Taller Virtual: Estrategias de Despliegue de Infraestructura en Areas Prioritarias

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The regulation of FTTH networks in Portugal

↪ Intervention in case of market failure   ↪ Facilitating investment

	Private investment	State aid	Regulating SMP ducts&poles and optical fiber	Cost reduction measures
2006/ 2007	Telecom operators' investment		Ducts reference offer (ORAC)	
2009/ 2010 …	Network-sharing agreements (& 2017)	"Redes rurais" public tender	Poles reference offer (ORAP)	Decree-Law n.º 123/2009
2014				BB cost reduction directive (BCRD)
2021				
2023		"Áreas brancas" public tender	SMP fiber in 402 parishes	
2024 …	Network-sharing agreements			Gigabit Infrastructure Act (GIA)

01

PRIVATE INVESTMENT & NETWORK-SHARING AGREEMENTS
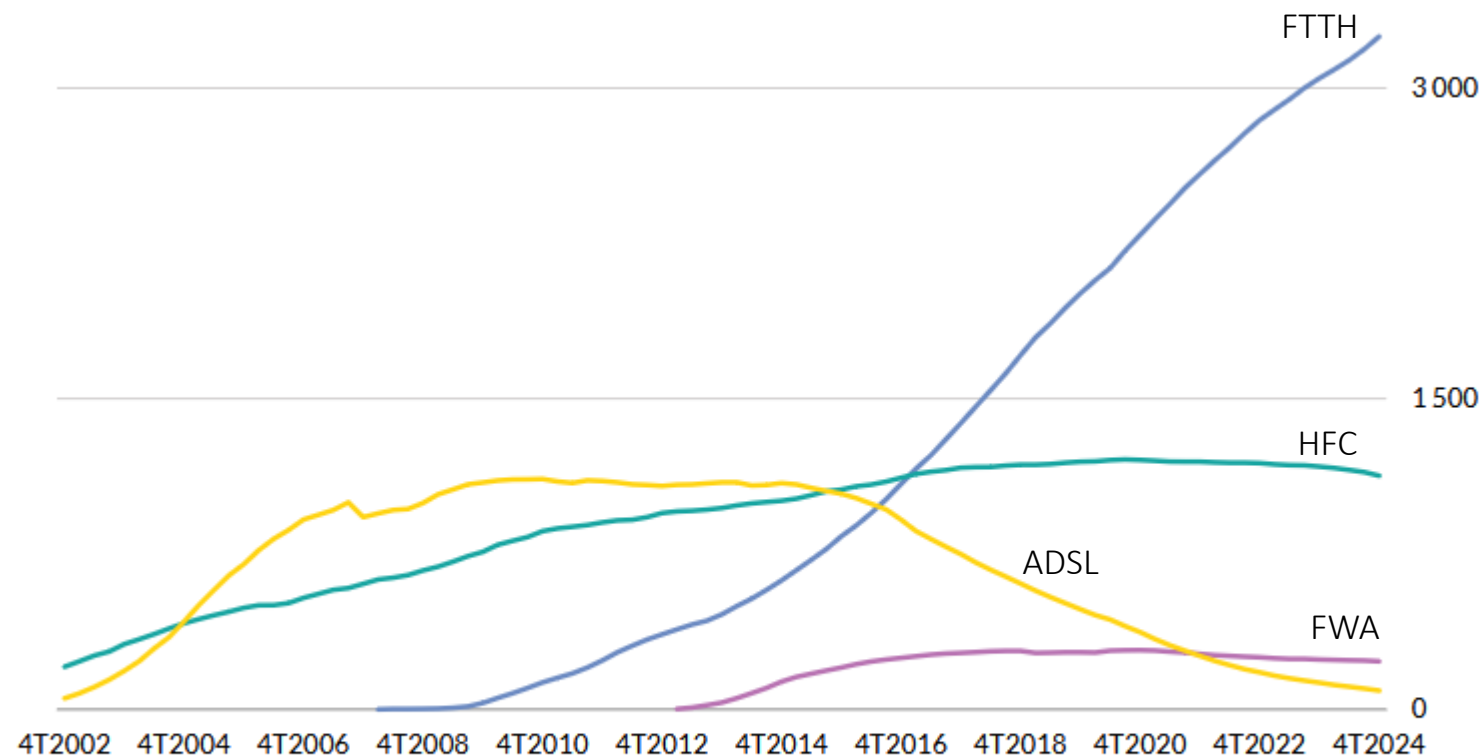
The regulation of FTTH networks in Portugal

	Private investment
2006/ 2007	Telecom operators' investment
2009/ 2010 ...	Network-sharing agreements (& 2017)
2014	
2021	
2023	
2024 ...	Network-sharing agreement

"*Portugal excels in VHCN, FTTP, and overall 5G coverage, both measured nationally and when looking at households in sparsely populated areas*"
– page 5 (PT country report – Digital Decade 2025 report – 16th June 2025)

Private investiment & network-sharing agreements

Fixed broadband lines in Portugal 2002-2024

Unidade: Milhares de acessos
Fonte: ANACOM

- **MEO** invested in a country-wide FTTH network.

- Alternative operators' followed- **Vodafone, NOS, NOWO & DIGI (2024).**

- Network-sharing agreements (reciprocal access):

  - 2014 MEO/Vodafone
  - 2017 NOS/Vodafone
  - 2024 NOS/Vodafone (other geographical áreas)

- 2008-2023 Operators invested € 240 million/year in FTTH networks.

=> 94% coverage & increased competition.

02
STATE AID

The regulation of FTTH networks in Portugal: state aid

Intervention in case of market failure

State aid
"Redes rurais" public tender
"Áreas brancas" public tender

2006/ 2007
2009/ 2010
2014
2021
2023
2024 ...

The regulation of FTTH networks in Portugal: state aid public tenders

| 2009 public tender ("Redes rurais)		2023 public tender ("Áreas brancas")	
€ 106 million public financing (PT + EU)	5 lots, 20-year contracts	€ 172 million public financing (PT + EU)	7 lots, 20-year contracts
Obligation to deploy network in 139 municipalities Goal: 50% coverage	Wholesale-only operators, offers, prices, SLA defined in contract	Target areas defined in terms of buildings: 400 thousand buildings / 10% of total	Wholesale-only operators, offers, prices, SLA defined in contract
2 winners: Fibroglobal and DST	ANACOM monitors contract	Winners: ?	ANACOM involved in defining terms of reference and monitoring of contract

STATE AID – NGAs in rural áreas (2009)

Areas with market failure
(areas with no fibre, cable or ULL operators)
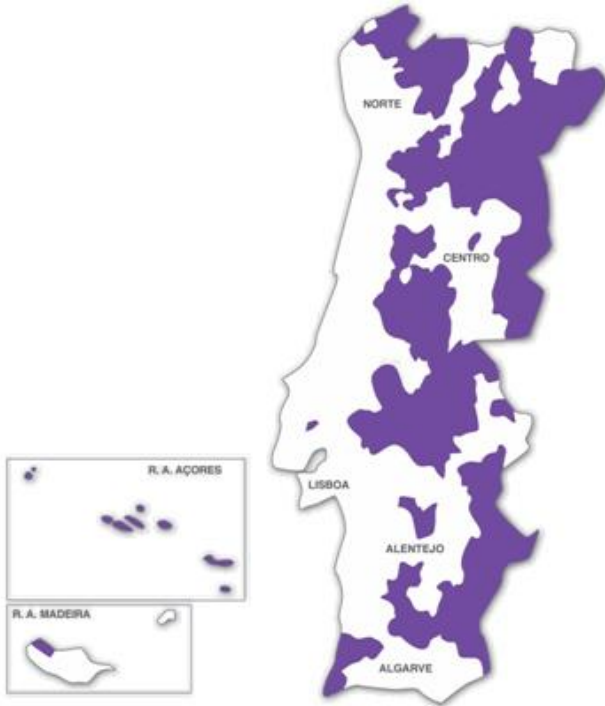
Characteristics of the service to be provided and coverage area

NORTE

CENTRO

R. A. AÇORES

LISBOA

R. A. MADEIRA

ALENTEJO

ALGARVE

Speed of at least 40 Mbps

140 municipalities (out of 308)

1 million people (10% of the population)

Coverage of the municipalities > 50%

Open network

Investment in total of 106 million euros, providing high speed access, covering more than one million people (more than 10% of the population and almost half of the municipalities) –

2030 Digital Compass: The European Way for the Digital Decade

ANACOM

There was a need to ensure that all households would have access to a Gigabit network before 2030

Created a "Connectivity Working Group"

Mission:

- Assess the state of fixed and mobile network coverage across the country and the needs
- Identify the most suitable technological and financial solutions to address existing gaps

Representatives of government cabinets + ANACOM (technical support)

Prerequisite for accessing European funding

European Regional Development Fund ERDF Regulation

a national broadband plan is mandatory for assure financial support for digital infrastructure projects

A structured strategy is necessary to provide legal certainty, establish clear deadlines, and coordinate efforts between public authorities and private stakeholders

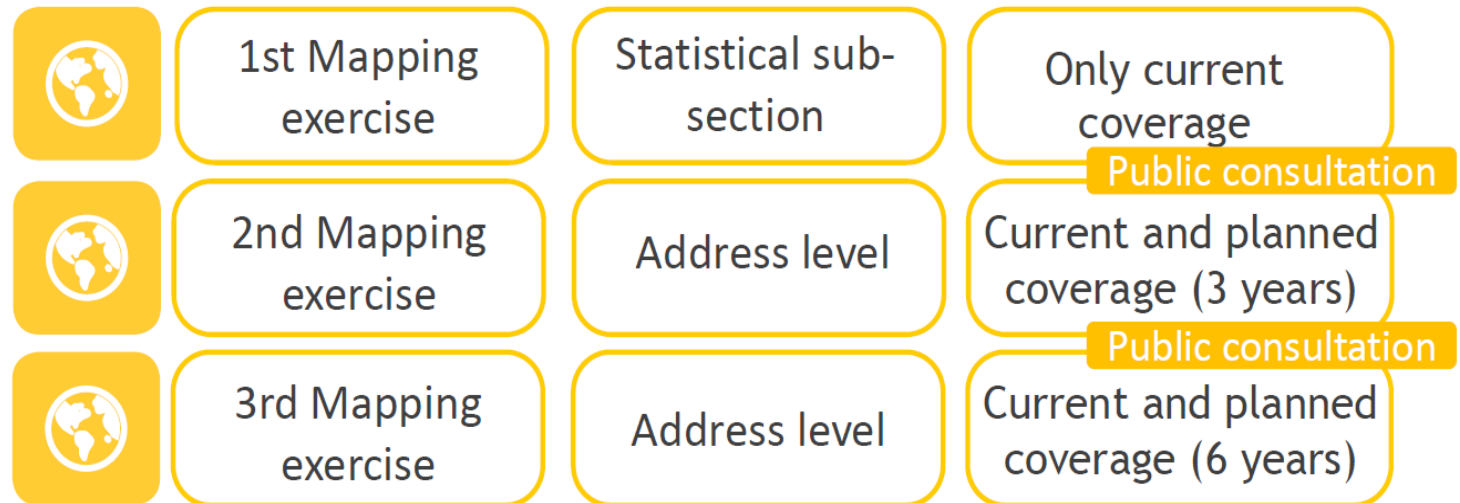# Requirements set by ERDF Regulation for broadband plans

❑ A detailed **mapping of existing infrastructure**, ensuring that public funding is targeted at areas where market-driven solutions are not viable.

❑ The strategy also needed to demonstrate a **sustainable investment model**, ensuring that public aid is minimized while maximizing private sector participation.

❑ It had to incorporate **mechanisms to minimize investment costs for VHCN deployment**, including regulatory improvements such as the implementation of the Broadband Cost Reduction Directive (BCRD), and provide technical assistance to local stakeholders through advisory structures like a Broadband Competence Office (BCO).

❑ Finally, a robust **monitoring framework** was required to track progress using standardized broadband mapping indicators.

Mapping - the process to get the target areas

The 'target areas' are deemed to cover only areas

where no high-capacity network exists or

is planned to be installed within the relevant time horizon, or,

where only one network exists covering **no more than 10%** of the dwellings in the area

1st Mapping exercise	Statistical sub-section	Only current coverage
2nd Mapping exercise	Address level	**Public consultation** Current and planned coverage (3 years)
3rd Mapping exercise	Address level	**Public consultation** Current and planned coverage (6 years)

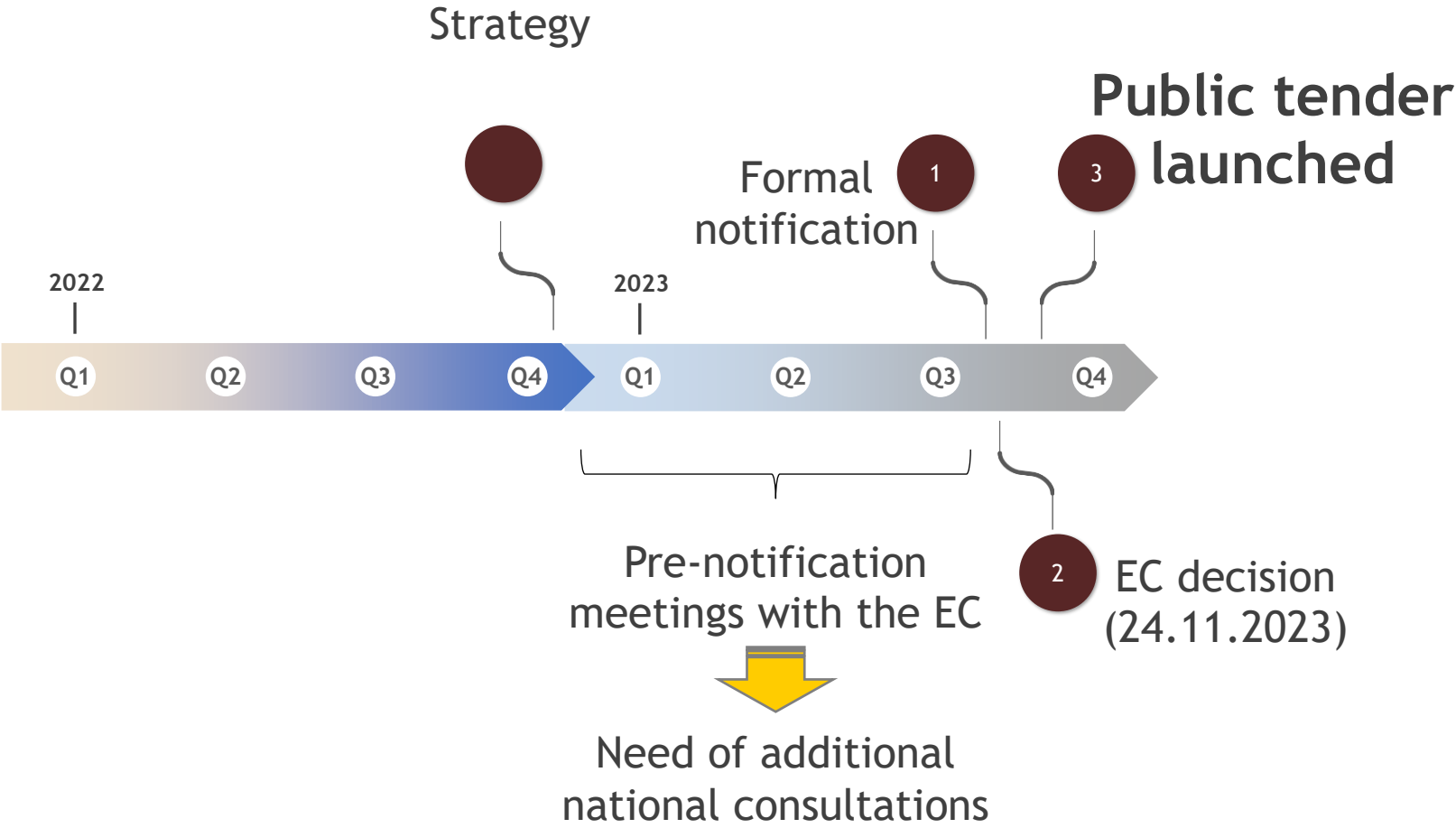**New State Aid Guidelines**

Guidelines on State aid for broadband networks (2023/C 36/01)

The result: public tender launched in December 2023

Strategy

Public tender launched

Formal notification

1

3

2022

2023

| Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |

Pre-notification meetings with the EC

2 EC decision (24.11.2023)

Need of additional national consultations

The public tender process (launched in december 2023)

- The network to be installed must allow a minimum throughput per access of **1 Gbps** in the downstream direction (*download*) and 150 Mbps in the upstream direction (*upload*).

- Tender divided into **7 lots** (North, Centre, Lisbon Metropolitan Area, Alentejo, Algarve, Azores, Madeira)

- **CCDRs** (*regional development agencies*) is responsible for the pre-contractual procedure and for selecting the winning bids for each lot – **to be concluded**

- **ANACOM** to supervise network deployment & operation

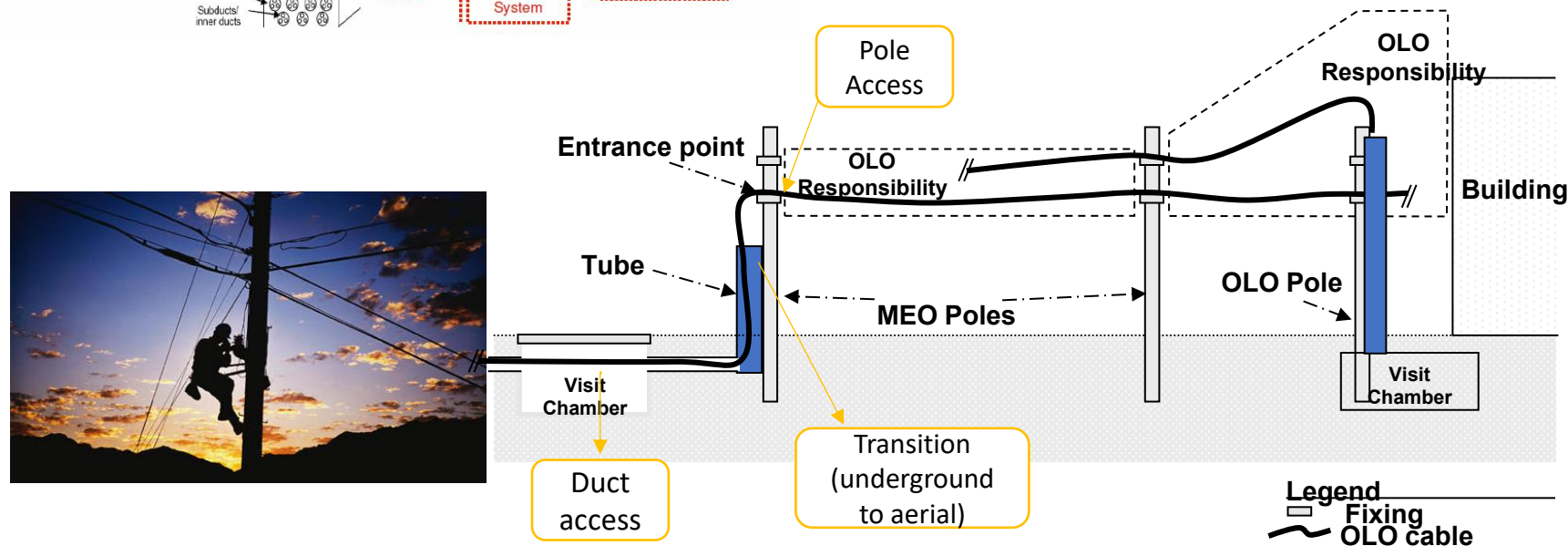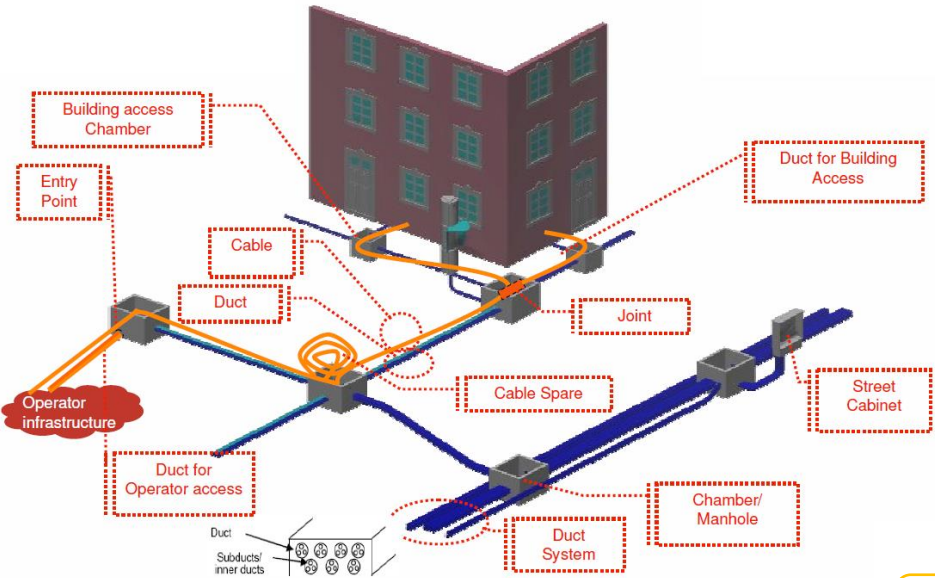- A new **Digital National Strategy** was published (december 2024)

03

SMP REGULATION

The regulation of FTTH networks in Portugal

↱ Intervention in case of market failure

| 2006/2007 |
| 2009/2010 |
| 2014 |
| 2021 |
| 2023 |
| 2024 … |

Regulating access & ducts/poles

| Ducts reference offer (ORAC) |
| Poles reference offer (ORAP) |
| |
| |
| Regulating access in 402 parishes |
| |

Regulating access and ducts & poles: ORAC & ORAP reference offers

Building access Chamber

Entry Point

Cable

Duct

Duct for Building Access

Joint

Cable Spare

Operator infrastructure

Duct for Operator access

Street Cabinet

Chamber/ Manhole

Duct System

Duct

Subducts/ inner ducts

Pole Access

OLO Responsibility

Entrance point

OLO Responsibility

Building

Tube

OLO Pole

MEO Poles

Visit Chamber

Visit Chamber

Duct access

Transition (underground to aerial)

Legend
Fixing
OLO cable

- MEO's ducts and poles network was mostly built while this undertaking was a publicly-owned monopoly, and is the most extensive physical infrastructure in Portugal.

- Not economically-replicable by alternative operators and market share > 90%.

- The regulation of MEO's physical infrastructure has been credited with "... *lowering the costs of FTTP deployment...* [allowing] *network operators to prioritize FTTP deployment...* [and] *leading to expedited rollout and cost reduction*" (source: *Broadband Coverage in Europe)*.

- Regulating this type of facilities demand extensive, detailed and frequent intervention during long periods of time:
  - Procedures, technical & legal issues, transparency, SLA/SLG, penalties (see example of ANACOM decision);
 - Prices (see example of ANACOM decision).

- Reference offers: ORAC and ORAP.

Regulating access and ducts & poles: ORAC & ORAP reference offers

➤ Concession contract (1995)
- Access to the incumbent's ducts (ORAC running since July 2006)

➤ Market analysis in January 2009 (M4/2007)
- National regulation
- Access to the copper network: LLU at cost-oriented prices
- Access to the incumbent's physical infrastructure as remedy (ORAC and ORAP for poles)

➤ Market analysis in March 2017 (M3a/2014)
- Access to the copper Loop obligation: LLU at cost-oriented prices
- Kept under the M3a the remedy of access to the physical infrastructures (ORAC and ORAP)

➤ Market analysis in December 2023 (M1/2020 and Physical infrastructure Accesss market - PIA)
- Deregulation of the Access to the Copper Loops in 24-month period
- Access to physical infrastructure was now imposed in a separate wholesale PIA market (ORAC and ORAP)

# Regulating access to SMP fiber in 402 parishes
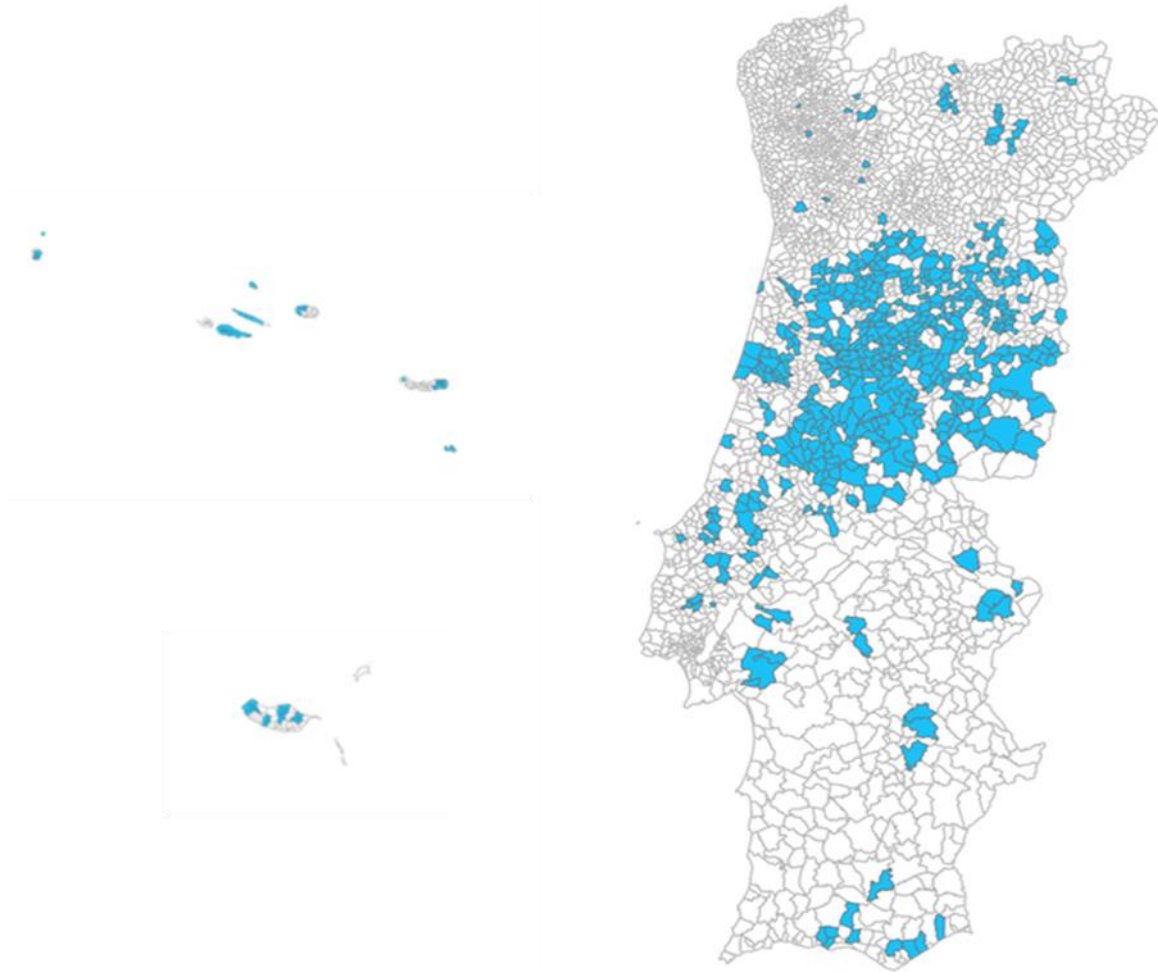
➤ Market analysis in March 2017 (M3a/2014)

- <u>Did NOT imposed access to Optical Fibre (despite serious doubts (phase II) from the EC) in order to promote investment</u>

➤ Market analysis in December 2023 (M1/2020 and Physical infrastructure Accesss market - PIA)

- Access obligations to incumbents' Fibre network in **402 parishes**:
  - Rural areas
  => 13% of parishes and 6% of dwellings.

- Two types of reference offers: local passive fiber PON and regional/local bitstream.

Regulating access to SMP fiber (PON and Bitstream)

- Local passive fiber PON / ODF unbundling) (reference offer).
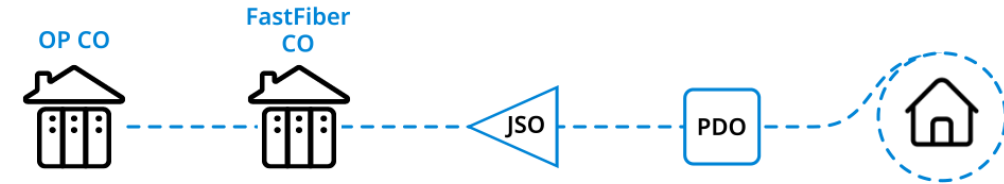
- Bitstream offer (reference offer):

  - Ethernet Bitstream (Layer 2 of the OSI model), allowing configurable rates up to 1 Gbps.
  - point-to-point connectivity for Unicast data traffic and point-to-multipoint connectivity for multicast data traffic.
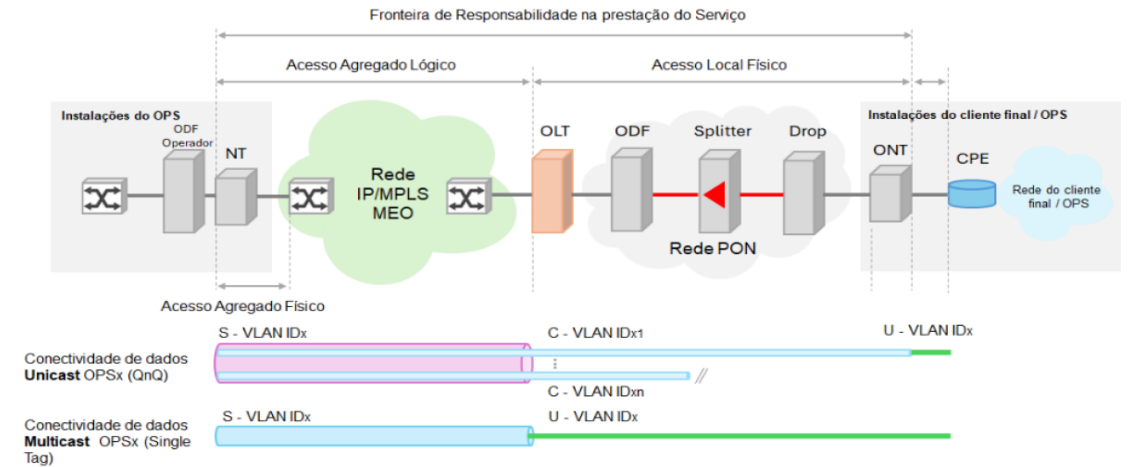
04

Cost reduction measures

The development of FTTH networks in Portugal

ANACOM

Facilitating investment

Cost reduction measures
Decree-Law n.º 123/2009
EU Broadband cost reduction directive
EC Gigabit Infrastructure Act

2006/ 2007
2009/ 2010
2014
2021
2023
2024 …

Cost reduction measures to facilitate investment: DL 123/2009/BCRD/GIA

- Obligation to grant access to existing physical infrastructure & access to information (see next slide for reference offers)

- Right to coordinate civil works and access/transparency

- Simplification of the permit-granting procedure (SIIA - single information point, deadlines)

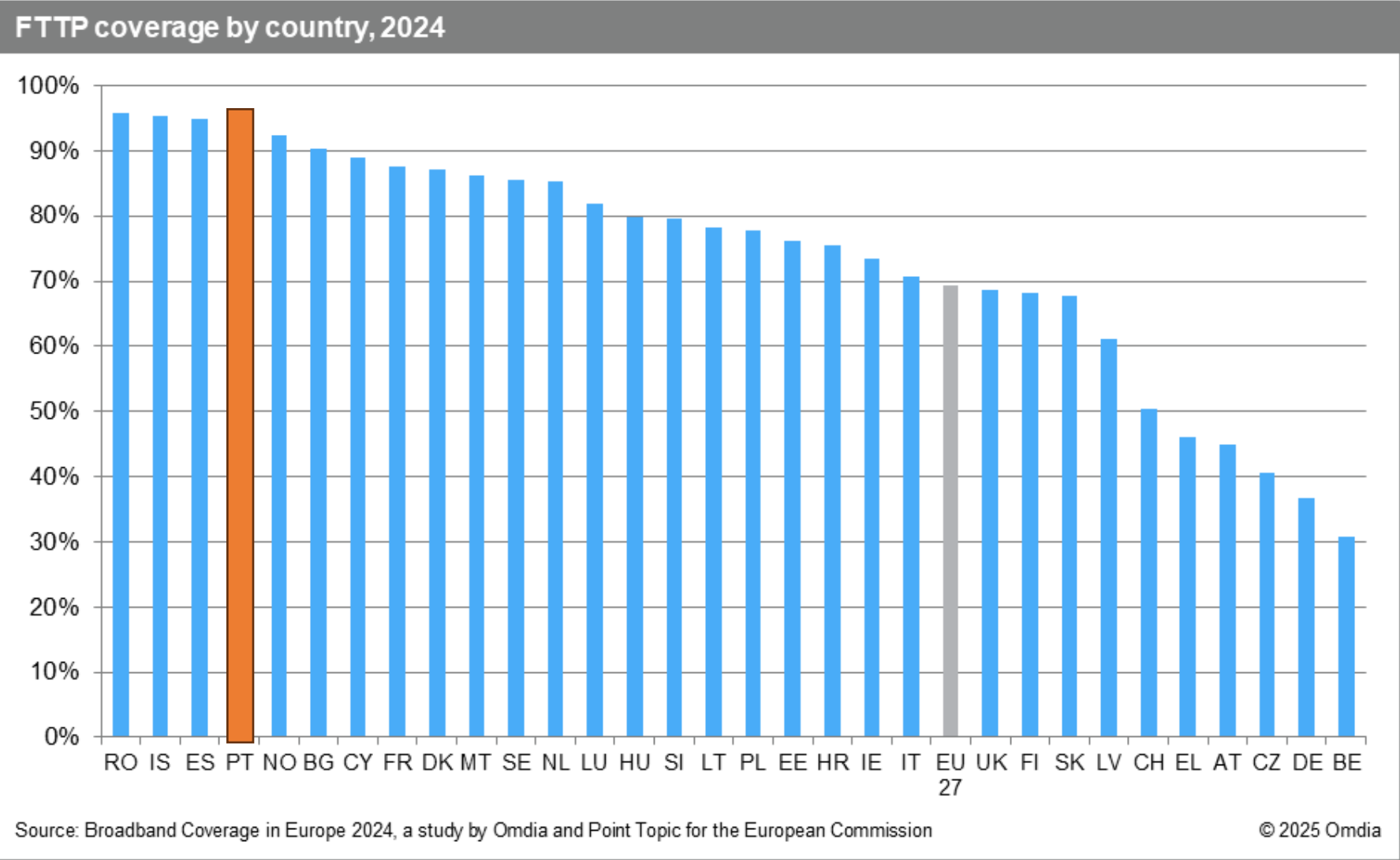- In-building physical infrastructure (new buildings must have "high-speed-ready" in-building physical infrastructure)
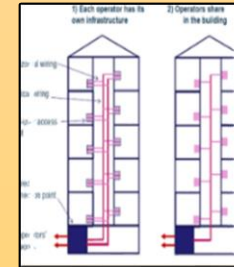
- Decree-Law 123/2009 / Directive 2014/61CE / Gigabit infrastructure Act.

- Portugal was among the first to launch these type of cost reduction measures.

- ANACOM involved in dispute settlement (example), verifying cost-orientation of prices (see here) managing single information point – SIIA and technical standards on the inbuilding physical infrastructure – ITED/ITUR.

Cost reduction measures to facilitate investment: alternative operators' & utilities' reference offers

Entidade	Oferta	Webpage
ONI (operador de comunicações eletrónicas)	IARC	http://www.oni.pt/en/documents-iarc
NOS (operador de comunicações eletrónicas)	OAI	https://www.nos.pt/institucional/EN/wholesale/regulated-services/oferta-de-acesso-a-infraestruturas/Pages/default.aspx
Vodafone (operador de comunicações eletrónicas)	VOAC	https://www.vodafone.pt/content/dam/digital-sites/downloads/wholesale/tarifario-condutas-vodafone-portugal.pdf
IP Telecom (concessionária de estradas)	ORIP	https://www.iptelecom.pt/pt-pt/node/4933
E-Redes (operador de distribuição de eletricidade)	Oferta de postes da E-REDES	https://www.e-redes.pt/sites/eredes/files/2023-04/Acesso%20e%20utiliza%C3%A7%C3%A3o%20das%20infraestruturas%20das%20redes%20de%20distribui%C3%A7%C3%A3o%20de%20energia%20el%C3%A9trica%20de%20baixa%20tens%C3%A3o%20a%C3%A9rea%20aptas%20ao%20alojamento%20de%20redes%20de%20comunica%C3%A7%C3%B5es%20eletr%C3%B3nicas.pdf
FIRSTRULE (gestor de infraestruturas municipais)	ORAIT	https://firstrule.pt/wp-content/uploads/2018/06/ORAIT_2018.zip

State of the Digital Decade 2030 - 2025 report

FTTP coverage by country, 2024

Source: Broadband Coverage in Europe 2024, a study by Omdia and Point Topic for the European Commission

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