Copper Switch Off: Policy Drivers and Improvement Pathways

Francesco Nonno – Director Regulatory & European Affairs

BEREC External workshop on migration and copper switch-off in light of the DNA

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AGENDA

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- Coverage & Take Up – EU vs Italy
- Benefits of CSO
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Open Fiber main figures

Open Fiber was born to build an ultra-broadband fiber optic network infrastructure (FTTH) across all Italian regions.
As a Wholesale Only infrastructure player, Open Fiber is responsible for the construction, management, and maintenance of the FTTH fiber optic network, with extremely high levels of efficiency and reliability.

Open Fiber coverage areas

Black Areas

Market competition areas in which (at least) two different providers of ultra-broadband network services operate, or will operate in the near future, and the supply takes place under competitive conditions.

White Areas

Areas in which private operators have not deemed it convenient to invest and therefore lack broadband and ultra-broadband infrastructures.

Grey Areas

Areas where there is a single network operator providing ultra-broadband services and it is unlikely that another fiber network will be developed.

>17,0 mln

Households covered in FTTH

164k km

Infrastructures

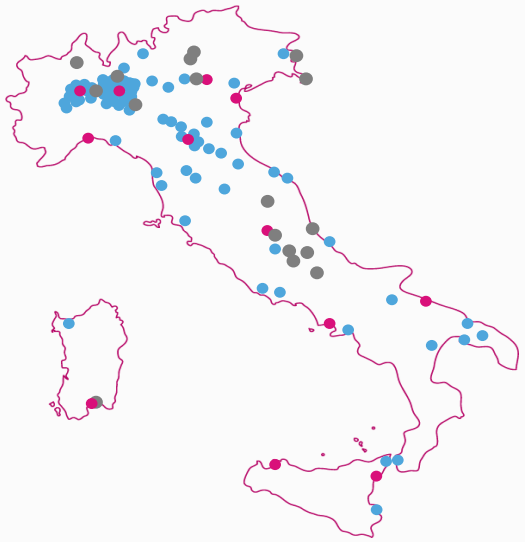
3,8 mln

Customers

Open Fiber today and end of project

~11,1 bln €
Capex PTD

Black Areas



~240 Cities medium and large

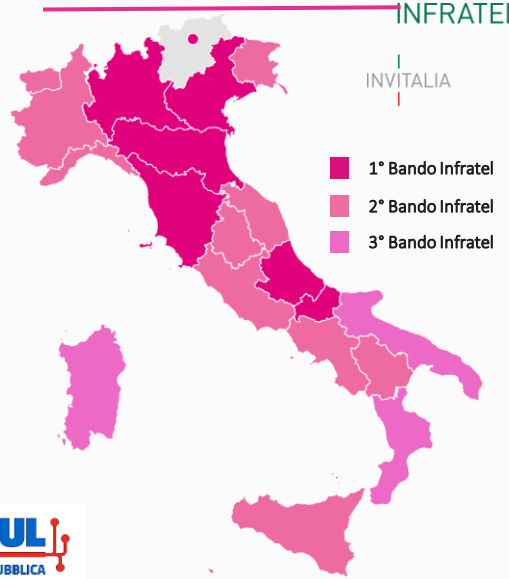
~ 39.000 Km infrastructures

~ 8,9 Mln HHs

White Areas

INFRATEL ITALIA

INVITALIA



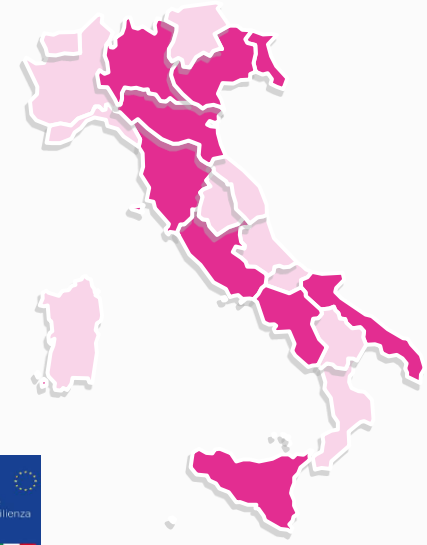
#BUL RETE PUBBLICA BANDA ULTRA LARGA

6.037 municipalities FTTH in 20 regions

> 90.260 Km infrastructures

> 6,4 Mln HHs

Grey Areas (PNRR)



Piano Nazionale di Ripresa e Resilienza

3.881 municipalities in 9 regions to be connected by june 2026

~ 35.000 Km infrastrucures

~ 1.112 K connected buildings in FTTH

> 1,8 Mln HHs - FTTH

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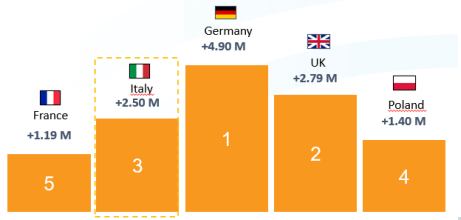
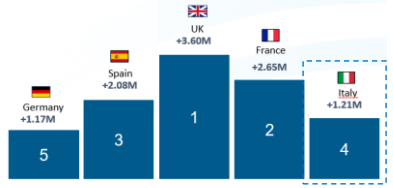
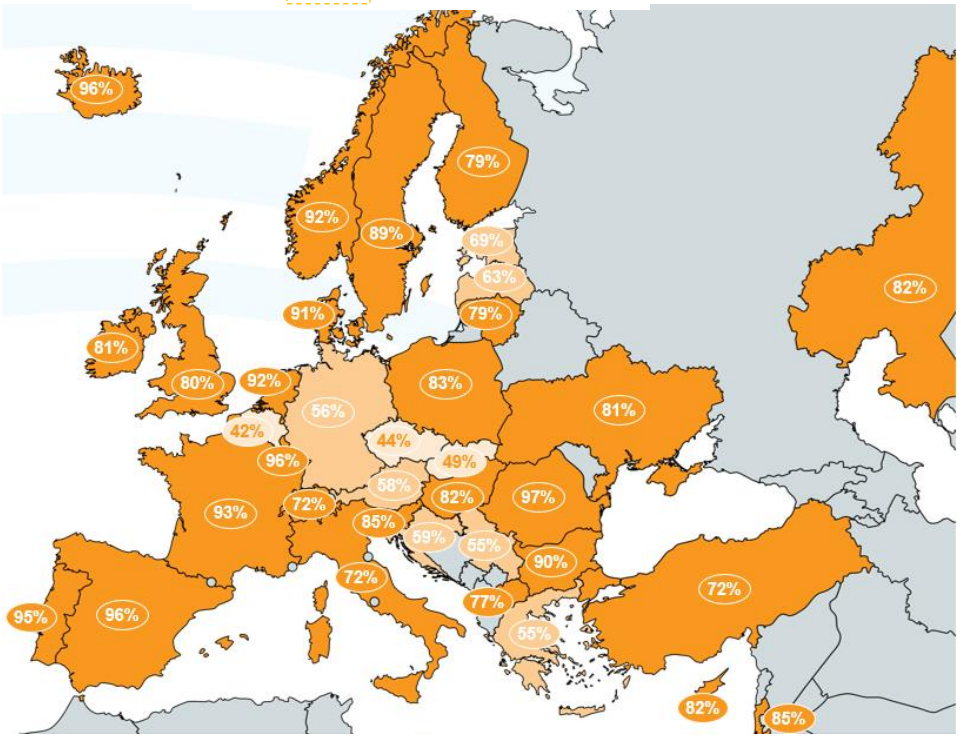
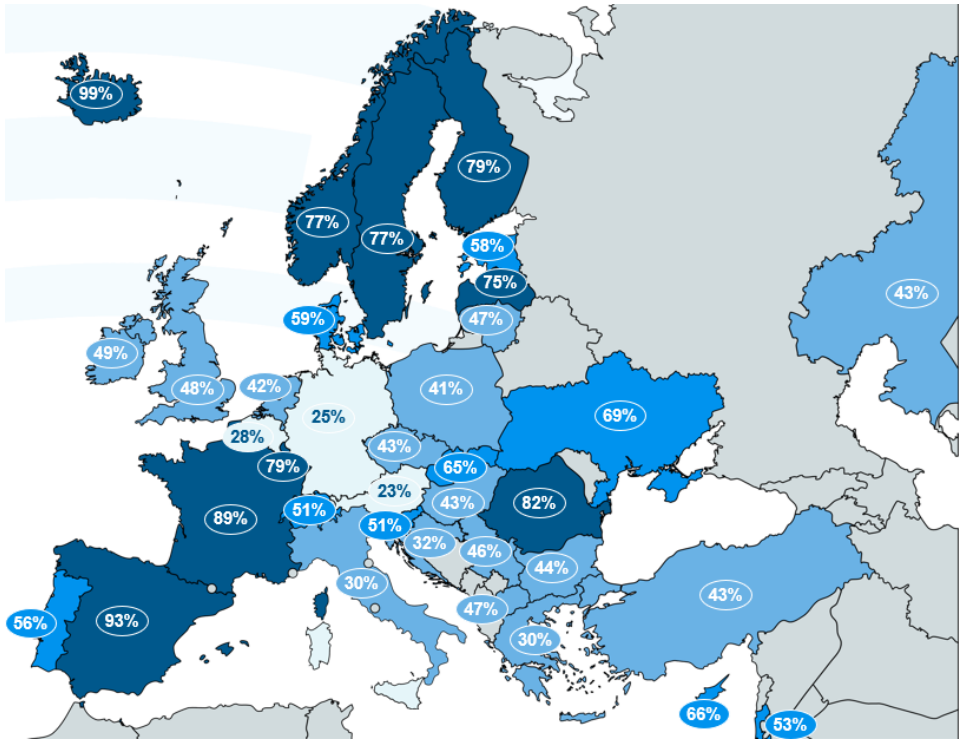
Home passed and Take up - Italy vs. EU









~20.5 mln of fixed lines in Italy

Technology	Lines	Change in the last year
Copper (ADSL)	2.4 million	−600,000
Fixed Wireless Access	2.6 million	+250,000
Fiber to the Cabinet	8.5 million	−800,000
Fiber to the Home	6.7 million	+1.2 million

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Accelerated yet orderly CSO process will generate significant benefits for EU competitiveness

The EC IA considers the following CSO benefits:

- Incentivize private investments;
- Generate GDP growth -> cumulative **GDP gain of €327bn**.
- Contribute to the achievement of the Digital Decade targets -> **By 2030: FTTH coverage +5 pp (78%→83%), take-up +7 pp (48%→55%), and average speeds +7%.**
- Contribute to the adoption of advanced technologies
- Sustainability effects: **energy savings** and higher resilience

2 studies by Deloitte and Politecnico di Torino estimate similar benefits:

- **5,5% GDP growth in rural areas with full FTTH adoption;**
- **+1,1% growth of the employment rate;**
- Environmental gains:
  - ✓ **-86% energy consumption**
  - ✓ **-125 kton CO2e**
  - ✓ **Up to 4 TWh saved with an accelerated CSO**
  - ✓ **Increased network resilience**

Lack of demand: the analysis of the EC Impact Assessment

- Some incumbents sustain that transition to fiber should be purely market driven -> in their view the lack of demand depends on consumers' choices. If consumers don't choose FTTH it is because they are already satisfied (in particular where there is FTTC).
- The EC Impact Assessment highlights that the low take up is due to:
  - ✓ **consumers inertia;**
  - ✓ **higher prices;**
  - ✓ **the possible works needed for bringing fiber to their homes;**
  - ✓ **the (perceived) lack of need**
- the EC Impact Assessment also acknowledges that where there is FTTC, the take up is low and also the coverage is progressing slowly
- Furthermore, the presence of FTTC in some cases provides incumbents with incentives for inefficient FTTH duplication, to reduce: i) profitability of competing FTTH infrastructure; ii) their ability to invest

Lack of demand: lessons from Italy

The experience in Italy seems to confirm that the presence of FTTC generates inefficiencies which hamper consumers to take informed decisions like:

- **Lack of information** -> despite AGCOM intervention to create specific labels to identify the different quality of services, end-users still have difficulties to perceive the difference amongst a FTTC and FTTH connections, particularly for elderly population;
- **Lack of price premium for FTTH** disincentivize retail operators from strongly pushing for customer migration, due to significant migration costs which can not be recovered;
- **Lack of trust** in "free" migration proposals, as a consequence of years of aggressive marketing by retailers;
- **Refusal to accept** new internal wiring or to give access to private properties

Establishing a binding, yet progressive CSO process will reduce the bottlenecks, especially if all the stakeholders, *in primis* the Institutions, cooperate in ensuring adequate communication to end-users

The timing for CSO can be optimized

Regulatory context

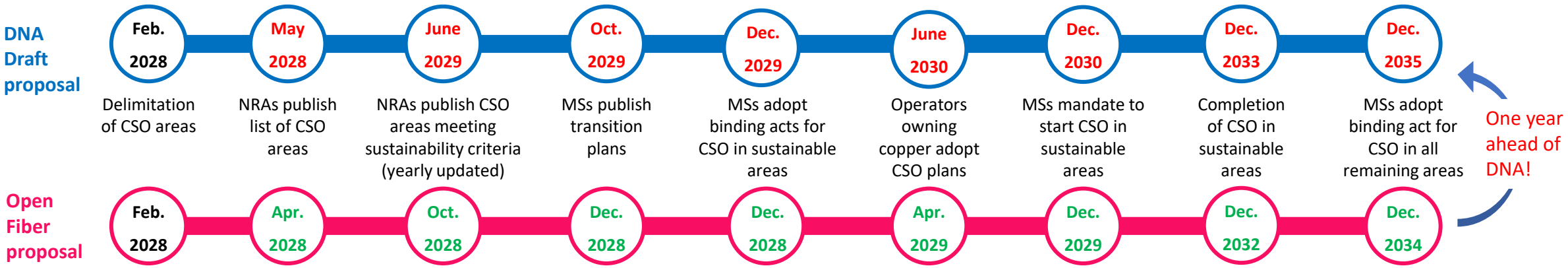
- The process outlined in the DNA provides for excessively extended timeframes.

Rationale for optimization

- NRAs already have updated network mappings (e.g. pursuant to Article 22 of the Directive 2018/1972), making such an extended evaluation period unnecessary.

Proposal for a revision of the timeframe

- Compress the operational phases to bring forward completion by a year, providing greater investment certainty for operators.
- Open Fiber suggests accelerating the CSO by adopting the following updated timetable:



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Art. 56, par. 2, lett. (b): measures to support migration costs should be included

- National Transition Plans are welcome to ensure that the CSO strategy is integrated covering both the switching-off and an active support to the migration as a safeguard for uniformity across the MS and for end-users
- As mentioned, especially in countries where there is no price premium for FTTH connection, retail operators might not be incentivised to promote FTTH offers to avoid sustain migration costs that cannot be easily recovered.
- In the context of the **measures to foster the transition to FTTH Networks** (art. 56, par. 2, lett. (b)) it would be important to **clarify that these measures can include some public funding of the migration costs incurred by retail operators**, if they don't charge end users for the migration. NRAs might ensure that operators benefitting from the support do not unduly increase prices for end-users

Sustainability conditions: «active premises» appears more effective than «homes passed»

Critical issues regarding the sustainability threshold at 95% of the premises

- The definition of premises used is very wide and may represent an obstacle to CSO. For instance, in Italy we have about 36 millions of “premises” (excluding barns, rural buildings, …), but only 20,5 millions have electronic communications services (among them less than 11 millions receive a copper-based service) -> why shall we cover more than 34 millions of premises to migrate less than 11 millions of them from copper to fiber?
- Copper networks do not pass 100% of the premises (In Italy the copper network has been historically activated in about 24 millions different premises). In some cases, the copper network covers less than 95% of the premises in a specific area. Why should a fiber network cover more than a copper network to begin the CSO process?
- Constraining CSO to near-total coverage risks producing inefficient investment or unduly blocking CSO
- Art. 71 already provides a safeguard to guarantee that operators can be obliged to connect end-users upon their request in a CSO area.

Adoption of the concept of "active" premises for efficient migration

- **We propose to amend Article 57, replacing the concept of "passed" premises with the concept of premises "active" with copper services** (i.e. in Italy the threshold to launch the decommissioning of the primary copper network is already based on the concept of «active» rather than «passed» premises).
- This would help focusing migration efforts in areas where the transition is most urgent and feasible, aligning the CSO with real demand and reducing the costs of maintaining parallel networks.

The information to end-users (ref. art. 59, par. 1 of DNA)

Information to be provided to end-users

Article 59, paragraph 1, requires that *end-users affected by the copper switch-off are informed clearly, in a timely and accessible manner about the following:*

(a) the expected timing of the copper switch-off;

(b) any necessary changes to their connectivity service or terminal equipment;

(c) the alternative connectivity services available to them

Difficulties experienced in CSO processes

In different countries the CSO has met difficulties with end-users not willing to update their connection or not easily available in their second homes or with a lack of trust in the necessity of the process.

Necessity of a Public-Private coordinated communication action

In order to achieve the full success of the migration process it is necessary that end-users receive the information on the process and on the necessity to upgrade to fiber both by public and private parties.
It is therefore necessary that public bodies are involved in this process

Open issues: management of essential copper services and the need for preventive mapping (ref. art. 59, par. 2 of DNA)

“Copper-only" services

- Article 59, paragraph 2, requires the continuity of essential services on copper or the migration to functionally equivalent alternatives.

Lack of information and risks

- The scope of the obligation is not clear. The choice to use copper specific solution does not depend on the operators, but it’s the choice of third parties, which are not always known.
- We agree on the necessity of actions to guarantee continuity, but a more detailed obligation should be put on MS (and, in our view, on NRAs)
- In any case, the DNA impact assessment acknowledge that a possibility is the migration from PSTN to all IP as it has been done in countries where the CSO is at an advanced stage.

Action requested from NRAs

- Open Fiber suggests the introduction of a provision for NRAs to conduct public consultations to identify services operating exclusively on copper (e.g. telemetry, remote ignition, elevator alarms, medical devices).
- Only a complete mapping will allow to define a secure migration plan that resolves technical compatibility issues without interrupting critical services and avoid disruption of life-saving services.
- The end-of-sale of copper services should be initiated well in advance of the end-of-service time (e.g. when the formal threshold is reached).

Overcoming infrastructural obstacles to implementation of CSO

Managing refusals for in-building civil works

- In a significant number of cases condominium owners' refuse to allow the necessary construction work to be carried out.
- In our view, the DNA regulation should provide that, in the event of a documented refusal, such buildings are excluded from the threshold calculation (see experimental projects in France).
- *In Italy, OF finds that approximately 2-3% of condominium owners oppose work in the building, thus preventing the activation of the emergency shelter.*

Congested cable ducts and recovery of copper cables

- To solve the recurring operational blockages caused by saturation of physical infrastructure, the DNA should include an explicit provision allowing the NRAs to mandate the removal of disused copper lines, freeing up the space needed to lay fiber optic cables (it can be summarized in a "One-in, One-out" policy for physical infrastructure).

Guidelines for in-building physical infrastructures

- It is recommended that NRAs be mandated to issue guidelines containing technical specifications for the implementation of in-building physical infrastructures. Establishing uniform standards will facilitate infrastructure sharing among operators, reducing burdens and conflicts.

Take aways

- The CSO produces significant benefits and an increase of overall welfare, making MS infrastructures more resilient
- **The CSO process** proposed is excellent, but it **can be accelerated and slightly improved**:
  - ✓ **The process can be initiated and concluded one year in advance**
  - ✓ **Measures to support migration should allow for specific public funding**
  - ✓ **Coverage of 95% of premises active with copper services would be a more relevant threshold to activate the process**
  - ✓ Public bodies should take part to the communication to end users
  - ✓ Essential copper services (Art. 59.2) should be identified through a public consultation
  - ✓ In-building difficulties should be addressed

Francesco Nonno

Director Regulatory & European Affairs

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