

FREE FLOWING
COMMUNICATIONS

ANACOM



Portugal Next Generation

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1. Portugal Today



- Portuguese population:

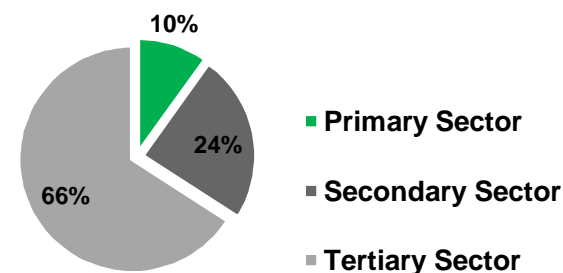
- 10.5 M (living in Portugal);
- 4.5 M (living abroad)

- Life expectancy:

76,9 82,8

- Working population as proportion of working age population: 78,4%

Employment



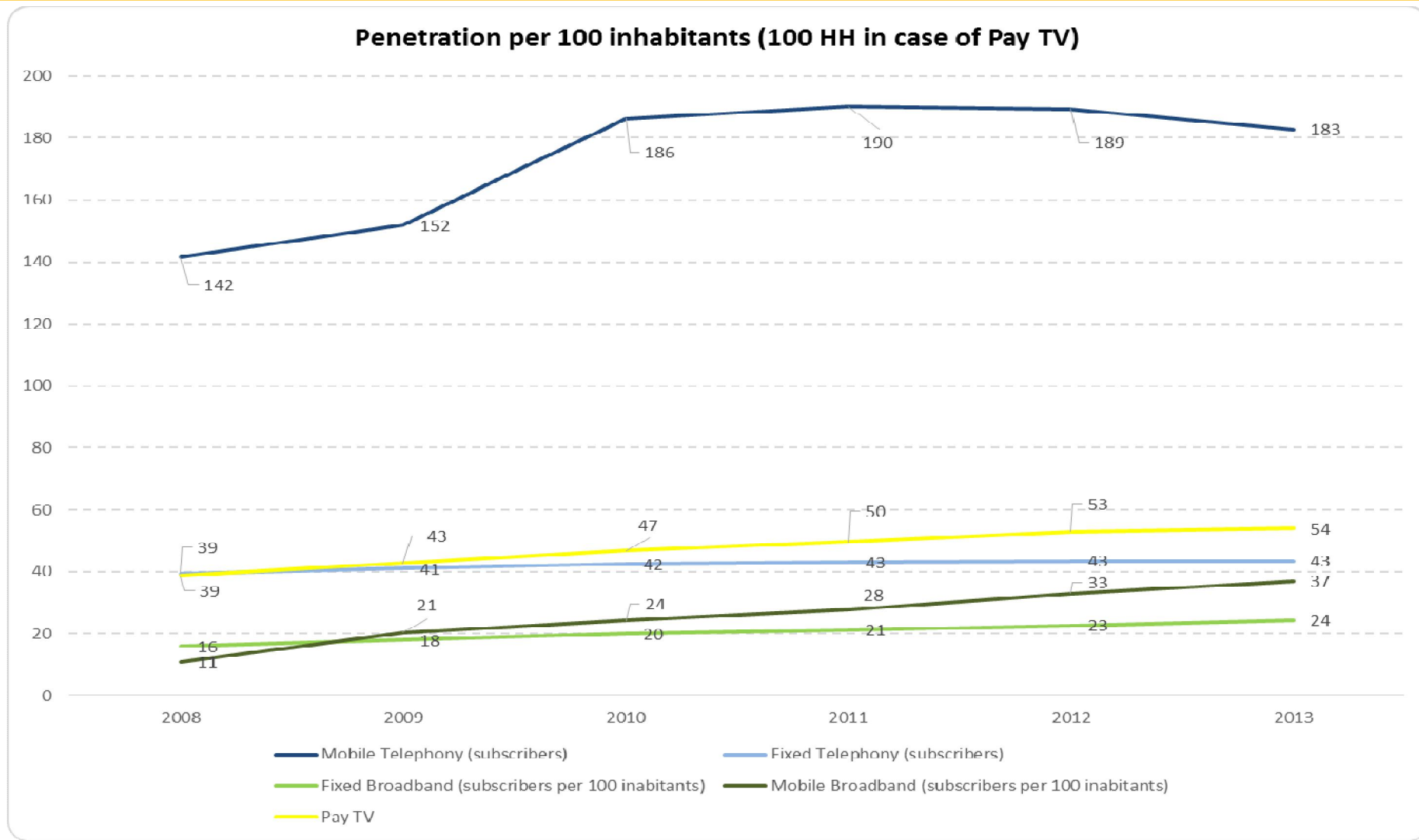
- Very High HDI: Rank 41
- Happiness Index (LPI): Rank 27th



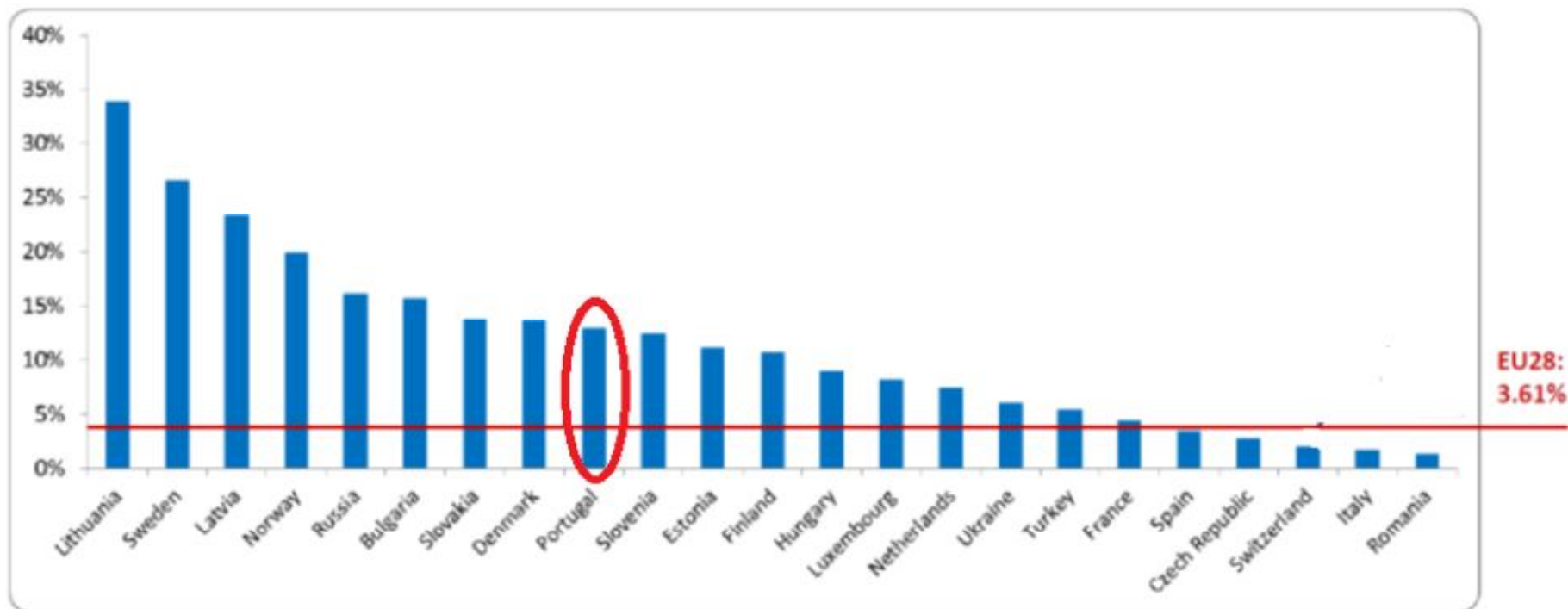
- Territory: 92,090 Km²
- PIB *Per Capita*: 15,842 €

2. The Portuguese Electronic Communications Sector

Penetration per 100 inhabitants (100 HH for Pay TV)



European Ranking FTTH/B end 2013



A Hub for World Connectivity and Innovation

- Europe's largest Data Centre



- “TimeWarp” in Pay Tv;
- Cloud Services

construction, machinery, pharmaceuticals, textile, footwear, cork and agriculture.

3. Public Policy Rationale

Infrastructure Sharing Expected to Speed Up The Digital Agenda Targets

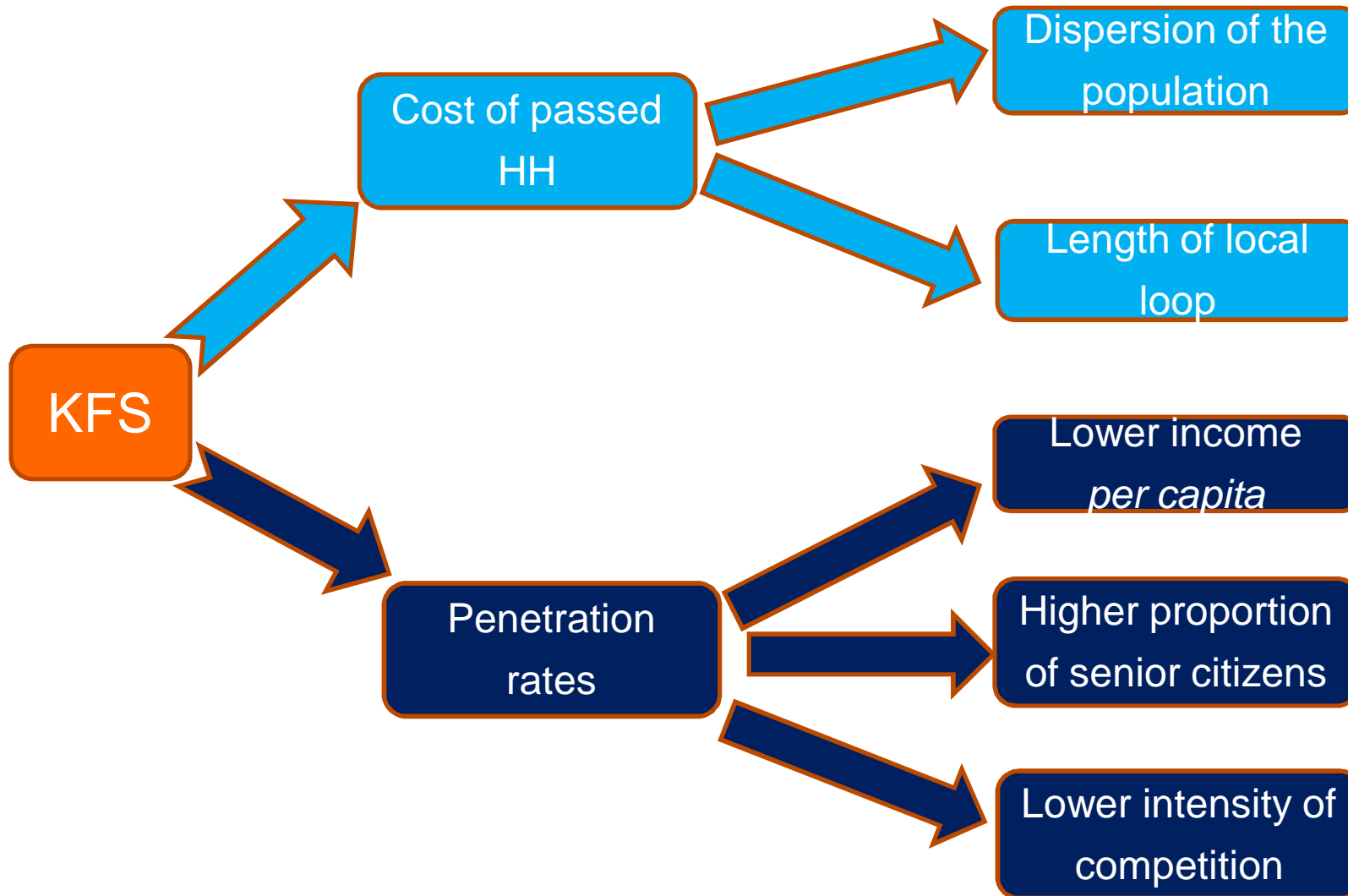
- In line with the Digital Agenda for Europe, the Portuguese Digital Agenda established ambitious goals for 2013 (access to basic BB for all) and beyond, namely:



2020
2020
2013 / 2014
(Mainland /
Islands)

Coverage	100%	@	≥30 Mbps
Subscriptions	≥ 50%	@	≥100 Mbps
Rural Coverage	≥ 50%	@	≥40 Mbps

- To promote digital inclusion and usage of the Internet / ICTs by the citizens living in remote areas, with low education levels, with disabilities and by the elderly is also an important target.



Directive Reduction of NGA deploying costs – What is at stake? (1)

Ducts are not easily replicable

Civil works
represent up to

80%^(a)

of the total roll-out
costs of NGA



^(a) E.g., European Commission – Explanatory note on draft NGA Recommendation

Directive Reduction of NGA deploying costs – What is at stake? (2)

Roll out of Next Generation Access (NGA) networks (e.g. FTTH networks)

Civil Works & Physical infrastructure

Deployment of high-speed broadband networks

By any provider of public communications networks

Reduce costs by 20 to 30% and exploit synergies with utilities (energy, water, transport)

Directive Reduction of NGA deploying costs – What is at stake? (3)

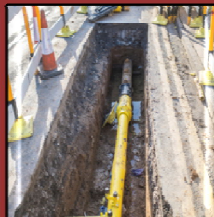
Four Pillars

Directive 2014/61/CE

- Access to infrastructure



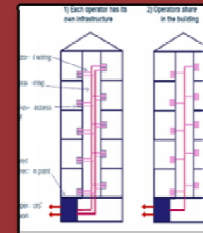
- Coordination of civil works



- Streamlining permit granting



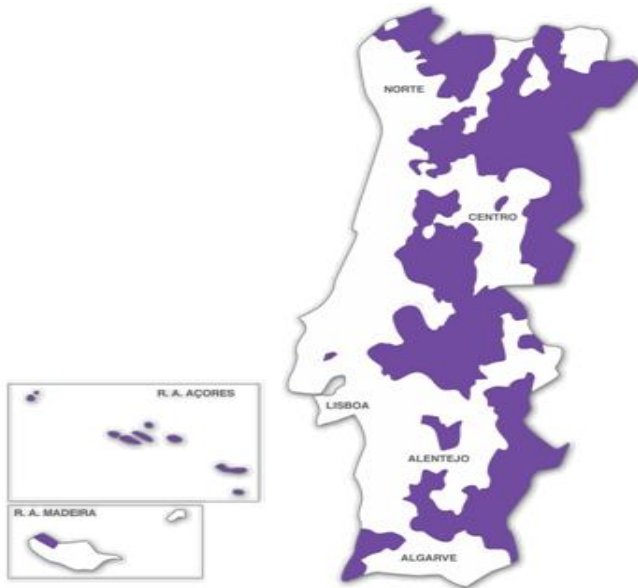
- In building infrastructure



4. Shared NGA Infrastructures in Rural Areas

Areas with market failure
(areas with no fibre, cable or ULL operators)

Characteristics of the service to be provided and coverage area



Speed of at least 40 Mbps

140 municipalities (out of 308)

1 million people (10% of the population)

Coverage of the municipalities > 50%

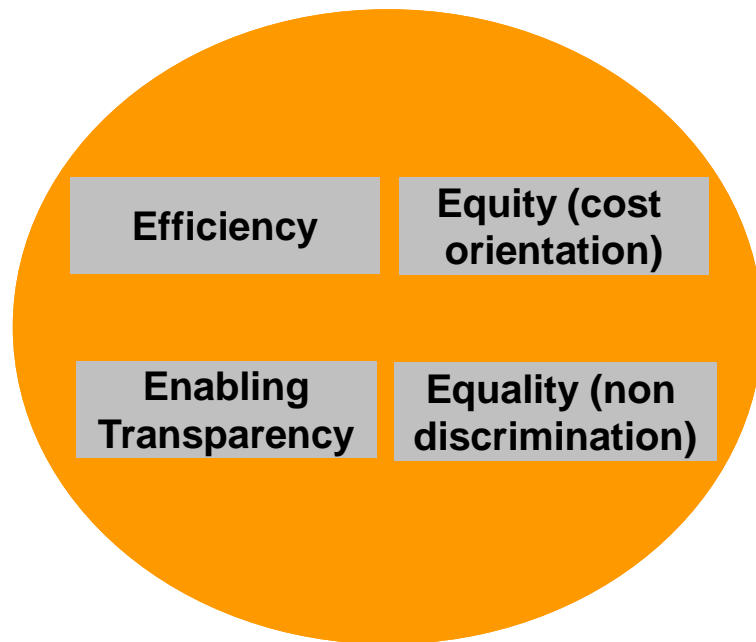
Open, non-discriminatory and cost-oriented access to the network

Investment of 156.5 M€ – FTTH-GPON roll-out concluded at the end of 2013
Wholesale passive offers already in use, supporting 3P services

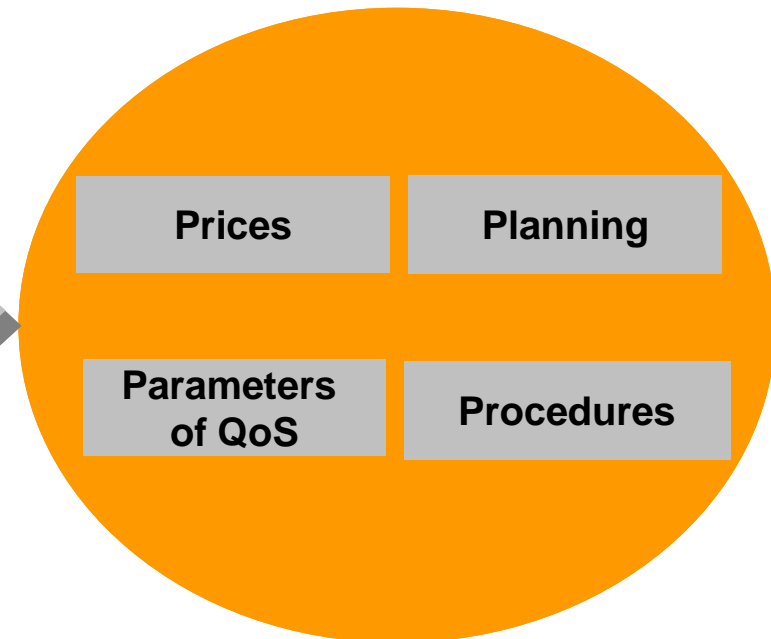
Privileged use of existing civil infrastructure (ducts, poles, etc.) from utilities (e.g. electricity concessionaires) or Public Authorities (e.g. Municipalities) and also from the historic operator

5. Access to Ducts and Poles of the Historic Operator

PRINCIPLES



AREAS OF INTERVENTION



In order to prevent this:



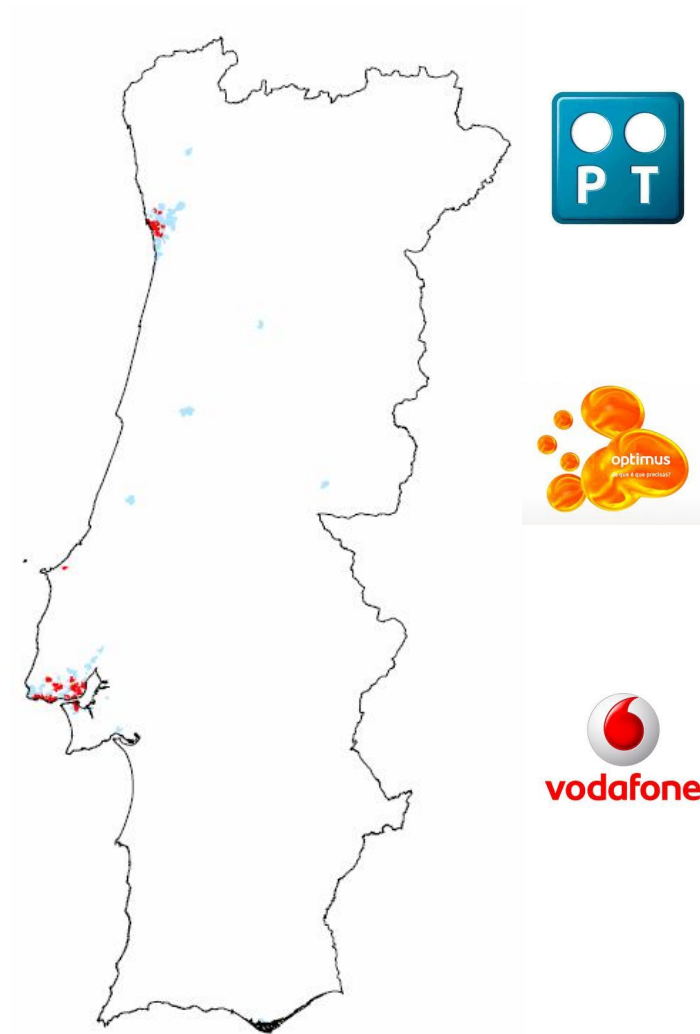
Example:

RO rules must result in efficient and effective procedures.

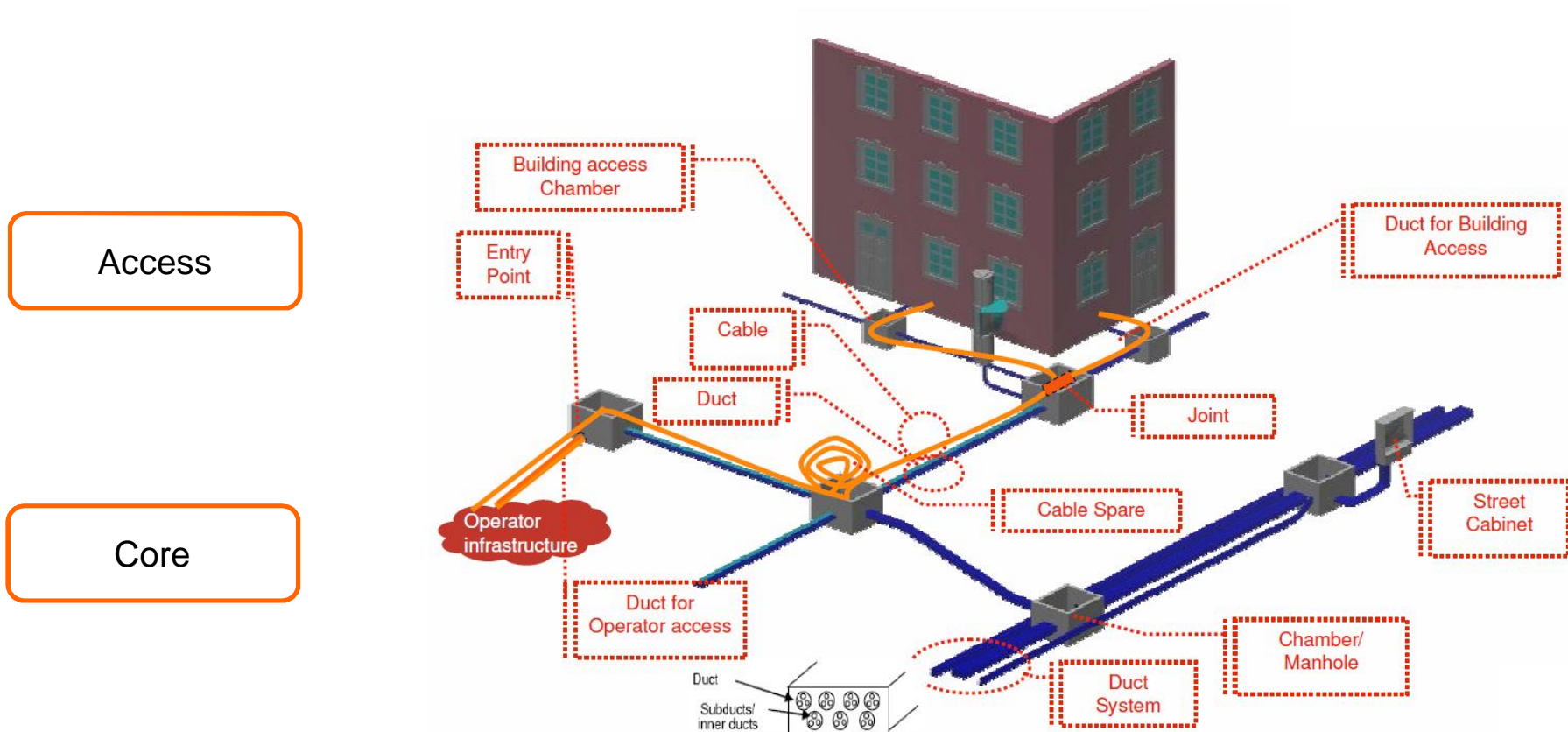
RO includes a procedures handbook and efficient technical specifications (namely for cable installation, intervention and removal), which is followed by beneficiary entities.

Regulated Access to Ducts of the Historic Operator

ANACOM

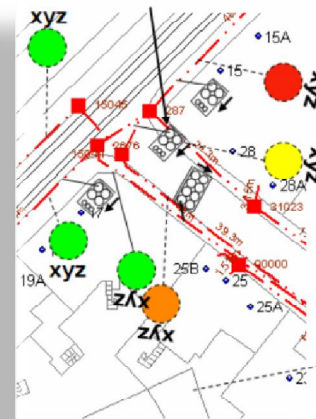
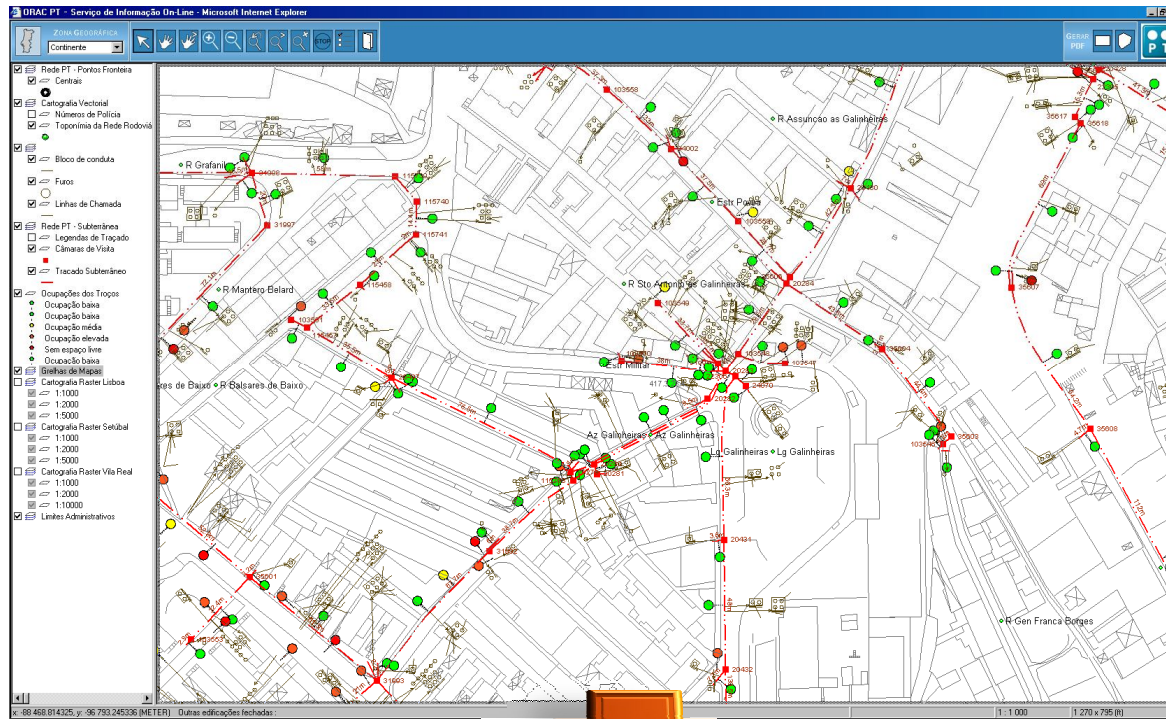


ICP-ANACOM regulation Duct Access Reference Offer (ORAC)



How Does Duct Access Offer Works?

Find a route + assess availability in database



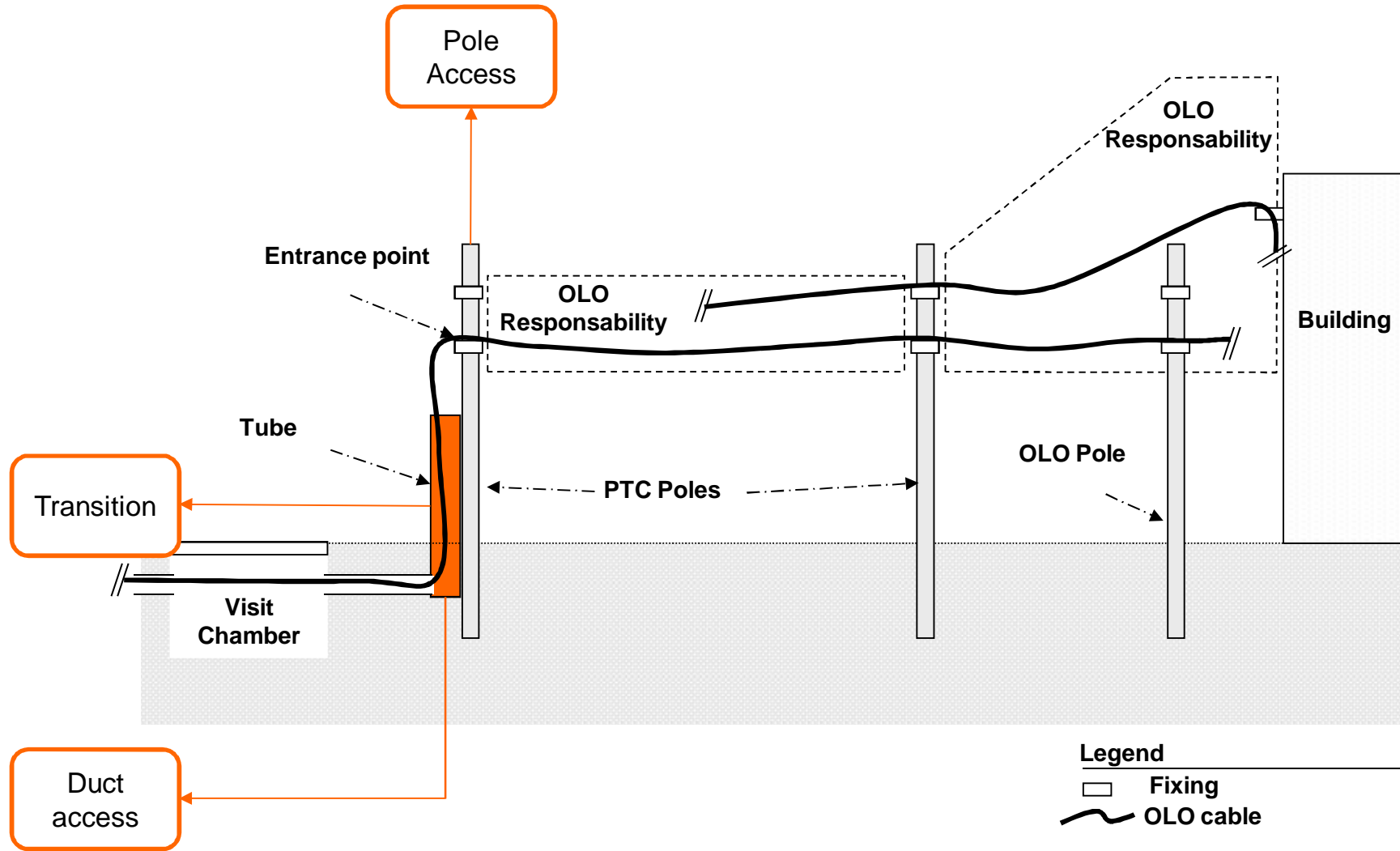
Cable installation in ducts by OLOs technicians

Access to Poles (1)



More used in rural areas.

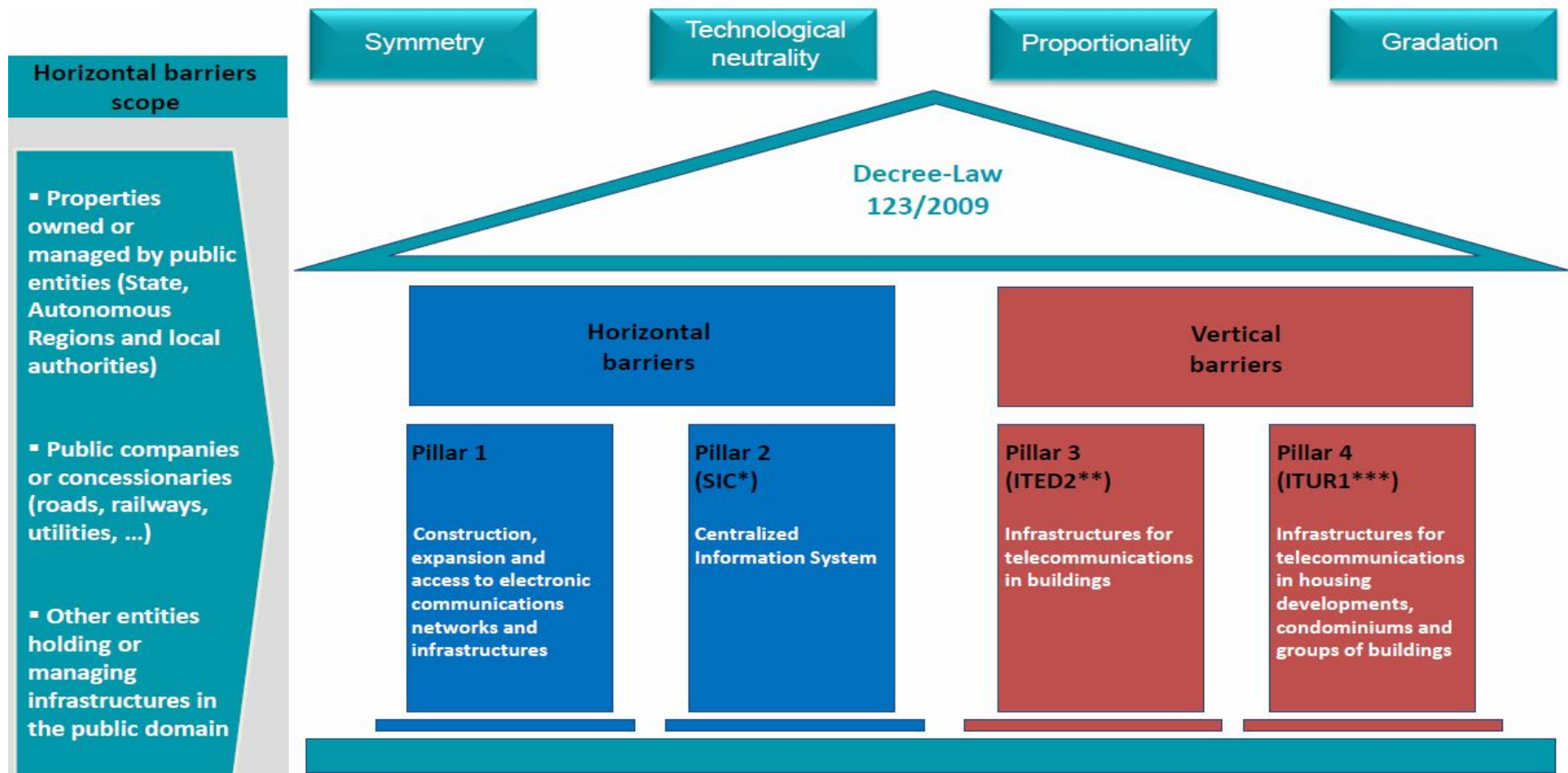
Access to Poles (2)



6. Symmetric Measures

Access to “Horizontal” and “Vertical” Infrastructure

In 2008 and 2009 the Government adopted measures to promote investment in NGA, focusing on access to horizontal and vertical infrastructures



Chapter III of the Decree-Law 123/2009 of 21st May, changed by the Law nr. 47/2013 of 10th July foresees the obligation of all entities (except the concessionary/SMP operator) to give access to its own (or managed) infrastructure suitable for accommodating ECN's

<http://www.anacom.pt/render.jsp?contentId=975261&languageId=1>

Symmetrical access conditions

Open/non-discriminatory access to all suitable ducts and related infra-structure

Access price should be cost oriented

Entities shall publish procedures and conditions applicable to the access

Any (viability) access request must be answered in 20 working days (max)

The installation must be done in 4 months maximum time

Other (horizontal) measures

- ✓ Access to other public infrastructures (e.g. towers, chambers, cabinets, buildings)
- ✓ Simpler and effective rules for the construction or extension of new infrastructures (may be under co-investment), including publicizing and cost sharing
- ✓ A public geo-referenced centralized information system (CIS) for all infrastructures

(Vertical) Access to buildings

- ✓ Open and non discriminatory access to buildings with at least a “dual fiber” optic cable per dwelling and a point for sharing infrastructure in the building or surroundings

- ANACOM is responsible for the enforcement of DL123, including:
 - ✓ breach proceedings and application (of fines);
 - ✓ settling disputes through a binding decision (without prejudice to the right of appeal to the courts).
- Entities that own ducts and related infrastructure suitable for accomodating ECNs shall (publicize and) communicate to ANACOM:
 - ✓ procedures and conditions for access to and use of the mentioned infrastructures (an “offer”);
 - ✓ technical instructions that apply to the installation of electronic communications equipment and systems in own infrastructures.
- ANACOM was also required to issue minimum elements to include in the Centralized Information system (CIS) and technical standards on the design and set up of ITUR (last connection to the building), as previously done for vertical infrastructures within buildings (ITED).

Several operators and utilities have already published their wholesale reference offers for access to infrastructures (ducts), e.g.:

- Oni (operator):
- Optimus (operator):
- Vodafone (operator):
- Estradas de Portugal (public utility):

- Gather information on
 - ✓ geo-referenced data;
 - ✓ information on procedures and access conditions to infrastructures;
 - ✓ procedures and conditions for the allocation of rights of way;
 - ✓ advertisements of construction of new infrastructure.

- By determination of 23 January 2014, ANACOM has approved a second tender for the implementation and management of the CIS (the first tender was nullified by a court order).
 - ✓ Proposals were received until 20th march 2014 and implementation is expected soon.

7. Voluntary Agreements

Framework Directive:

- Facility sharing can be of benefit for town planning, public health or environmental reasons, and should be encouraged by NRAs on the basis of voluntary agreements.

PT-Vodafone Agreement

- The historic operator (PT) and Vodafone signed an agreement on 21.07.2014 to share dark fiber with regard to access to 900,000 HH.
- This agreement follows a model of an IRU contract over 25 years.

8. At the end of the day

Infrastructure sharing is resulting in visible benefits, such as:

- Risk mitigation;
- More effective and efficient investments;
- Cost savings;
- Swifter geographic coverage;
- Lower entry barriers;
- Environmental benefits;
- Consumer benefits (massification of services, better QoS, lower prices).