



CEF Digital 2023 Call for Proposals - *Info Day*

26 October 2023, 9:30–13:00

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Welcome

Mateusz KUJAWA, Head of Sector

CEF Digital - HaDEA

Agenda

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- **Welcome**
- **CEF-Digital Policy Context**
- **2023 calls overview**
- **Priorities of the Calls (topics):**
 - **Digital Global Gateways**
 - **5G Corridors**
 - **5G and Edge Cloud for Smart Communities**
- **Q&A**

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CEF-Digital Policy Context

*Franco ACCORDINO, Head of Unit
Investment in High-Capacity Networks
European Commission, DG CONNECT*

CEF-Digital Call-3 – policy context

- Underpinning Digital Decade targets (5G & Gigabit)
- Strengthening EU connectivity with the rest of the world (Global Gateway)
- Ensuring EU resilience in a tense geopolitical context
- Supporting the transformation of the telecom sector

CEF-Digital Call-3 : building on Call 2 lessons

- More time for applicants to prepare proposals
- More time for MSs to provide support/approvals
- Continuity with exclusion clauses and guarantees
- Size of calls and readiness of topics
- Indicative grant size of proposals

Calls 3: opened 17 Oct 2023

Accelerating 5G deployment

- 5G corridors (EUR 100 million):
 - 95M€ for works
 - 5M€ for studies
- 5G communities (EUR 51 million)
 - 51M€ for works
 - We expect around 15 new 5G standalone best practices

Strategic backbones

- Global gateways (EUR 90 million)
 - 75M€ for works, key strategic projects based on Global gateway priorities
 - 15M€ for studies

Total budget: 241M€

Quality of proposal is key for success of calls!

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HaDEA – the European Health and Digital Executive Agency



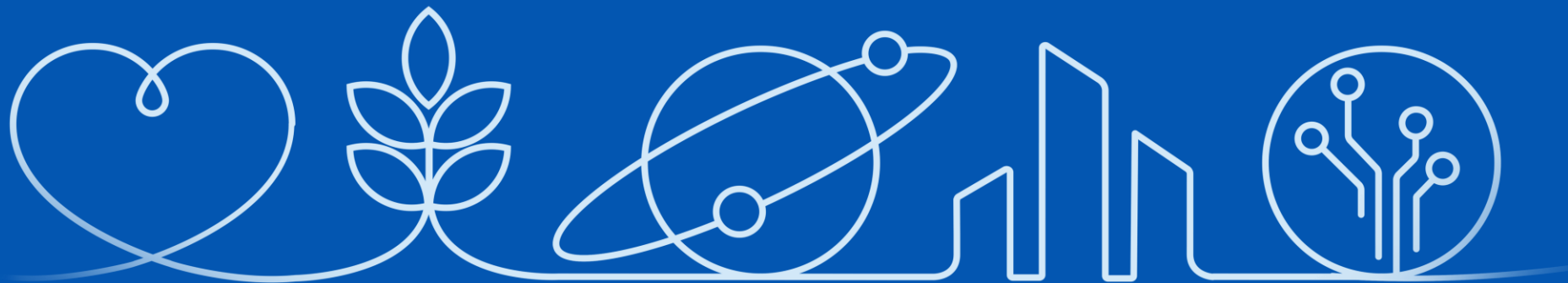
Hervé DUPUY, Head of Unit

CEF-Digital - HaDEA

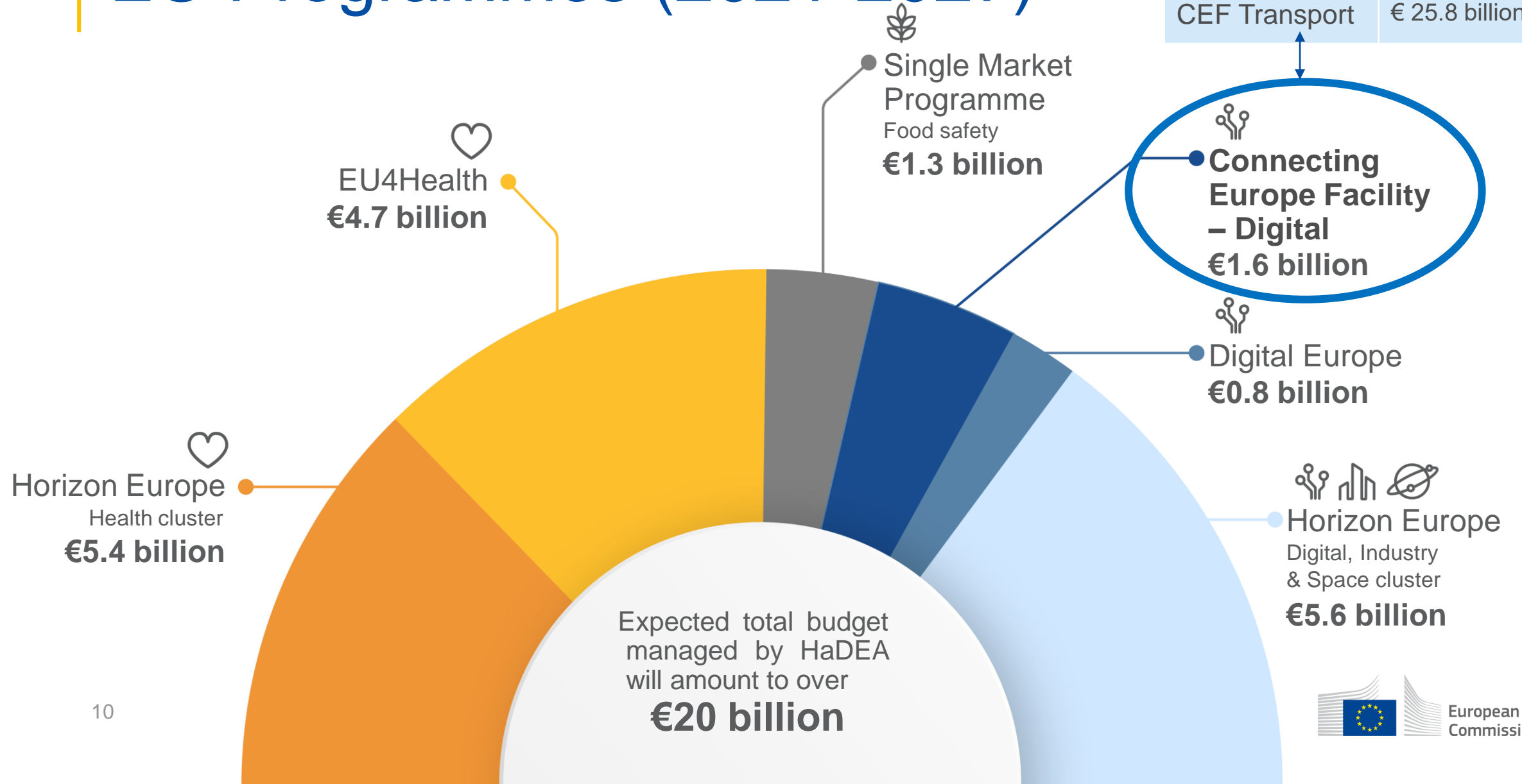
HaDEA – the European Health and Digital Executive Agency

“Boosting Europe by building, from earth to space, a healthy society, a digital economy and a competitive industry”

Programme sectors



HaDEA implements EU Programmes (2021-2027)



CINEA implements:	
CEF Energy	€ 5.8 billion
CEF Transport	€ 25.8 billion

● **Connecting Europe Facility - Digital**
€1.6 billion

Overview of CEF-Digital calls 2023 (Call-3)

Calls	Topics	Budget (MEUR)
5G Coverage along Transport Corridors	CEF-DIG-2023-5GCORRIDORS-WORKS	95
	CEF-DIG-2023-5GCORRIDORS-STUDIES	5
5G for Smart Communities	CEF-DIG-2023-5GSMARTCOM-WORKS	51
Backbone connectivity for Digital Global Gateways	CEF-DIG-2023-GATEWAYS-WORKS	75
	CEF-DIG-2023-GATEWAYS-STUDIES	15
TOTAL		241

Tentative timeline

Call opening	17 October 2023
Deadline	20 February 2024 17:00 (CET) -> extended
Evaluation of proposals	March - May 2024
Information to applicants and launch of Grant Agreement Preparation	Summer 2024
Grant Agreement signature	Autumn 2024

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Priorities by topic

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Backbone connectivity for Digital Global Gateways



Georgios TSELENTIS
Policy Officer, Investment in High-Capacity Networks
European Commission, DG CONNECT, Unit B5

*“We will build **Global Gateway** partnerships with countries around the world. We want investments in quality infrastructure, connecting goods, people and services around the world.*

We will take a values-based approach, offering transparency and good governance to our partners.

We want to create links and not dependencies!

And we know how this can work. Since the summer, a new underwater fibre optic cable has connected Brazil to Portugal.

[...]

In an unprecedented manner, we will invest in 5G and fibre.”

President European Commission, Ursula von der Leyen

State of the Union speech to the European Parliament, Strasbourg, 15 September 2021



Connectivity Ambition



2025 Gigabit Society Objectives

- 100 Mbps to all households, upgradable to 1Gbps
- 1Gbps to all main socio-economic drivers (schools, businesses etc.)
- Uninterrupted 5G coverage in all urban areas and all major terrestrial transport paths

2030 Digital Compass Targets

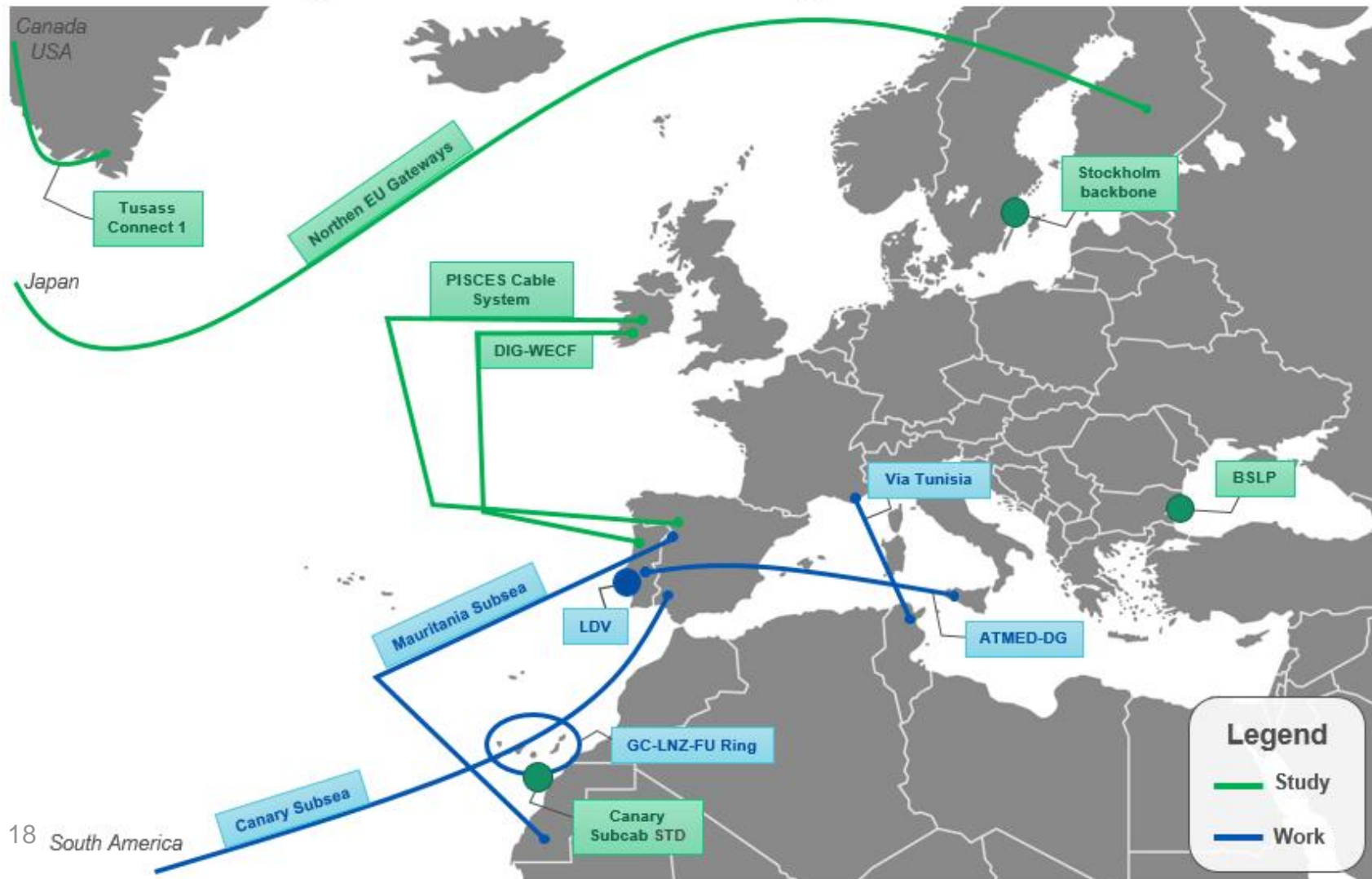
- All European households will be covered by a Gigabit network
- All populated areas covered by 5G

Digital Global Gateways - CEF Call 1 Results



CEF-DIG-2021-GATEWAYS-STUDIES	21-GL-DIG-Tusass Connect 1	Tusass Connect 1	Tusass	GL	8.845.988,50 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-EU-DIG-WECF	West European Coast Festoon	Orange	FR	423.267,00 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-EU-DIG-NORTHERN EU GATEWAYS	Planning of development of the autonomous digital backbone and connecting Europe with global strategic partners	Cinia	FI	3.650.000,00 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-SE-DIG-Stockholm Backbone	Resilient Stockholm Archipelago Backbone	Netonomics AB	SE	189.945,00 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-IE-DIG-PISCES Cable System	Portugal Ireland Spain Connecting Europe Subsea	McMahon Design and Management	IE	4.000.214,00 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-ES-DIG-CANARY-SUBCAB-STD	Study to deploy new submarine cables in Canary Islands	Canalink	ES	413.425,00 €
CEF-DIG-2021-GATEWAYS-STUDIES	21-BG-DIG-BSLP	Black Sea Landing Point	Varna Net Ltd	BG	57.500,00 €
CEF-DIG-2021-GATEWAYS-WORKS	21-IE-DIG-Mauritania Subsea	Submarine cable connecting Mauritania to Portugal and Europe	EllaLink	IE	9.570.811,20 €
CEF-DIG-2021-GATEWAYS-WORKS	21-ES-DIG-ATMED-DG	Digital Gateway between the Atlantic and the Mediterranean	AFR-IX Telecom	ES	7.792.411,50 €
CEF-DIG-2021-GATEWAYS-WORKS	21-ES-DIG-GC-LNZ-FU Ring	Submarine cable system between Gran Canaria, Lanzarote and Fuerteventura in Canary Islands	Canalink	ES	23.000.853,40 €
CEF-DIG-2021-GATEWAYS-WORKS	21-PT-DIG-LDV - ICC	LDV - Interconnection and Colocation Center	MEO	PT	717.984,00 €
CEF-DIG-2021-GATEWAYS-WORKS	21-FR-DIG-ViaTunisia	Submarine cable between Marseille (France) and Bizerte (Tunisia)	Orange	FR	10.000.000,00 €
CEF-DIG-2021-GATEWAYS-WORKS	21-IE-DIG-Canary Subsea	Build the future Canary Islands submarine cable connection	EllaLink	IE	13.691.173,40 €

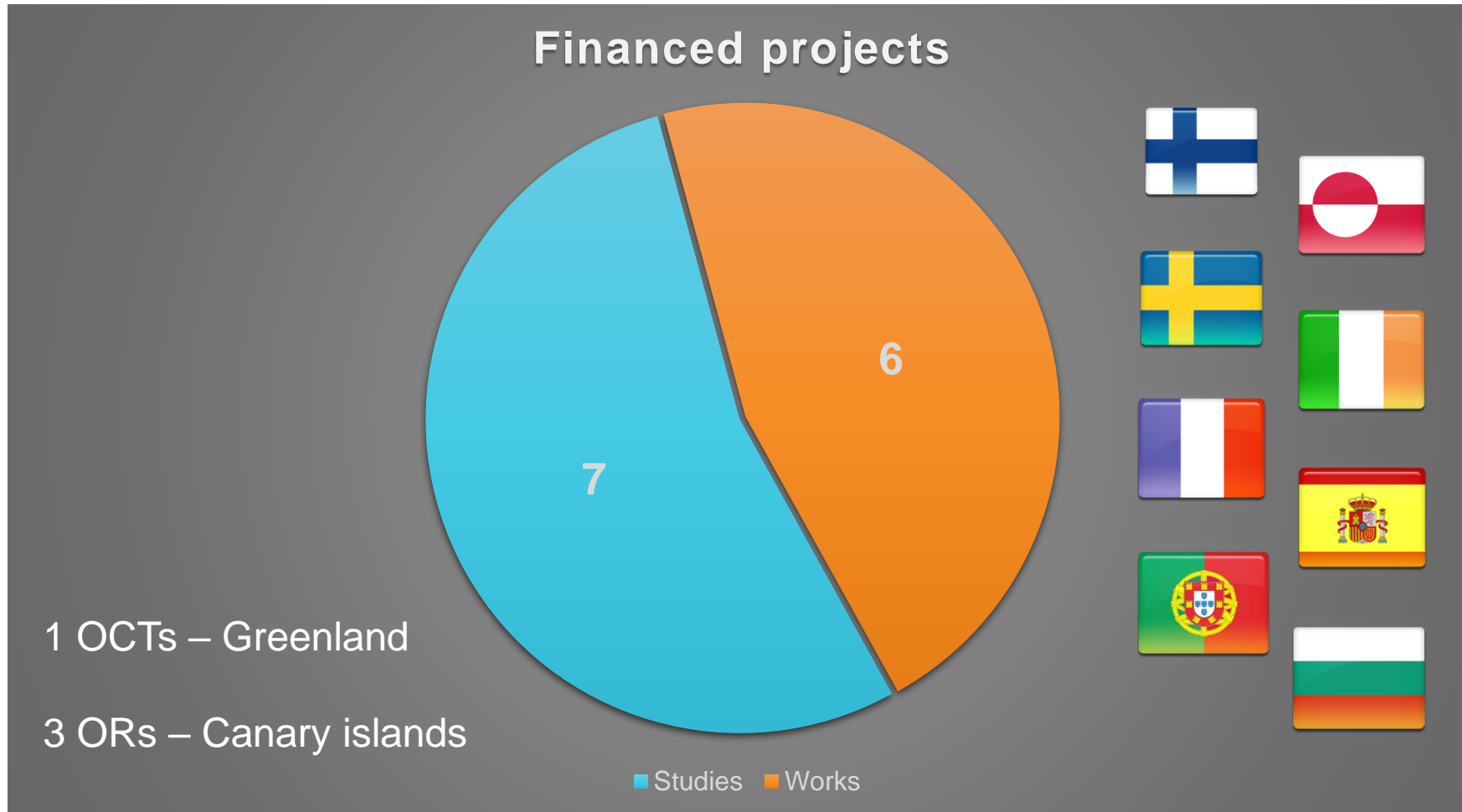
Digital Global Gateways - CEF Call-1 map



Please note that this map is a draft and may not reflect the real path of the cables.

Digital Global Gateways

CEF Call-1 financed project

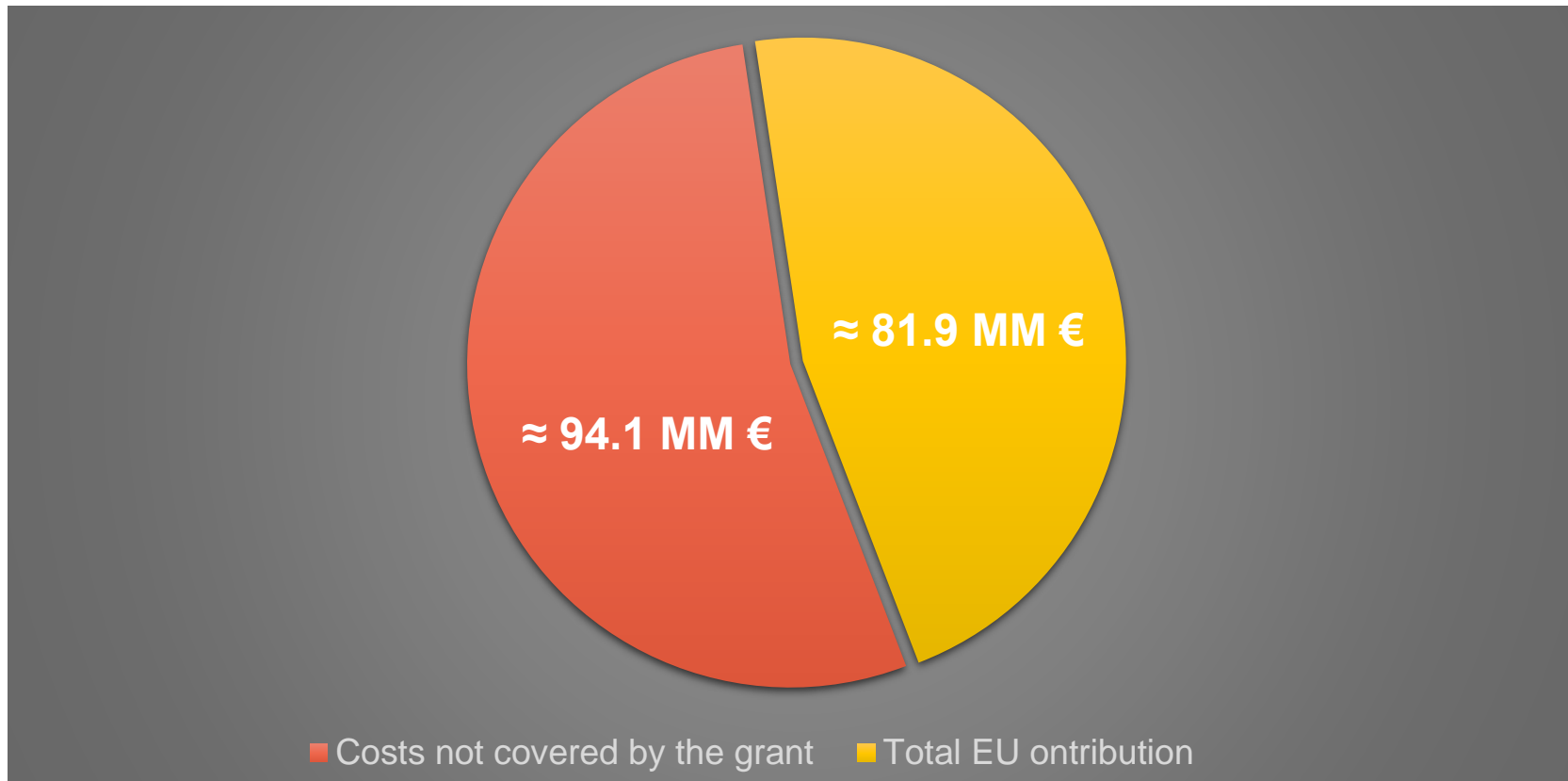


Digital Global Gateways

Total volume of the GAs



The CEF-Digital Call-1 is enabling Digital Global Gateways projects (studies + works) with a total volume of **≈176 MM €**.



Backbone connectivity for Digital Global Gateways

CEF-DIG-2023-GATEWAYS-WORKS & STUDIES

1. Objective

Support the deployment of strategic networks as part of the Digital Global Gateway Strategy of the EU by addressing connectivity needs, such as:

- (1) **Connecting territories of the EU** including its Outermost Regions.
- (2) **Supporting the specific connectivity needs of the Member States**, which are islands themselves, or have islands as part of their territory.
- (3) Intermeshing backbones to **interconnect major connectivity points in the EU**.
- (4) **Addressing the specific needs of Overseas Countries and Territories in the EU**.
- (5) **Ensuring international connectivity to EU partners** worldwide as a basis for European strategic autonomy.
- (6) **Promoting synergy projects** addressing other objectives of CEF Digital, including sector specific considerations encompassing the connectivity of large-scale digital capacities such as HPC or cloud.

Backbone connectivity for Digital Global Gateways

CEF-DIG-2023-GATEWAYS-WORKS & STUDIES

2. Scope

Support the deployment of backbone connectivity for routes within Member States, between Member States, and between the EU and third countries, including to remote territories where:

- (1) there is a lack of **redundancy**, or
- (2) existing infrastructure cannot satisfy **demand**, or
- (3) the users in the territories suffer from suboptimal **services** and **prices**.

3. Security requirements

- **Exclusion of non-EU** controlled entities (art. 11.4 CEF regulation).
- **Exception** for infrastructure connecting EU with third countries: legal entities in that third country where their participation is indispensable for the achievement of the objectives can participate subject to security guarantees approved by the third country.
- Security declaration that no **security sensitive equipment** or **services** procured from third country suppliers.

Backbone connectivity for Digital Global Gateways

CEF-DIG-2023-GATEWAYS-WORKS & STUDIES

4. Technology neutral call

Digital Global Gateways can make use of the technology best suited including e.g.:

- **Submarine Cable Systems,**
- **Satellite Infrastructure,**
- **Connectivity to internet exchange points,** and
- **Inter-Connection of Backbones** with networks within the supported territories

5. What will be co-financed

- For **works**: Costs required to construct and deliver the infrastructure for the foreseen lifetime, from end to end, including cable landing station and their connectivity. Operating costs, and costs for the land ownership excluded.
- For **studies**: All preparatory work required to design, deploy and deliver a backbone network, e.g., marine ground surveys for submarine cables, the application for required permits, technological solutions, including any step prior to signing a contract with a supplier, etc.

Backbone connectivity for Digital Global Gateways

CEF-DIG-2023-GATEWAYS-WORKS & STUDIES

6. Changes in Call-3

Alignment with Digital Network Strategy

- Focus on Global Gateway

Reinforcement of sovereignty:

- Where guarantees are requested (international gateways), no change of ownership/control imposed (10 years)
- Security provisions: additional reference to the Communication of 15 June 2023
- New template [Business plan financial spreadsheet](#) (works only)

Backbone connectivity for Digital Global Gateways

CEF-DIG-2023-GATEWAYS-WORKS & STUDIES

7. Maximum co-financing rates

- **Studies within a works proposal may also be financed up to 50%!**
- Smart Cables are in scope!
- Call-3 overall budget is 90 M€ (up from 40 M€ in Call-1, similar to 100 M€ in Call-2).
- Split 75M€ for works and 15M€ for studies
- Indicative grant size: up to 20 M€ for works and 5 M€ for studies.

Works: 30 %

Studies: 50%

Strong Cross-border Dimension: 50%

In Outermost Regions: 70%



Business plan financial spreadsheet

CEF-DIG-2023-GATEWAYS-WORKS

New required document

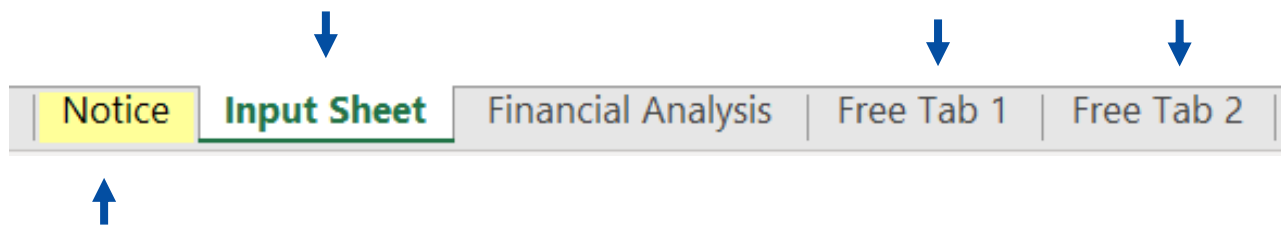
- Submitting a Business plan financial spreadsheet is an admissibility condition only for Works proposals
- For a matter of proportionality, the requirement applies only to this priority because the requested grants are larger
- Its main purpose is to help applicants demonstrate the market failure and assess the effect of the EU financial assistance



Business plan financial spreadsheet

CEF-DIG-2023-GATEWAYS-WORKS

- The Excel template is available in the Submission System and is password protected.
- Only the input cells/sheets can be modified.



Financial Discount Rate (%)
Reference period (n of years)
First year in the reference
Last year in the reference

5,0%
15
2024
2038



- All instructions are detailed in the “Notice” sheet
- We have adopted the template that is used in the CEF-Energy sector. In future Calls we plan to adapt it to the Digital Global Gateways.

Business plan financial spreadsheet

CEF-DIG-2023-GATEWAYS-WORKS



- The questions on revenues/residual value depending on the CEF Grant should be replied “No”

Residual value

Does the residual value depend on the amount of CEF grant?

No

Year	2038	Reference	Section/page
Amount			

Do the revenues depend on the amount of CEF grant?

No

- This dependency happens often in the energy sector, where regulated asset bases (RAB) are common, but this is in principle not applicable to digital global gateways
- The Financial Discount rate (net of inflation) is prefilled at 5%
- If this hurdle rate is not adapted to the project at stake, it can be modified but the new rate must be justified (e.g. with a WACC calculation)

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5G Coverage along Transport Corridors



Christian MICAS
Senior Policy Officer, Future Connectivity Systems
European Commission, DG Connect, Unit E1

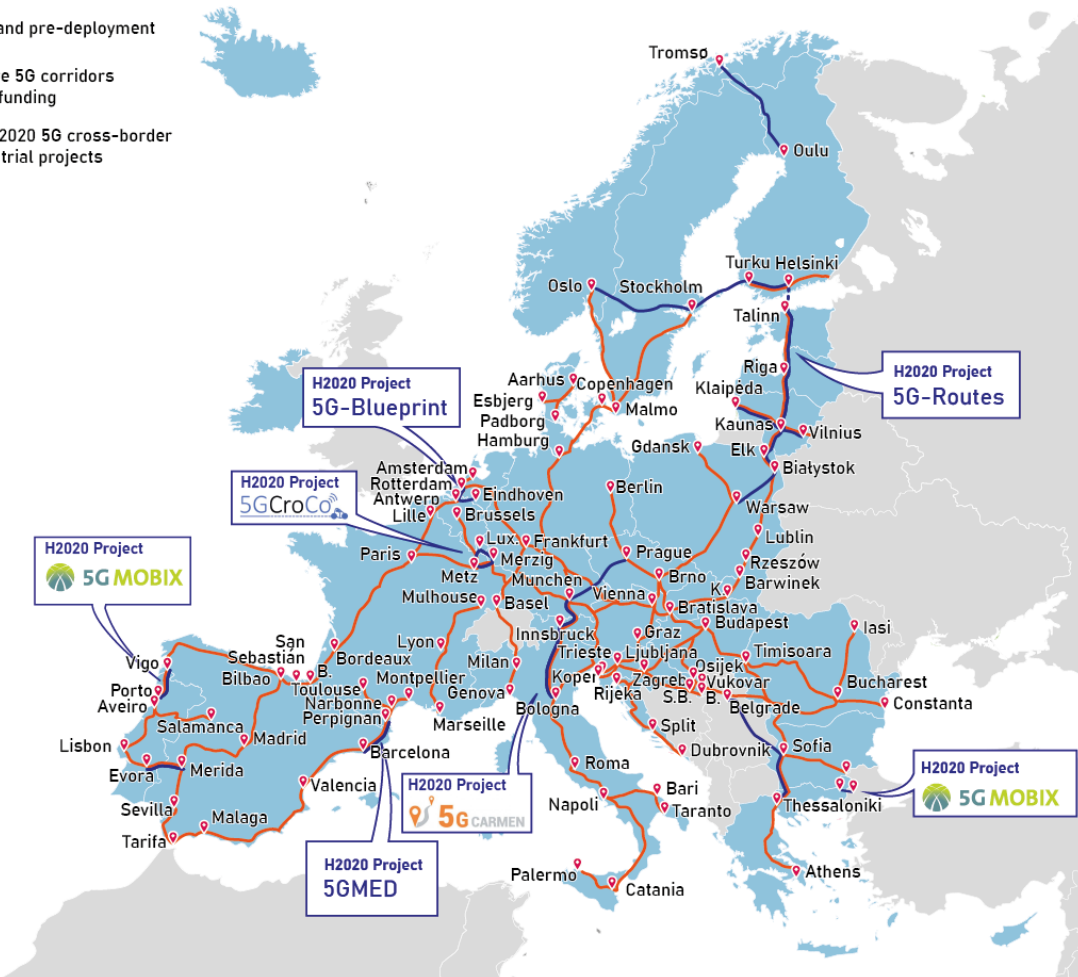
5G Corridors: driving the EU Green and Digital Transition



- Multi-country project (MCP) Vision: Pan-EU 5G corridors for Connected and Automated Mobility
- Private investment with public funding of cross-border and "challenge" areas
- CEF Digital
 - Objective: 26.000km transport paths along TEN-T
 - 49 intra-EU borders: Investment required: ~EUR 5,4 bn
 - Planned EC funding ~€800M for 5G Corridors
 - Call-1: projects launched in 2023
 - Call-2: closed, evaluation results in Q4 2023
 - **Call-3: 17 October 2023 to 20 February 2024**
- Blending or coordination with RRF, InvestEU and national programmes
- Smart Networks and Services Joint Undertaking formally tasked to coordinate Strategic Deployment Agendas(Road & Rail)



- Testing and pre-deployment
- Indicative 5G corridors for CEF funding
- Horizon 2020 5G cross-border corridor trial projects



5G Corridors Planning



CEF Digital 5G corridor deployment calendar & planning											
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	EU Budget
Early Wave	Call 1	Call Q4-Q1	Studies								42 MM €
	Call 2	Call Q4-Q1	Deployment (CEF/RRF)								
			Call Q4-Q1	Studies							28 MM €
		Call Q4-Q1	Deployment (CEF/RRF)								
1st big Wave (Call-3)			Call Q4-Q1	Studies							100 MM €
			Call Q4-Q1	Deployment (CEF/RRF)							
2nd big Wave (TBC)				Call Q1-Q2	Studies						TBC
				Call Q1-Q2	Deployment (tbc)						
Last Wave (TBC)											TBC

5G corridor CEF Budget: 170 MM € for 2021-23

- Call-1 Studies and Projects launched in 2023 (8 studies & 7 works)
- Call-2 Studies & Projects will launch in 2024: winning projects to be announced in November 2023
- Call-3 : Published on 17/10/23, EU budget 100 MM € (50% co-financing)

5G Corridor Projects: CEF Digital Call 1 2022



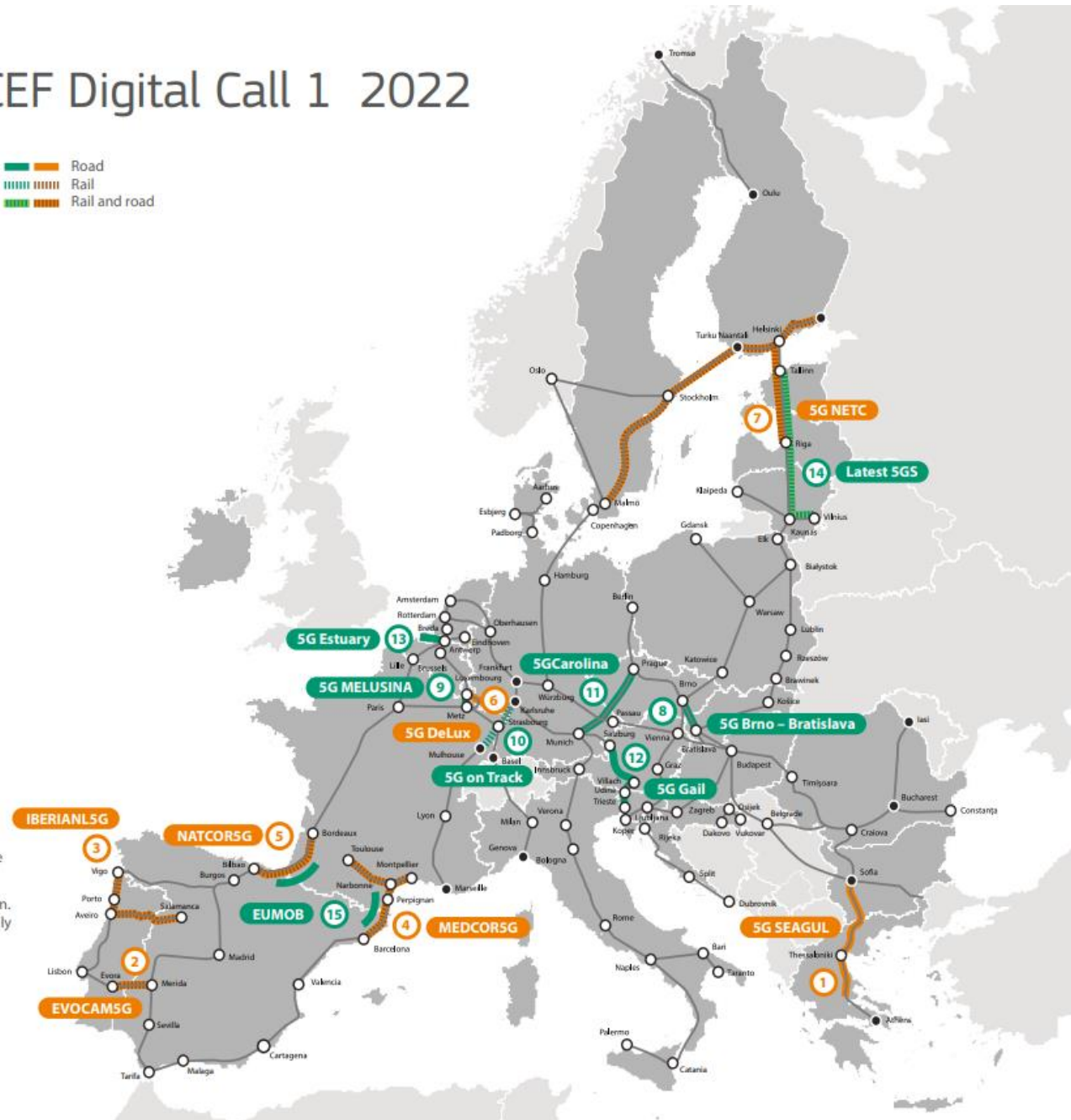
WORKS

- 1 5G SEAGUL**
Sofia (BG) to Velestino (EL)
~ 475 km
- 2 EVOCAM5G**
Evora (PT) to Merida (ES)
~ 155 km
- 3 IBERIANL5G**
Vigo (ES) to Aveiro (PT)
to Salamanca (ES)
~ 600 km
- 4 MEDCOR5G**
Barcelona (ES) to Montpellier (FR)
~ 550 km
- 5 NATCOR5G**
Bilbao (ES) to Bordeaux (FR)
~ 515 km
- 6 5G DeLux**
Frisange (LU) to Güdingen (DE)
~ 100 km
- 7 5G NETC**
Malmö (SE) to Helsinki (FI)
to Riga (LV)
~ 2000 km

STUDIES

- 8 5G Brno – Bratislava**
Brno (CZ) to Bratislava (SK)
~ 140 km
- 9 5G MELUSINA**
Luxembourg (LU) to Metz (FR)
~ 70 km
- 10 5G on Track**
Mulhouse (FR) to Karlsruhe (DE)
~ 200 km
- 11 5GCarolina**
Prague (CZ) to Munich (DE)
~ 70 km
- 12 5G Gail**
Udine (IT) to Salzburg (AT)
~ 200 km
- 13 5G Estuary**
Antwerp (BE) to Vlissingen (NL)
~ 260 km
- 14 Latest 5GS**
Tallin (EE) to Vilnius (LT)
~ 670 km
- 15 EUMOB**
Bordeaux (FR) to Bilbao (ES)
Perpignan (FR) to Barcelona (ES)
~ 500 km

- Road
- Rail
- Rail and road



Road and rail network based on the list of 5G corridors and cross-border backbone connections identified in Part V of the Annex of CEF Regulation (EU) 2021/1153.

The GUIDE project is a Coordination Support Action funded by the European Union. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.

1st Big Wave, Call-3



- Proposals for **deployment works** based on the 8 CEF-funded inception studies conducted as part of Call-1
- **New deployment work** proposals based on preparatory work done outside of the CEF-Digital Work Programme
- **Inception studies** to prepare the groundwork for deployment projects to be submitted in upcoming calls under the 2nd big wave in 2025

EU Budget EUR 100 million

Up to 50% co-financing for Works and Studies

Objectives



- ✓ **Leverage the needed private investment** to establish a full pan-European road and railway network of 5G corridors, with a focus on cross-border sections
- ✓ **Deploy 5G systems along transport paths** thus enabling Connected and Automated Mobility (CAM), including automated rail and waterway operations
- ✓ **Uninterrupted coverage** with 5G systems across all major European transport paths, following but not limited to TEN-T corridors (indicative list in Part V of CEF Regulation Annex)
- ✓ **Uninterrupted coverage for: CAM, FRMCS, RIS and multi-service application of 5G services**, including non-safety services
- ✓ Transport modes: **rail, road, inland waterways and/or a multimodal** combination thereof (example: smart logistics use cases in multimodal logistics platforms and ports, etc.)

Consortium Composition



- ✓ Minimum 2 applicants (beneficiaries; not affiliated entities) from at least 2 Member States or a Member State and an associated or third country
- ✓ Exception: minimum 2 applicants (beneficiaries; not affiliated entities) from at least one Member State - when there is no terrestrial border with another Member State - 5G corridor deployment projects crossing the border of a 3rd country or terminating at a port with maritime connections to other EU Member States

Possible Consortium Members



- ✓ **5G spectrum band owners / telecom operators**
- ✓ **Tower companies**
- ✓ **Public authorities/agencies in charge of traffic and infrastructure management**
- ✓ **Road operators**
- ✓ **Rail infrastructure managers**
- ✓ **Original equipment manufacturers**
- ✓ **Mobility service providers (such as innovative solutions providers for traffic management and intelligent transport systems)**

Scope



Scope	Studies	Works	Both
Cross-border			✓
Use of 5G pioneer bands (also FRMCS 900MHz and 1900MHz)			✓
If C-ITS using 5.9GHz band – compatibility analysis			✓
Road, rail, inland waterways, multimodality (i.e., logistics)			✓
Installation of active elements (routers, switches, antennae, MEC edge nodes, etc.)		✓	
Installation of passive elements (ducts, dark fiber, 5G radio stations, etc.)		✓	
Installation of specific track side devices (sensors, cameras for traffic monitoring incl. roadside units)		✓	
Studies for preparatory works, including network planning	✓	If deployment within the proposal	
Location, length		✓ 15% TEN-T	

Requirements



Requirements	Studies	Works	Both
Security declarations		✓	
Security guarantees approved by Member States			✓
Market failure declarations from the coordinator indicating no other 5G infrastructure present or credibly planned		✓	
MNO declarations - beyond coverage obligations		✓	
Other: please check carefully admissibility requirements!			

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5G and Edge Cloud for Smart Communities



Gerasimos SOFIANATOS

Deputy Head of Unit – Investment in High-Capacity Networks
European Commission, DG CONNECT, Unit B5

5G and Edge Cloud for Smart Communities

CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS



Funding

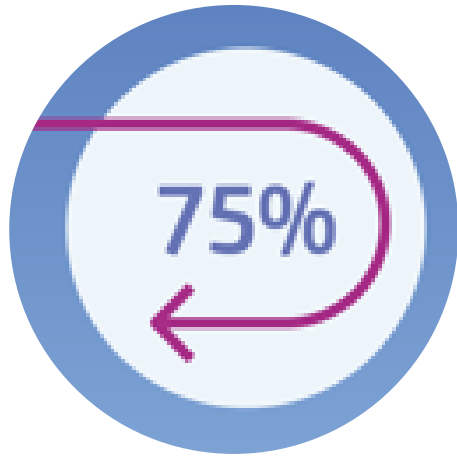
- Call-2: **51 million euros**
- Deployment of 5G and Edge infrastructure elements that enable innovative use-cases for services of general interest or public authorities

Raising Awareness

- Benefits of 5G in populated areas & the importance of reaching 5G targets
- FYI: The dedicated **Coordination & Support platform (CSA)** will gather good practices & disseminate results
- See also the call: CSA for edge cloud integration

5G and Edge Cloud for Smart Communities

CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS



- Reimbursing **up to 75%** of the infrastructure costs



- Facilitating an **online community** for stakeholders (**5GSC.EU**)



- “partner search” function of the Funding & Tenders portal

5G and Edge Cloud for Smart Communities

CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS



At least:

The owners of the funded 5G infrastructure:

the company that will operate the network infrastructure (possibly a private network and with unlicensed 5G spectrum)



The providers of the use cases:

public authorities or providers of **services of general interest** (*during the lifetime of the project*)



5G and Edge Cloud for Smart Communities

CEF-DIG-2023-5GSMARTCOM-EDGE-WORKS



Eligible costs

- ✓ 5G passive & active infrastructure, including **5G connectivity software & services** and **connectivity hardware/software** for objects
- ✓ **Edge cloud hardware/software**
- ✓ Fibre backhaul, yet *not* the major focus (< about 10%)
- ✗ Individual applications, internet software services

Security Requirements

- ✓ Applicants should fill in **self-declarations**, including **guarantees approved by the Member State** in which they are established, on the basis of national law
(Not applicable for the end-users of the consortium)

Call-1 projects



● Call-1 (ongoing projects)



Call-1 projects



≈ € 4.00 M



5G for a Smart Academic Campus in Sicily



≈ € 3.34 M



5G for the Frankfurt University Hospital



≈ € 4.00 M



A 5G network for Disaster Relief & Public Protection along Hungary-Ukraine border



≈ € 0.4 M



A 5G network in a Mosonmagyaróvár farm



≈ € 2.8 M



5G Connectivity for Smart City Services in Toulouse



≈ € 2.98 M



A 5G Network for Emergency Responses in Wavre



≈ € 4.13 M



5G Coverage for Healthcare & Education in Flanders Fields

*The amounts refer to the max EU financial contribution

5GSC Call-1 & -2 trends



- **From projects' portfolio**
 - Public Operators - Alternative Operators - Tower Companies
 - Public & Private 5G Networks (MPN)
 - Transitional flexibility: 5G Standalone (SA) & 5G non-Standalone (NSA) (RF upgrade, 4G core)
 - **Edge Cloud** network integration (with EU-based cloud solutions)
 - Key benefits:
 - Densification: increase of the connected objects & devices
 - Reduced power consumption
 - Variety of IoT applications (port safety, city recycling, city traffic, precision agriculture)
 - Multiple verticals (health, education, energy, transport)
 - Positive impact in environmental transition and energy consumption

Call-3 in a snapshot



- **What's new**
 - Bundling 5G with **Edge Cloud** deployment.
 - Reimbursement of the Edge Cloud computing infra as an option (if deployed **at the same location** to take advantage of energy and time efficiencies).
- **What remains unchanged**
 - At least **2 partners**: the owner of the 5G infra & the provider of the SGI use-case.
 - **Up to 75%** reimbursement of the infra cost (passive & active).
 - **Fibre** backhaul (up to **10%**).
 - Total funding: **€51 million**.
 - Procurements should be **in line with 5G cybersecurity toolbox** (high-risk suppliers).
 - Duration **36 months** (extensions are possible).

5GSC Community Support Platform



- **Make sure to join the 5GSC Community Support Platform: 5GSC.eu**
- The platform is a networking & knowledge-exchange online platform where you can:
 - Meet like-minded stakeholders & project partners
 - Share good practices
 - Stay up to date with 5G events
 - Get information on call openings



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Thank you!