

# European Regions for Better ICT Connections

Providing Fibre Solution to Underserved Areas

*Giorgio Proietti Silvestri*

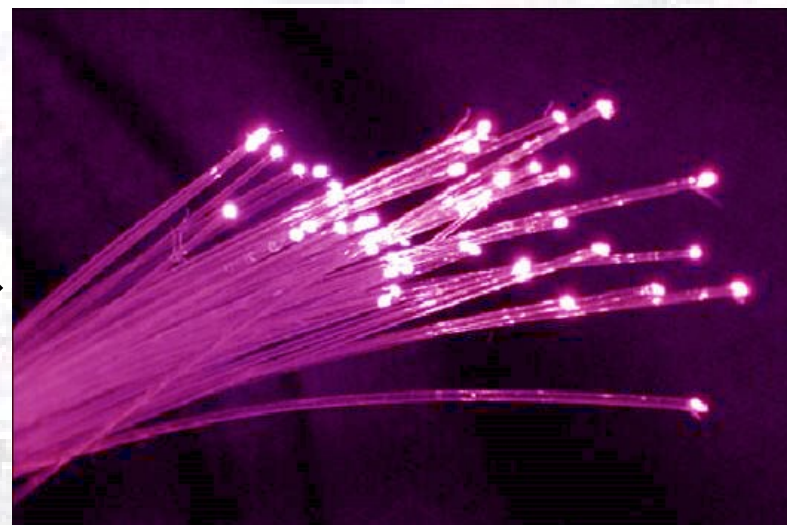
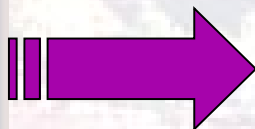
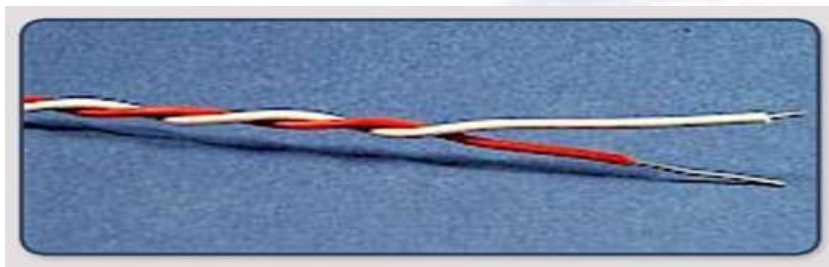
Turin, april 3, 2009



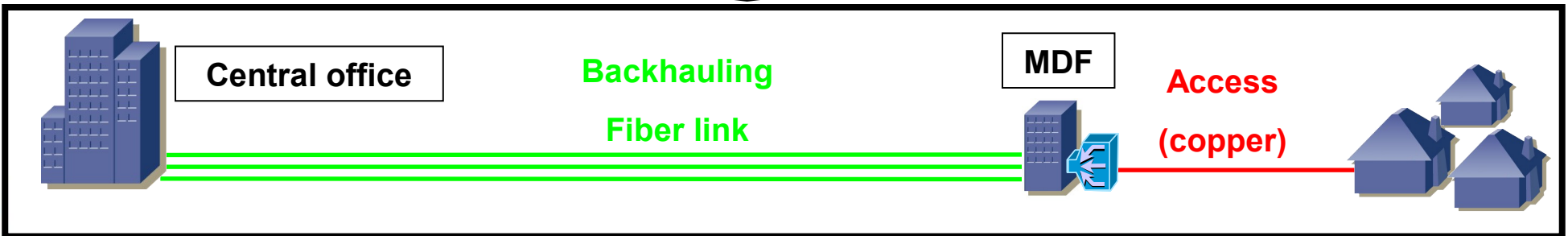
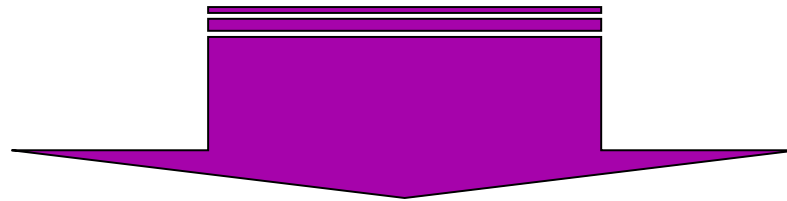
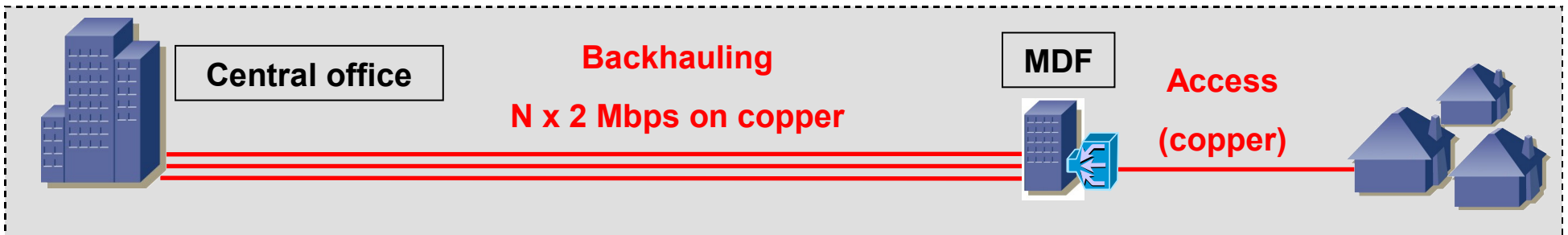
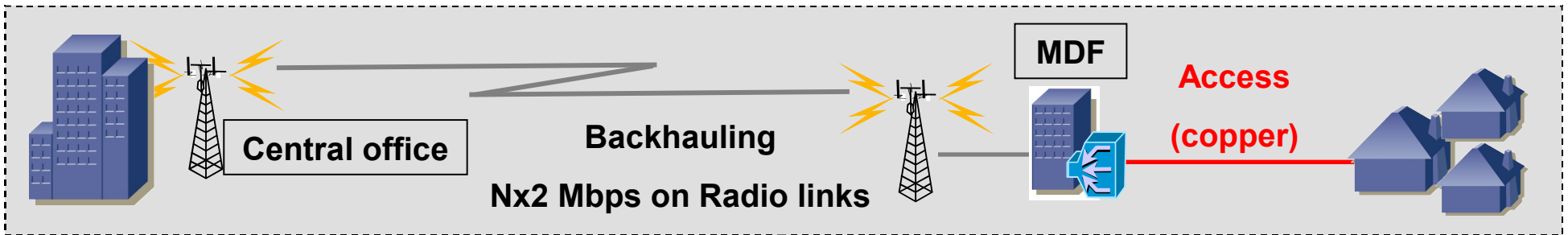
Wide areas in Italy are not covered by real broadband services. Unfortunately these large areas have a very **low density of population and business activities**.

Without broadband, these areas will become much more uninhabited and also the last small business activities will migrate to the more populated areas with **deep social and cultural consequences**.

In the past, the old monopolists reached these areas with **voice services** through the “**universal service**” policy. These **old infrastructures**, first of all in the backhauling, **don't fit with broadband**: typology (copper/radio), length and quality of the lines can't support broadband. Therefore we have to substitute copper or radio links, mainly with **fiber**.



# Digital Divide: architectural evolution





## 1. The pay-back time and the demand

- Broadband customers pay more to have broadband instead of narrowband connections, but the growth of revenues for the operators is not enough to sustain the investments in the so called “market failure zones”. The **pay-back time** is too long, also for the old monopolists.
- There are some possibilities to reduce the pay-back time considering that broadband **demand** is strictly related to PC penetration. In order to sustain the investments it is possible to increase the revenues from broadband. So it is recommended to support the use of PCs.

***By increasing the demand we would generate “more populated” areas***



## 2. Investments

- The investments to deliver broadband to the remote areas are related to the **technology** and to the **infrastructures**.
- First of all it is important to fit access technologies in each area, fixing specific technical **requirements**.
- Most of the access technologies need a proper backhauling to avoid dangerous bottlenecks.
- The backhauling should be in **fiber, up to the concentration points** (Central Offices, Base stations, ...). This is the most expensive cost item in the anti digital divide projects.

In order **to reduce the costs** to lay the fiber we suggest :

- To determine, in the most accurate way, the **current absence or presence of fiber and civil infrastructure** (ducts, poles, ...) to reach the concentration points. It is fundamental to **avoid the overlap** of different interventions and waste of public money
- To **take advantage of other works** in the same area (electricity, gas, water, public light, roads,...) to obtain ducts and fibers at marginal costs.

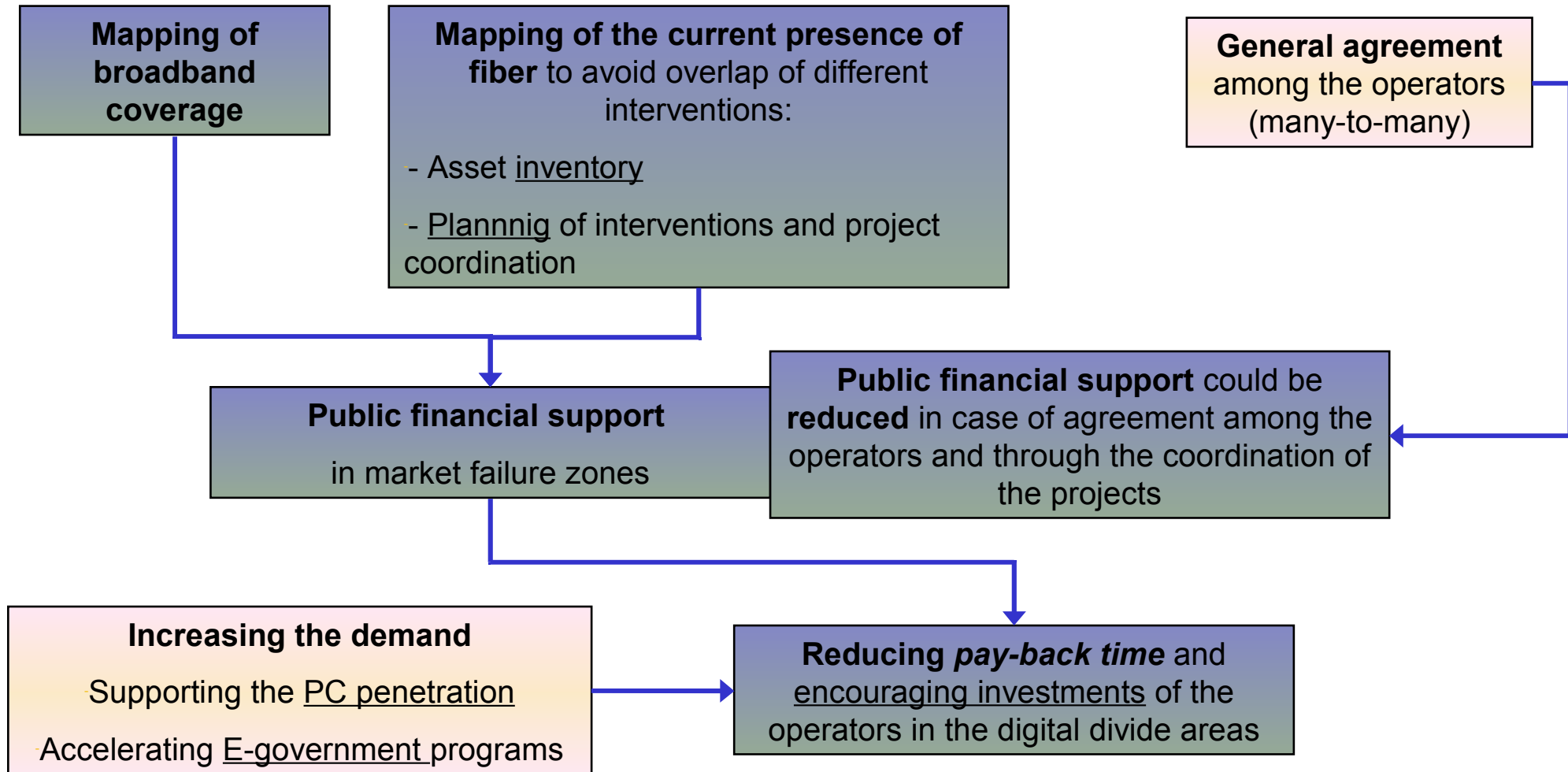


## 3. Public support

Public local governments can support the anti digital divide policy in different ways:

- Local authorities should **map the current coverage of broadband and the presence of fiber**, considering all the assets owned by infrastructured operators.
- **Public financial support** will be necessary to subtain the investments in the “market failure zones” carefully controlling all the project to avoid the overlap between different projects and the dispersion of public money in not consistent interventions.
- All the operators should be **encouraged to sell fiber** to the other operators that will provide broadband services through a general agreement “many to many”. In this way it would be easier to optimize public financial support.
- The Operators that will reach the digital divide zones must provide also **wholesale services**.
- To **increase the demand**, Public local government should give **incentives for the use of PCs** through:
  - **Economic support** for family and business to buy PCs and other ICT HW and SW
  - **Training on ICT** (for young people, workers and small businesses) to make them conscious of the importance of ICT in their activities
  - **E-government** projects with specific applications deployed for the remote areas
  - **E-Healthcare** and **E-learning** projects...
  - ...

# Digital Divide: summary of the model





In the last few years, **FASTWEB** took part in some projects or preliminary phases to reduce digital divide:

- **Industrial agreement signed with Eutelsat Communications** via its **Skylogic** broadband subsidiary that will allow FASTWEB to extend the coverage of broadband service through satellite connections
- **Memorandum of understanding** signed with the central government, with some local governments (e.g. Lombardia and Liguria) and with public companies like Infratel. The purpose of which was to give all the information about broadband coverage and availability of fiber network, and to cooperate in finding the best solution in each area
- Specific contracts signed to give the right of use of **assets** to some regional public companies (e.g. CSI Piemonte, Mercurio FVG, DOCUP, Enia,...)
- **Deployments of projects** to extend broadband coverage in some regions through public financial support (e.g. Puglia and Campania)
- **Cooperation with many other operators** for mutual network extension through an intensive **infrastructure and fiber optic cable sharing**

Thank you !

*Giorgio Proietti Silvestri  
Head of Design & Implementation  
Network & Systems Department  
FASTWEB*

*[giorgio.proietti@fastweb.it](mailto:giorgio.proietti@fastweb.it)*