VIEIRA DE ALMEIDA

Digital Union – Submarine Cables and Opportunities for Portugal: Regulation and Strategy

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APDC & VdA

01 Setting the scene

Connecting the world in a data-driven society

The role of submarine cables

International connectivity

- Submarine cables form the backbone of the global internet, enabling high-speed data transfer across countries and continents. “99% of the world’s digital communications transit through the global cable network and roughly USD10 trillion in financial transactions are sent via these cables each day” (Report on the State of the Digital Decade 2023).
- European Data Gateways.

Digital Economy and Technology – connection to data centers

- They support the infrastructure needed for cloud services, IoT, AI, and other emerging technologies. Directly impact economic growth by enhancing digital connectivity and information exchange.

Security and resilience

*‘A precondition for secure communications is a higher level of resilience and integration of all communication channels: terrestrial, non-terrestrial and, importantly, **submarine**. In the current context of increased cybersecurity and sabotage threats, governments in all regions are paying particular attention to their reliance on critical submarine cables.’* (White Paper: How to master Europe’s digital infrastructure needs)

Europe’s connectivity infrastructure challenges

Current infrastructure is **insufficient** for a data-driven society

Fibre Coverage

- Limited to 56% of households (41% in rural areas)
- Unlikely to exceed 80% by 2028, jeopardising the 2030 target of 100%

Satellite Broadband

- Can provide up to 100 Mbps in remote areas but cannot replace ground-based networks

5G Deployment

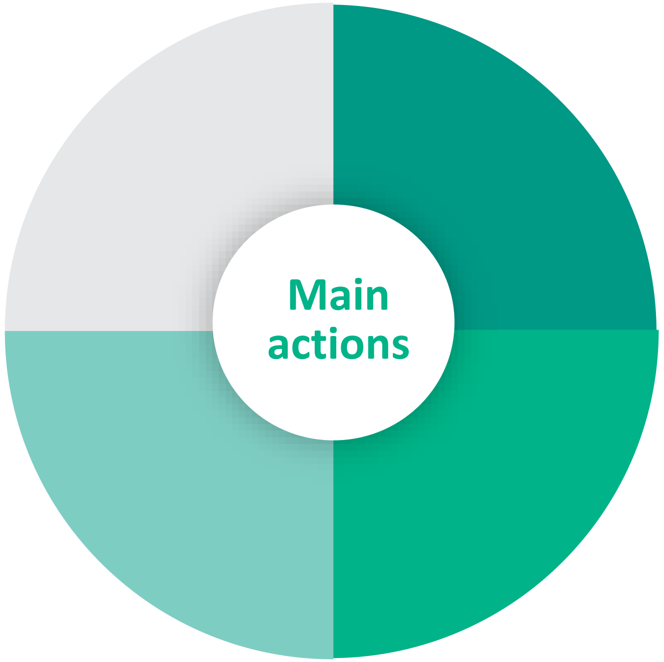
- Basic 5G covers 81% of the population (51% in rural areas)
- Advanced 5G (stand-alone) deployment is below 20% of populated areas

Digital Decade Connectivity Objectives

- Low uptake: 1 Gbps (14%), 100 Mbps (55%)
- Underdeveloped edge computing
- 2023 Report: Risks in meeting 2030 targets

Connecting Europe Facility - Digital

Connecting the gap between connectivity demand and infrastructures



Deploying new or a significant upgrade of existing backbone networks

Including submarine cables, within and between Member States and between the Union and third countries

Implementing and supporting digital connectivity infrastructure

Related to cross-border projects in the areas of transport or energy

Deploying very high-capacity networks

Including 5G systems, in areas where socioeconomic drivers are located

Guaranteeing uninterrupted coverage with 5G systems of all major transport paths

Including the trans-European transport networks

Path to the Digital Decade to deliver the EU's digital transformation by 2030

Cable submarines and the Connecting Europe Facility

CEF Digital

- 5G (and Edge Cloud) for Smart Communities
- Backbone Connectivity for Digital Global Gateways ("BCDGG")
  - **submarine cables**
  - satellite infrastructures connectivity to internet exchange points, among others
- 5G coverage along Transport Corridors

EC grant **+ 142 million** to co-fund BCDGG, specifically **submarine networks**

First Digital Work Programme 2021-2023

1st & 2nd call

20 funded submarine cable projects

~ € 285 million financed by the EU

Second Digital Work Programme 2024-2027

3rd and 4th call

3rd call for BCDGG ended in 02.2024, with 34 proposals, of which where selected:

6 cable submarine projects

(with 2 reserve projects)

4th call from 02.10.2024 until 13.02.2025

Studies for backbone connectivity, focusing on areas with suboptimal services due to market dominance. It funds research, surveys, and permits to prepare for future infrastructure projects.

Portugal – Europe’s data hub

Opportunities and strategic advantages

Maritime expanse of about 4.1 million kilometres squared

Proximity to North America, Brazil, and the African continent

Outcome

Between 15 to 20% of submarine cables pass through Portugal’s area of sovereignty

Examples of submarine cables

EllaLink
Equiano
2Africa
Medusa

Portuguese GDP could increase by €500 million per year

(Copenhagen Economics)

02 Regulatory framework

Balancing innovation and regulation - EU Policy Perspective

EU Digital Infrastructure

- Expand the EU’s digital infrastructure
- Remove regulatory barriers to the deployment of high-quality, resilient networks

White Paper “How to Master Europe´s digital infrastructures”

EU Competitiveness

- Reform EU governance
- Increase the depth of coordination among Member States
- Reduce regulatory burden

Draghi Report: ***“Regulation is seen by more than 60% of EU companies as an obstacle to investment, with 55% of SMEs flagging regulatory obstacles and the administrative burden as their greatest challenge.”***

Electronic communications regulatory framework

General authorisation regime

Draft BEREC Report on the general authorisation and related frameworks for international submarine connectivity

European Electronic Communications Code

Electronic Communications Act

01
Prior notification

Applicable to operators of **public** networks and **publicly available** electronic communications services

02
Security and integrity of public networks

Obligations regarding the security and integrity of public electronic communications networks, arising, for example, from ANACOM Regulation no. 303/2019 – and soon, the NIS 2 Directive

03
Lawful interception

Install and make legal interception systems available to national authorities and to provide decryption means

04
Reporting and fees

Obligation to provide statistical information and payment of regulatory fees

The extent of the application of the general authorisation regime depends on the **qualification of the submarine cable offer at stake, as publicly available or non-publicly available networks/services**

ANACOM may regulate the application of these conditions by identifying the types of networks or services to which they apply

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Environmental licenses and permits

BEREC: *"(…) the deployment of submarine cable systems depends on the compliance with a significant number of national authorisation administrative procedures in fields beyond the ECNS sector, including environmental protection, cultural heritage protection, maritime resources planning and management and urban and territory planning and management,* ***involving a total average duration that <u>can exceed one year</u>****"* (BoR (23) 214)

01 Obtaining a title for the private use of national maritime space (TUPEM) from the Directorate-General for Natural Resources, Safety and Maritime Services (DGRM)

02 Prior notification to the Regional Coordination and Development Commission (CCDR), in case of a cable run in an area within the National Ecological Reserve (REN)

03 Prior authorisation from the Institute for Nature Conservation and Forests (ICNF), in the case of use of protected areas

04 Environmental Impact Assessment (AIncA) with the ICNF (in case of passage through maritime areas integrated into the Natura 2000 Network)

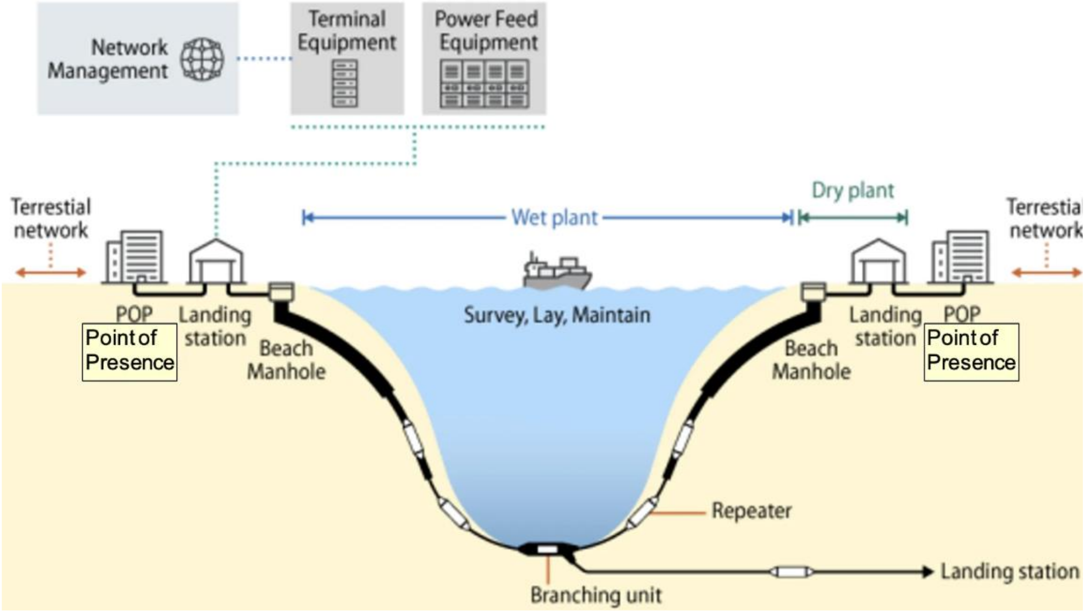
05 Obtaining a water resources utilisation permit from the Portuguese Environment Agency (APA)

06 Prior authorisation from the National Maritime Authority for the vessel to remain on the continental platform

07 Environmental impact assessment, with the Portuguese Environment Agency (APA) or the competent CCDR

Physical infrastructures framework

Decree-Law no. 123/2009, of 21 of May



Examples of physical infrastructures:

- Pipes
- Ducts
- Inspection chambers
- Manholes
- Cabinets
- Cable landing station

Three main focus

- Access obligations
- Construction and extension of physical infrastructures
- Rights of way (accessing the public domain)

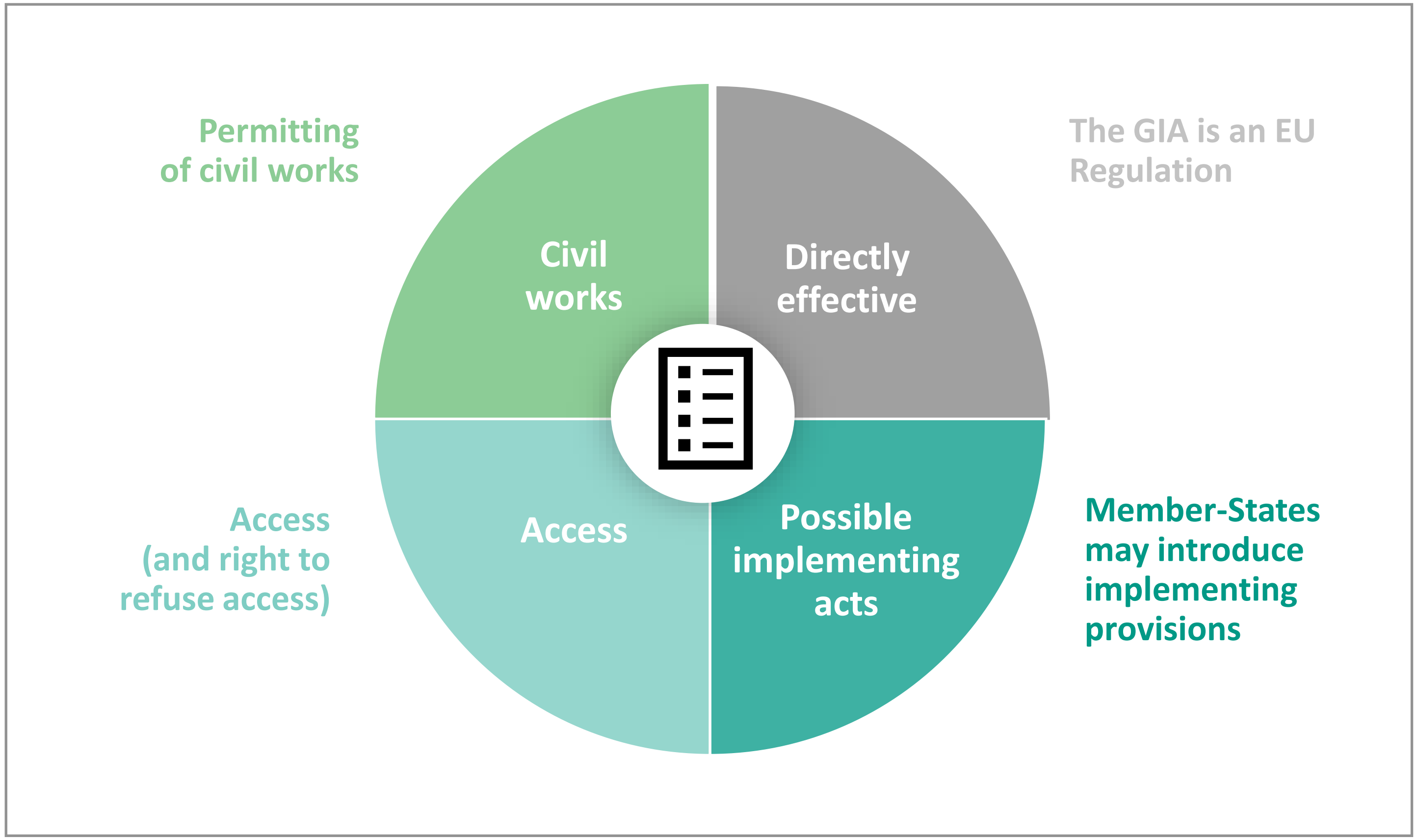
Investment encouraging or discouraging measures?

Physical infrastructures framework

Gigabit Infrastructure Act

Objective: simplify and accelerate the roll-out of high-speed, fixed or mobile, electronic communications networks (the so-called very high-capacity networks, or “**VHCNs**”), by promoting the joint use of existing physical infrastructure and enabling a more efficient deployment of new physical infrastructure, to meet EU’s Digital Decade’s goal of deploying gigabit-capable infrastructure across the EU by 2030.

The GIA will be fully applicable from 12 November 2025.



03

Investment promoting measures – Ministerial Order no. 11808/2023

Ministerial Order n.º 11808/2023

3 action pillars

Energy

Strive to make Portugal a world reference in terms of the digital economy, based on the use of energy from renewable sources in an environmentally sustainable way

Comunications and connectivity

Strengthen the development and support of initiatives to improve Portugal's strategic positioning in the field of international connectivity (with adequate and redundant capacity, at intermediate network level and with the main European and intercontinental digital hubs, via submarine cables, complementing connectivity by land via Spain)

Information and data

Ensuring that Portugal achieves a prominent position in the location of data storage and processing centres, thus adding value to connectivity

According to the Ministerial Order, improving the country's international connectivity and proximity to data centres will **boost the quality of very high-capacity networks for citizens and companies to access the Internet and services** and **support the development of technological industries and the location of technology-based companies**, promoting the creation of skilled jobs and making a decisive contribution to digitisation, innovation and national scientific development in various sectors of activity

Ministerial Order n.º 11808/2023

Main points of action

Taking advantage of the strategic location

Developing submarine cable corridors and encouraging the installation of data centres

Institutional coordination

Involve ANACOM, DGRM, APA and other entities in the implementation of regulatory, environmental and infrastructure measures

Strengthening infrastructure and regulation

Creating specific zones for submarine cables and simplifying licensing processes, including a dedicated portal for investors

Promoting attractiveness and sustainability

Integration of renewable energy sources into the digital ecosystem and strategic communication to attract global investors

Stimulating the development of alternative routes to increase connectivity and safety

Examples of instructions – Ministerial Order n.º 11808/2023

Directorate-General for Natural Resources, Safety and Maritime Services (DGRM)

Creating suitable areas for the installation of submarine cables in the National Maritime Spatial Plan, considering the locations of the mooring stations

Creation of a dedicated licensing portal

Dematerialised procedure (DGRM as single point of contact)

Simplified licensing procedure for installing cables in corridors identified in the allocation plan

ANACOM

Propose to the Government the technical and regulatory conditions to ensure that the submarine cable is buried along its entire length on the land side with extra protection using the HDD (Horizontal Directional Drilling) methodology, in ducts with sufficient capacity to accommodate an adequate number of cables (open access, non-discriminatory and cost-orientated)

Assess the best way to make the information hosted in the SIIA available for potential investors and how it should be aggregated

Define an expeditious mechanism to ensure the infrastructure of networks in places/routes of high demand that do not have an adequate response from the market

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