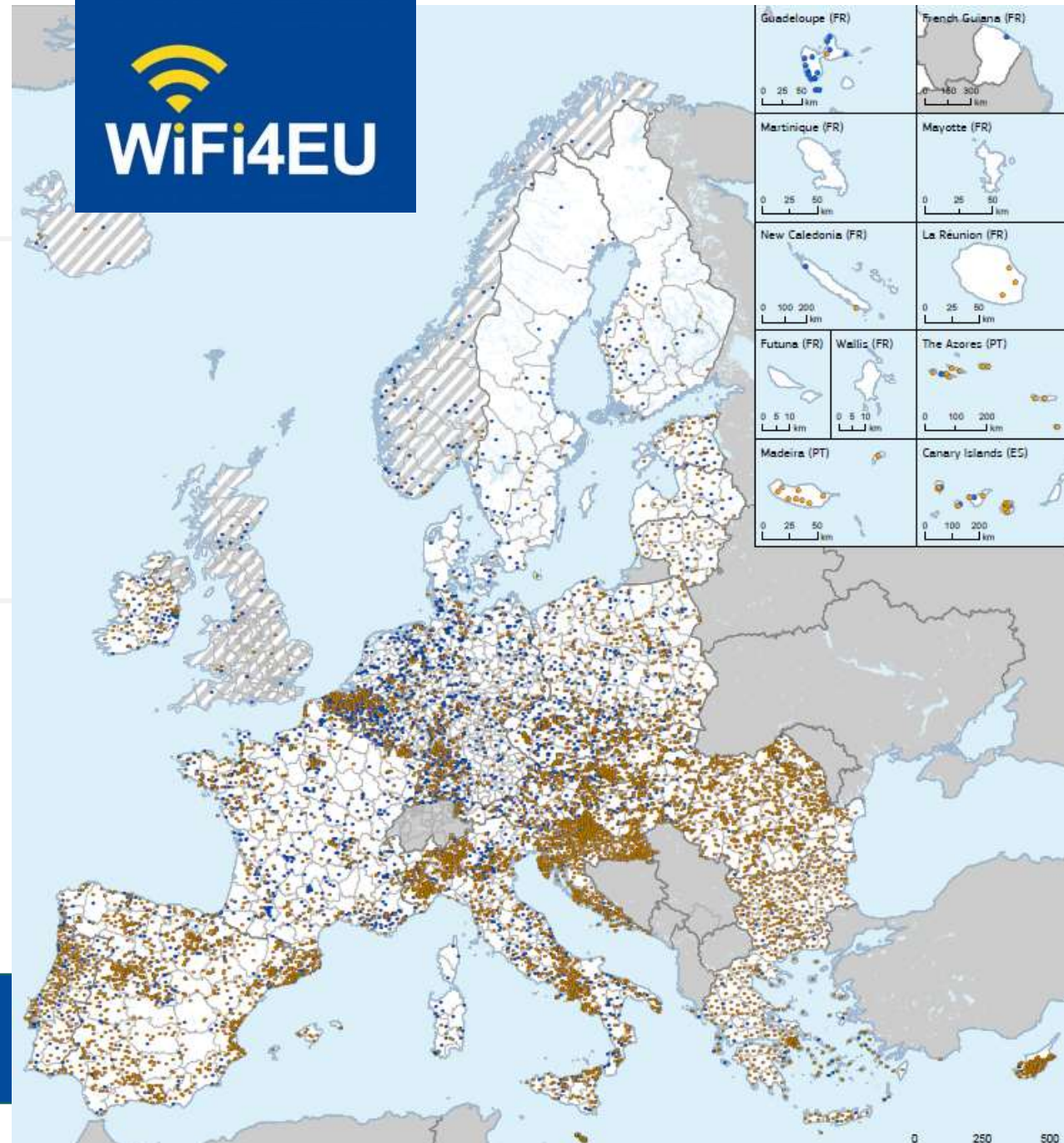


162 000

daily connections

10% of all European municipalities
have set up a WiFi4EU network

WiFi4EU



WiFi4EU in Greece



94% of Greek municipalities have been granted a voucher (€15,000)



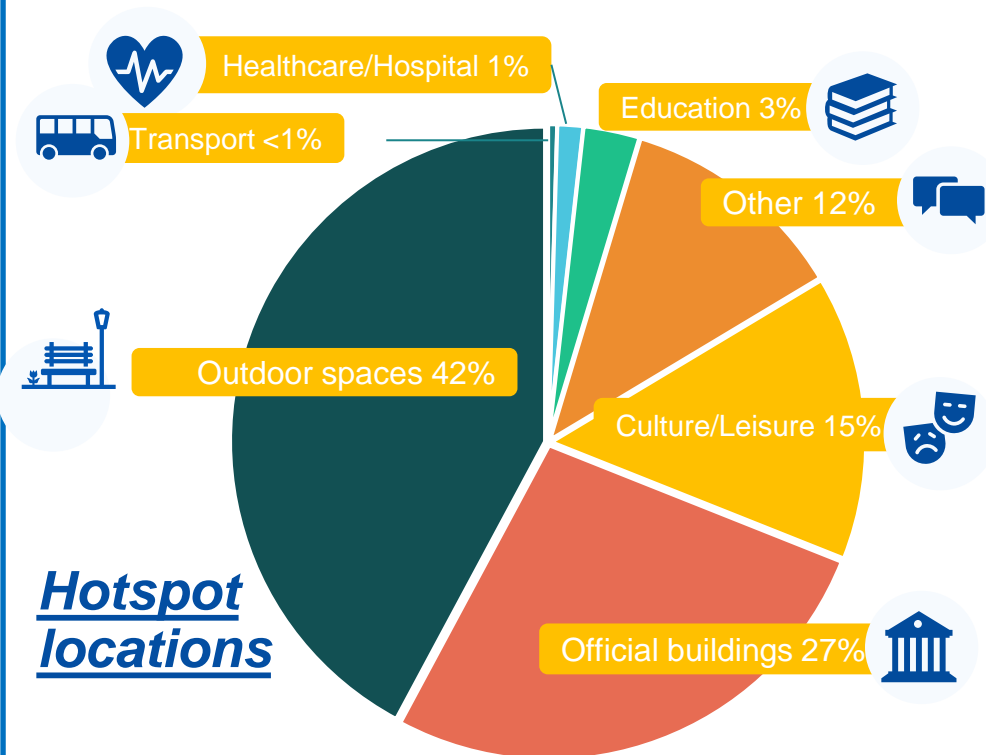
309 Municipalities; 58 installation companies



360 active networks; 3,700 hotspots



500,000 end-users (monthly average)



**Additional info
(interactive map)**

Digital Europe

Strategic digital capacities in EU (deployment)

- Supercomputing
- Artificial intelligence, data and Cloud
- Cybersecurity
- Advanced digital skills
- Ensuring a wide use of digital technologies

CEF Telecom (legacy):

Digital Service Infrastructures: Cross-border interaction of public admin, business and citizens

DEP: 82 projects, €259 million

CEF Telecom (DSIs - legacy): 149 projects, €87,31 million



Digital Europe Programme

Strategic autonomy

Building strategic digital capacities in EU - Facilitating wide deployment of digital technologies



Compete globally

Other regions of the world invest huge amount of public capital in advanced technologies. For example, the US and China spend € 10-20 billion annually on AI alone



Better address Europe's economic and societal challenges

E.g. climate, health, mobility and public services



Achieve scale through collective co-investments

Given the size of investments needed, scale required and risks involved Europe needs to pool the resources together



Ensure broad take-up of digital technologies across all regions of EU

In deploying latest technologies to offer best services to citizens and business



Regain control over Europe's value chains

and ensure Europe's technological sovereignty



Support SMEs to acquire or access the latest technologies and skills

More than 400,000 EU vacancies in these fields

SPECIFIC PROGRAMME IMPLEMENTING HORIZON EUROPE & EIT*

Exclusive focus on civil applications



Pillar I EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie

Research Infrastructures



Pillar II GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- **Digital, Industry & Space**
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment

Joint Research Centre



Pillar III INNOVATIVE EUROPE

European Innovation Council

European innovation ecosystems

European Institute of Innovation & Technology*

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation & spreading excellence

Reforming & Enhancing the European R&I system

* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

Cluster 4 - Vision

*Competitive technologies respecting the boundaries of our planet,
and reflecting human needs*

Green and digital 'twin' transition

Industrial and digital transformation

- mastering technologies
- deploying technologies and technology infrastructures
- securing autonomy in strategic value chains



Climate-neutral, circular and clean industry

- Innovative production and manufacturing processes
- Sustainable-by-design advanced materials and technologies
- Deep decarbonisation of energy-intensive industries

Major contribution to inclusiveness and resilience

- human-centred and ethical developments
- engagement with users, workers, citizens
- social innovation

Horizon Europe - Cluster 4

Digital

- **Destination 1:** Climate neutral, circular and digitised production
- **Destination 3:** World leading data and computing technologies
- **Destination 4:** Digital & Emerging Technologies for competitiveness and fit the European Green Deal
- **Destination 6:** A human-centred and ethical development of digital and industrial technologies

Industry

- **Destination 1:** Climate neutral, circular and digitised production
- **Destination 2:** Increased autonomy in key strategic value chains for resilient industry
- **Destination 6:** A human-centred and ethical development of digital and industrial technologies

Space

- **Destination 5:** Strategic autonomy in developing, deploying and using global space-based infrastructures, services, applications and data

RTD

Research &
Innovation

CNECT

Communications
Networks,
Content &
Technology

GROW

Internal market,
Industry,
entrepreneurship
and SMEs

DEFIS

Defence Industry & Space



Horizon Europe (CL4) Digital

Calls 2024: € 198 million

106 projects
of €568 million
&
5 GAPs of
€24.7 million

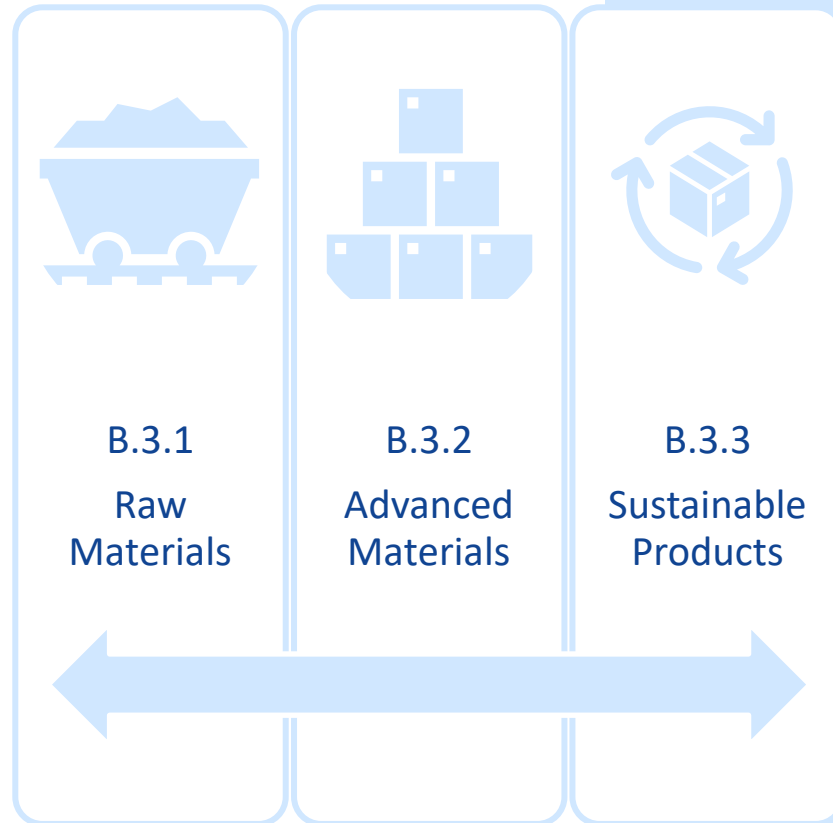
91 projects
€554 million
ongoing

Horizon Europe Cluster 4 – Digital

- Destination 1: Climate neutral, circular and digitised production
- Destination 3: World leading data and computing technologies
- Destination 4: Digital & Emerging Technologies for competitiveness and fit the European Green Deal
- Destination 6: A human-centred and ethical development of digital and industrial technologies
- Artificial Intelligence and Technologies for Digitising European Industry and Economy
- Digitising and transforming European industry and services: digital innovation hubs and platforms
- European Data Infrastructure: HPC, Big Data and Cloud technologies

Horizon Europe (CL4) Industry

Calls 2024: 481.2 million



316 projects of
€1.942 billion

192 projects
€1.6 billion
ongoing

Horizon Europe Cluster 4 – Industry

- Destination 1: Climate neutral, circular and digitised production
- Destination 2: Increased autonomy in key strategic value chains for resilient industry
- Destination 6: A human-centred and ethical development of digital and industrial technologies

H2020 Legacy

- Leadership in enabling and industrial technologies - NMBP programme: Nanotechnologies, advanced materials, biotechnology and advanced manufacturing and processing
- Societal Challenge 5: Raw materials

Horizon Europe (CL4) Space

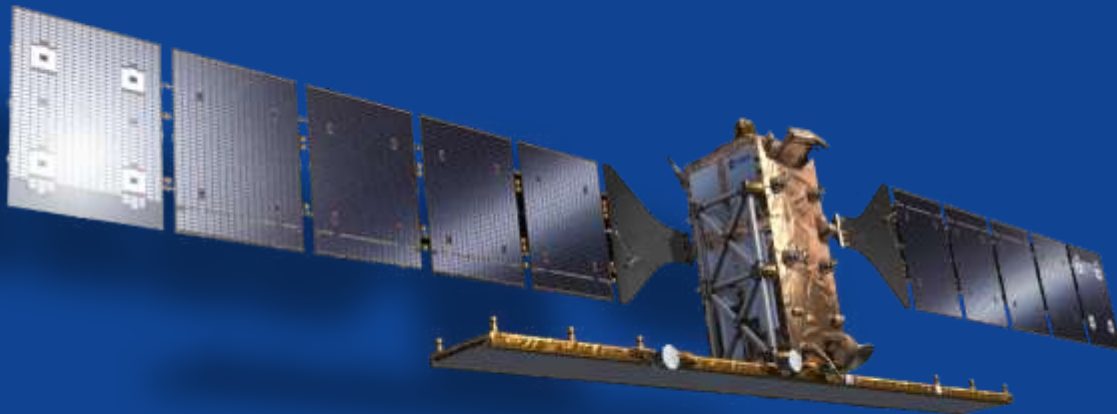
Horizon 2020 LEIT Space

273 projects
EU Contribution € 779 million
of which 58 projects still ongoing

Horizon Europe Cluster 4 Space

88 projects
EU Contribution € 395 million
all ongoing

1 GAP ongoing from 2023 (€ 1.5 million)
Calls 2024: € 46,3 million + € 56.5 million (IBA)



Intergovernmental organization, 22 member states, dedicated to the exploration of space



Copernicus, Galileo, Egnos, GovSatCom, IRIS2



Implementing Horizon Europe CL4 Space for the European Commission



HaDEA.B4



HADEA programmes



Greece

Horizon Europe - Cluster 4

HaDEA part – 2021-2023

DIGITAL

Number of grants: 111

Budget (EC contribution): 592,56 million

123 participations / 64 participants in **57 projects**

€ 67,12 M

INDUSTRY

Number of grants: 310

Budget (EC contribution): 1,942 billion

262 participations / 128 participants in **117 projects**

€ 111,34 M

SPACE

Number of grants: 88

Budget (EC contribution): 395,186 million

31 participations / 14 participants in **20 projects**

€ 6,3 M

DIGITAL Europe

HaDEA part – 2021-2023

Number of grants: 92

Budget (EC contribution): 262,98 million

77 participations / 51 participants in **24 projects**

€ 12,86 M

CEF2 Digital

HaDEA part – 2021-2023

Number of grants: 75

Budget (EC contribution): 488,24 million

10 participations / 5 participants in **4 projects**

€ 16,8 M

A Digital Decade to shape EU's transformation

VALUES



TARGETS

Skills

ICT Specialists: 20 millions + more women in ICT
Basic Digital Skills: min 80% of population



Infrastructures

Connectivity: Gigabit for everyone
Cutting edge Semiconductors: double EU share in global production
Data – Edge & Cloud: 10,000 climate neutral highly secure edge nodes
Computing: first computer with quantum acceleration

Business

Tech up-take: 75% of EU companies using Cloud, AI or Big Data
Innovators: grow scale ups & finance to double EU Unicorns
Late adopters: more than 90% of European SMEs reach at least a basic level of digital intensity

Government

Key Public Services: 100% online
e-Health: 100% of citizens with online access to health records
Digital Identity: 100% citizens have access to digital ID

Digital Decade Compass

Skills
 ICT Specialists: 20 million + Gender convergence
 Basic Digital Skills: min 80% of population

Infrastructures
 Connectivity: Gigabit for everyone, 5G in all populated areas
 Cutting edge Semiconductors: double EU share in global production
 Data - Edge & Cloud: 10,000 climate neutral highly secure edge nodes
 Computing: first computer with quantum acceleration

Government
 Key Public Services: 100% online
 e-Health: 100% availability medical records
 Digital Identity: 80% citizens using digital ID

Business
 Tech uptake: 75% of EU companies using Cloud/AI/Big Data
 Innovators: grow scale ups & finance to double EU Unicorns
 Late adopters: more than 90% of European SMEs reach at least a basic level of digital intensity

DIGITAL EUROPE

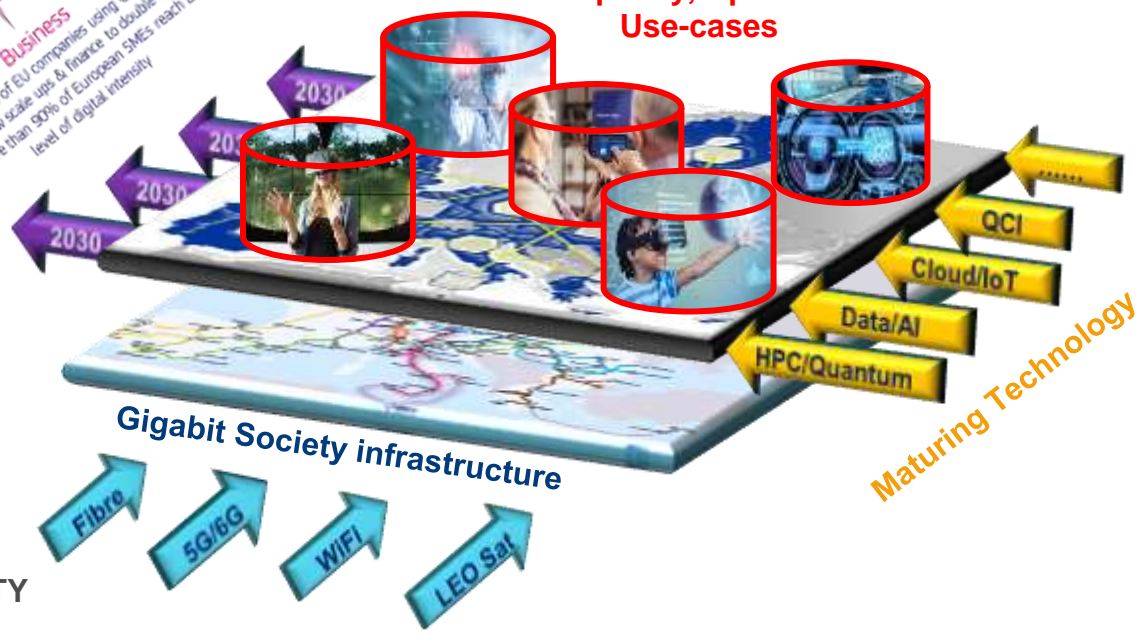
- EU-Wide deployment
- Strategic capacities
- Advanced digital skills
- Testing Facility

Complemented by Structural Funds, InvestEU, RRP efforts, IPCEI...

HORIZON EUROPE

- Preparing/maturing technology & progress (AI/Quantum...)
- By-design regulatory compliance (e.g. privacy friendly, unbiased AI)
- Leading & best in-class (e.g. strategic open autonomy, quantum)
- Prosperity, people & planet lens (green tech, societal challenges, industrial lead...)

Capacity, Uptake & Use-cases



CONNECTING EUROPE FACILITY

- Strategic Backbones
- Fixed + Wireless Connectivity



The European Commission's approach to stimulating synergies

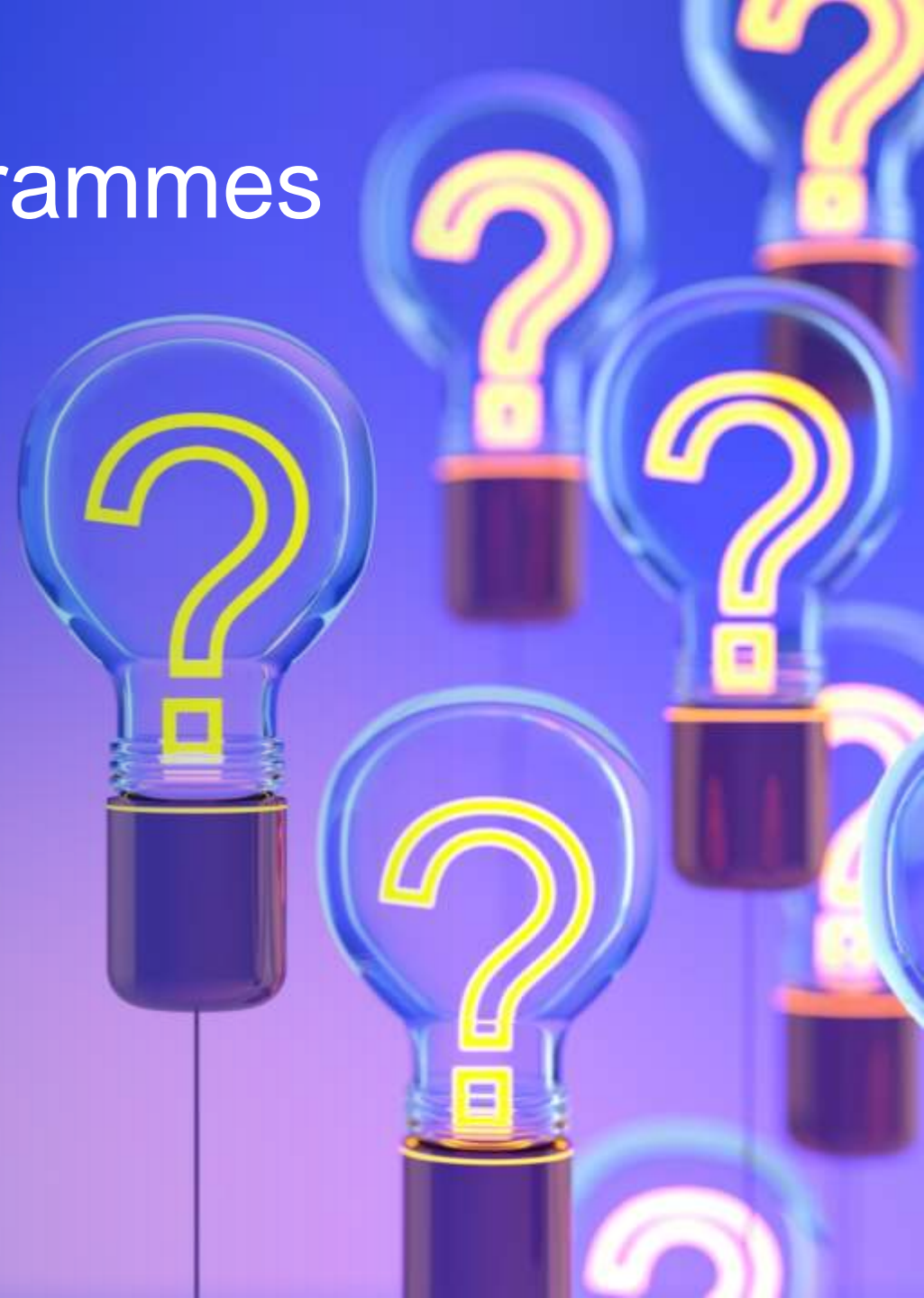
Why synergies across programmes

“Synergies encompass compatibility, complementarity and coherence among different forms of EU funding. This requires good interaction of two or more programmes aiming at enhancing the effects that could be achieved by individual interventions”*

** DG RTD Synergies action plan*



Maximise the value, impact, efficiency of EU funding and deliver on EU priorities



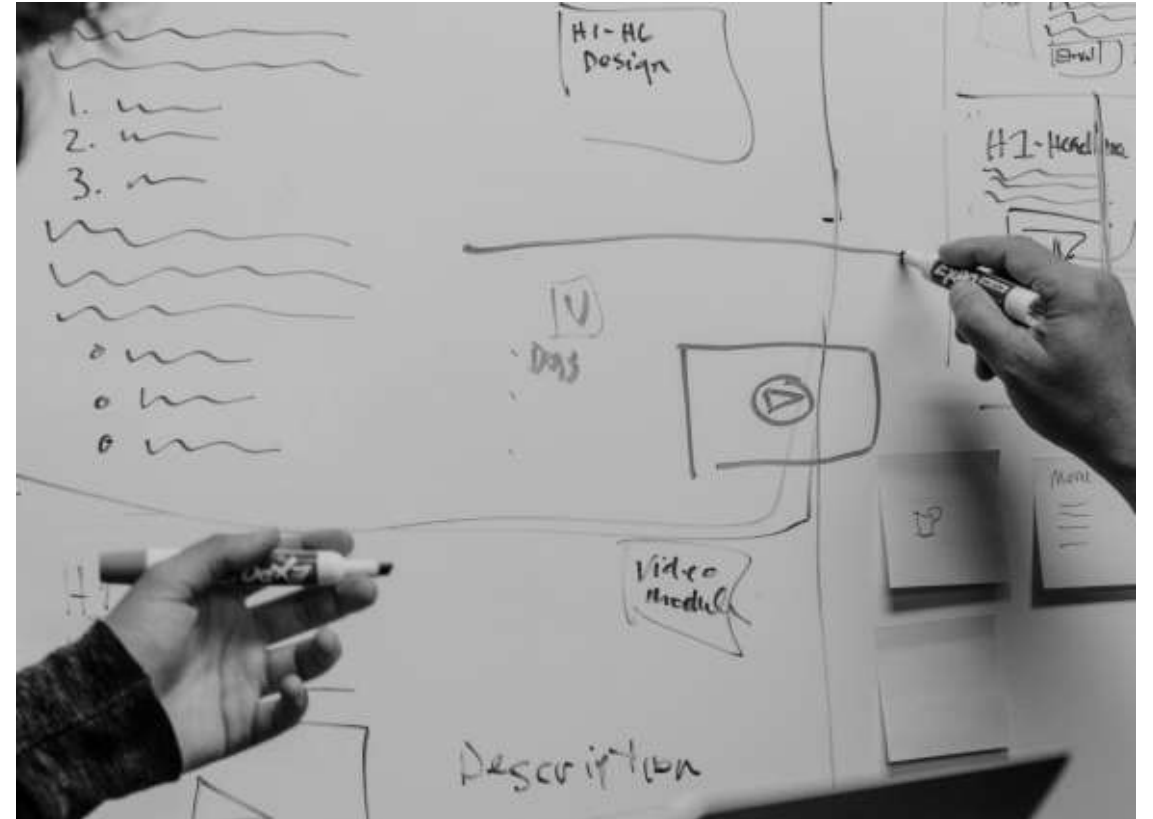


Synergies “by design”

- European Commission in the lead: planning, design and programming of EU funding programmes (e.g. co-creation of Work Programmes, calls)
- Legal basis of EU funding programmes
- Aligning strategic priorities, harmonisation of rules
- Strong collaboration across Commission services Inter-service Synergies Network on Horizon Europe and beyond led by RTD (incl. HaDEA)

HaDEA: synergies “by implementation”

- Internal workshops to identify complementarities, gaps, overlaps, barriers, drivers for synergies
- Mapping of topics of common interest across programmes
- Promoting synergies through beneficiaries and networks
- Visibility and communication of cross-programme synergetic results



How do synergies unfold?



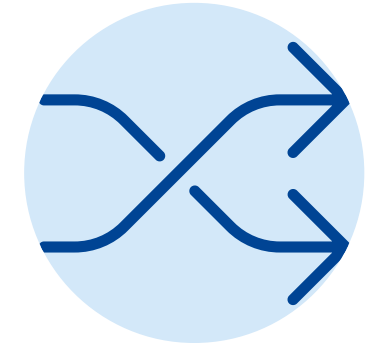
Complementary funding: bringing together funding from different programmes or different levels in the same project



Sequential funding: successive projects that build on each other (upstream / downstream)



Alternative funding: taking up high-quality project proposals from other programmes (e.g. Seal of Excellence)



Complementarity of parallel projects

Synergies across HaDEA programmes

Horizon Europe Art. 7 of Regulation (EU) 2021/695	The Programme shall be implemented in synergy with other Union programmes while aiming for maximal administrative simplification.
CEF pre-ample (40), Regulation (EU) 2021/1153	It is also important to maximise the synergies between different programmes
Digital Europe Art. 13 of Regulation (EU) 2021/694	The Programme shall enable synergies with other Union programmes (...) in particular through arrangements for complementary funding from Union programmes where the management arrangements allow it.
EU4Health Art. 24 of Regulation (EU) 2021/522	The Commission and the Member States shall ensure that there is overall consistency, synergy and complementarity between the Programme and other Union policies, instruments and actions(..).

Synergies Digital with Health



Digital, Industry and Space Research & Innovation

- **Nanomedicine**, devices, material applications in health sector
- Smart multifunctional **biomaterials for health innovations**
- **Biophotonic** imaging and sensing **techniques** enable diagnosis, screening, monitoring and treatment of a patient, possibly including augmented reality (AR)



Deployment of digital technologies in the economy and society, digital skills and AI

- **Digital skills & AI** in health sector
- Excellence in higher education institutions, including **masters targeting digital transformation of the health sector**



CEF Digital Deployment of digital network infrastructures

- **5G coverage** for innovative **healthcare services**
- **Cloud infrastructure** and backbone connectivity **for health sector** (current call)

Synergies: policy and resources

HORIZON EUROPE

Other Union Programmes, including

Common Agricultural Policy	InvestEU	ESF+	Innovation Fund
External Instrument	LIFE	Digital Europe	Internal Security Fund
Maritime & Fisheries Fund	EU4Health	Space programme	Single Market Programme
Connecting Europe Facility	ERDF	ERASMUS	Creative Europe

Just Transition Mechanism

Recovery and Resilience Facility

Enhanced synergies

COMPATIBILITY
Harmonisation of funding rules; flexible co-funding schemes; pooling resources at EU level

COHERENCE & COMPLEMENTARITY
Alignment of strategic priorities in support of a common vision



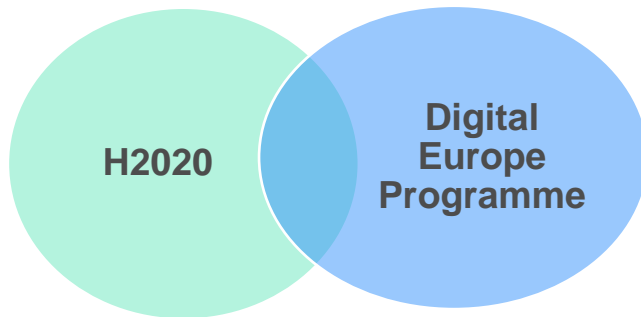
Digital Europe is complementary to other programmes with investments in digital

EU-wide collective effort					National regional and local			Financial instrument
Horizon Europe	Digital Europe	CEF	Creative Europe	Health	Cohesion	Agriculture Funds	RRF	InvestEU
Research Innovation	Strategic capacities: computing, data, testbeds, etc. Advanced digital skills EU-Wide deployment	Broadband and 5G roll out Connecting Communities	Creative industry Media	Telemedicine eHDSI	Digital connectivity in white and grey areas Support to enterprises in line with Smart specialisation Digital skills for all citizens	Making use of Big Data for CAP monitoring Broadband rollout in rural areas	Connect Scale-up Modernise Reskill and Upskill 20% digital	Leverage private capital for investments in SMEs, research, digital, infrastructure, skills...

AI-powered tools to fight crime



EU Programmes involved



About the synergy

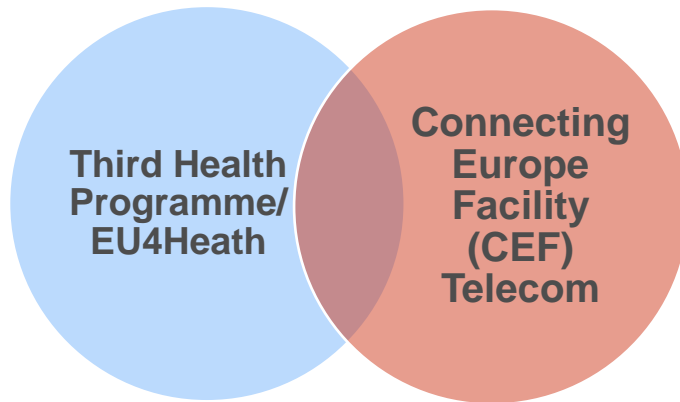
- **H2020 projects** developed innovative analytical tools to support European law enforcement: image, video/text, data acquisition, multimodal analytics
- **EMPOWER (Digital Europe Programme)** is building on H2020's research to foster the uptake of developed AI-based innovative solutions

Impact of the synergy

- Increased performance of European Law Enforcement Agencies to **combat crime** within real and operational contexts
- Enhanced **investigative capabilities and trusted data sharing** to fight against child sexual abuse, terrorism, cybercrime and protection of public spaces, compliant with ethical requirements and EU core values

Tackling rare and complex diseases through the European Reference Networks (**ERNs**)

EU Programmes involved



Impact of the synergy

- CEF Telecom eHealth boosted the **efficient and collaborative use** of the ERN's digital platform and led to an improved and faster **cross-border knowledge exchange**.
- Medical experts from all over the EU can **accelerate diagnosis and improve treatments** of rare diseases affecting EU citizens.

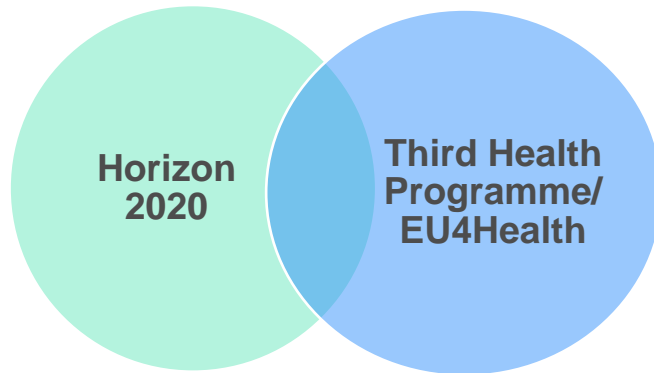
About the synergy

- Established under the Third Health Programme
- **Virtual networks of healthcare providers** across Europe
- Facilitating **knowledge sharing** on **complex or rare diseases**
- Receiving support under **CEF Telecom eHealth** (and EU4Health in future)



Vaccine coverage and uptake to prevent diseases: the VAX-EU joint group

EU Programmes involved



About the synergy

Projects working together on **vaccine coverage** and **uptake**, including in disadvantaged and difficult-to-reach populations and on preventive cancer vaccines:

- **H2020** (RIVER-EU, VAX-TRUST, JITSUVAX)
- **Third health programme** (RISE-Vac, AcToVax4NAM, IMMUNION)
- **EU4Health** (Joint Action PERCH and PROTECT-EUROPE)

Impact of the synergy

- Exchange on key information and opportunities, collecting **feedback and input** in the field of vaccine coverage and uptake, coordinating **joint communication** activities and participating in scientific conferences, **dissemination and exploitation of results**.
- Potential to contribute to the **Horizon Europe's Cancer Mission** and **Europe's Beating Cancer Plan**



Synergies-Between EU wide Advanced Digital Skills programmes

DIGITAL EUROPE PROGRAMME

What was the policy need?

Policy need

Legislation, regulation & its implementation

- As the “Advanced Digital Skills” under the DIGITAL programme continues to grow and attracts increased public interest, HaDEA took the **initiative to identify potentials for coordination and synergies** with other EU funded programmes.

What did HaDEA deliver?

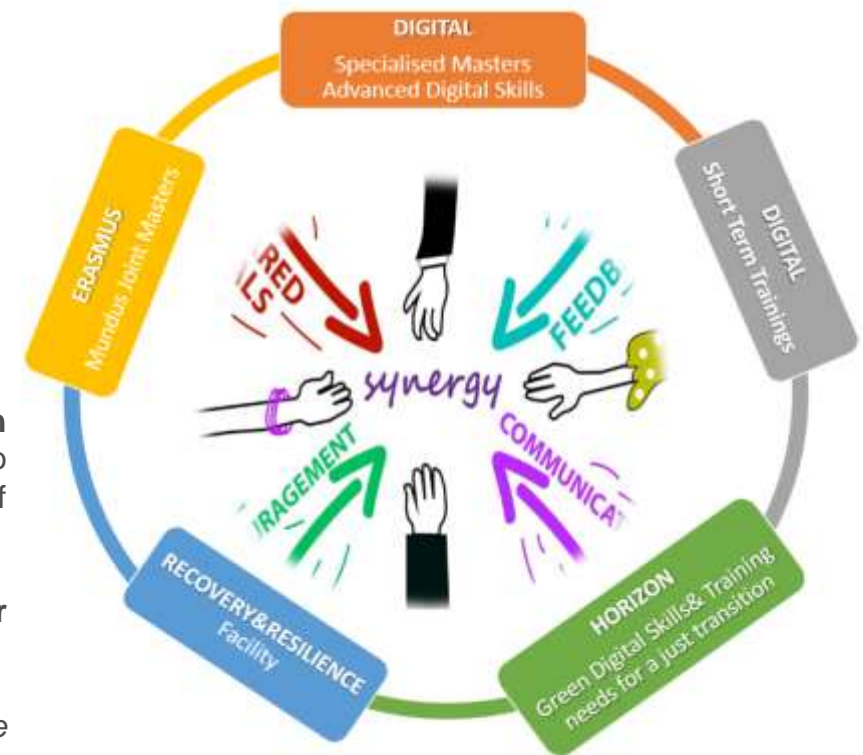
Policy input

Analysis & Support

- Small-scale mapping of similar or complementary EU programmes** (e.g. ERASMUS) concerning the digital skills (a detailed guidance note with a vision to turn it into a **coordination action plan** with other relevant services (DG EMPL) upon consent of DG CNECT)

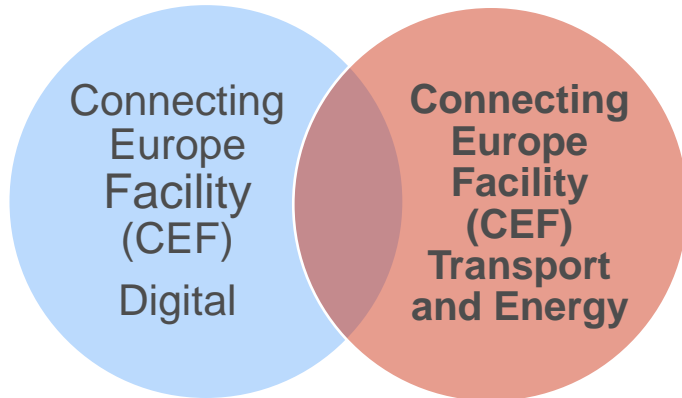
Why is it useful?

- An inventory of current similar & complementary EU programmes **to identify overlaps and put in place monitoring measures to minimize the double funding risk**. A recommendation to CNECT to **extend the inventory to the EU programmes in the pipeline** within the framework of **Feedback to Policy (F2P)**.
- How to amplify the *‘tailor made aspect of our future calls’* by focusing on **unique aspects of our programme** to increase the **distinctive impact**.
- To pave the way for a **complementary impact on EU citizens** by designing *‘fitting like a puzzle piece’* grants by different DGs, i.e. *A student graduated from our Wind Energy Digitalisation master programme could be employed by or start up a Digital Wind Farm supported by another EU programme*. Only such intact effort could **reduce the ICT gap identified in Europe** and give **a competitive edge to the internal market**.



CEF-Digital: Operational Digital Platforms (ODP)

EU Programmes involved



Opportunity for synergies

- ODPs implement the digitalisation of energy and transport sectors
- CEF-Digital brings together European **digital, energy and transport** stakeholders

Impact of the synergy

- Leverage effect on the innovation of the energy and transport infrastructures;
- Provision of spill-over opportunities, for the public and private sector to re-use the underlying digital connectivity infrastructures for multiple purposes;
- Contribution towards the objectives of the European Green Deal and Digital Decade



CEF Digital: Digital Global Gateways

Deployment of submarine cables linking Member States and third countries :

- European seas (Mediterranean, Baltic, Nordic, Atlantic, etc.) and Continental connections;
- Global routes (e.g. linking islands in outermost regions or overseas countries & territories).

“Seal of Excellence” to some evaluated (but not selected) projects, to facilitate their funding by:

- Cohesion funds (ERDF), RRF, InvestEU and national programmes;
- European Investment Bank (EIB), World Bank, European Bank for Reconstruction and Development (EBRD);
- Other EU programmes, e.g. the Neighbourhood, Development and International Cooperation Instrument (NDICI)-Global Europe, Instrument for Pre-Accession Assistance (IPA) III, European Fund for Sustainable Development (EFSD+).

Synergies between Horizon Europe and Cohesion Policy programmes – Preconditions

- **Alignment of strategies**
 - ✓ Horizon Europe strategic planning and Work Programmes
 - ✓ ERDF/ESF+ programmes
- **Alignment of legal provisions**
 - ✓ Horizon Europe/Annex IV
 - ✓ Common Provision Regulation ('CPR')
 - ✓ EU State aid rules – the General Block Exemption Regulation ('GBER')
- **Joint support initiatives**
 - ✓ Seal of Excellence , Transfers, Teaming
 - ✓ COMMISSION NOTICE - GUIDANCE ON SYNERGIES (OJ C 421 of 4/11/2022)

Synergies: Research & Cohesion

- Member States may transfer of up to 5 % of their initial Cohesion Policy allocations to any other EU Fund or instrument under shared, direct or indirect management (Art. 26 CPR)
- Horizon Europe allows transfer to all of its parts – for future or already established reserve lists
- Transfer allowed from regional and/or national programmes for the benefit of the eligible region/MS
- **Transferred national funds not subject to State aid rules if:**
 - **Member States no longer have any discretion over the use of the funds and**
 - **do not attach any conditions (other than the geographic allocation inherent to the European Structural and Investment Funds)**

Potential role of supporting Networks

Identify best practices of existing synergies with potential for replication

Promote synergies in the current MFF programmes

Guide and train stakeholders to implement opportunities for synergies and combine various funding sources

Strengthen collaboration among NCPs, and learn about complementary funding opportunities from each other

Provide feedback to the EC regarding gaps, bottlenecks, limitations, constraints

Thank you



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