

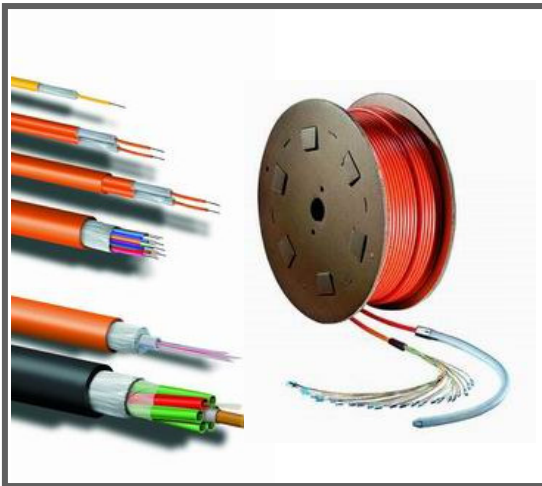
# The implications of community network rollouts on the future telecom market structure

**Jan Van Ooteghem**  
Ghent University – IBBT

WP1 Meeting Helsinki – 28/05/2008

---

## *FttH networks*



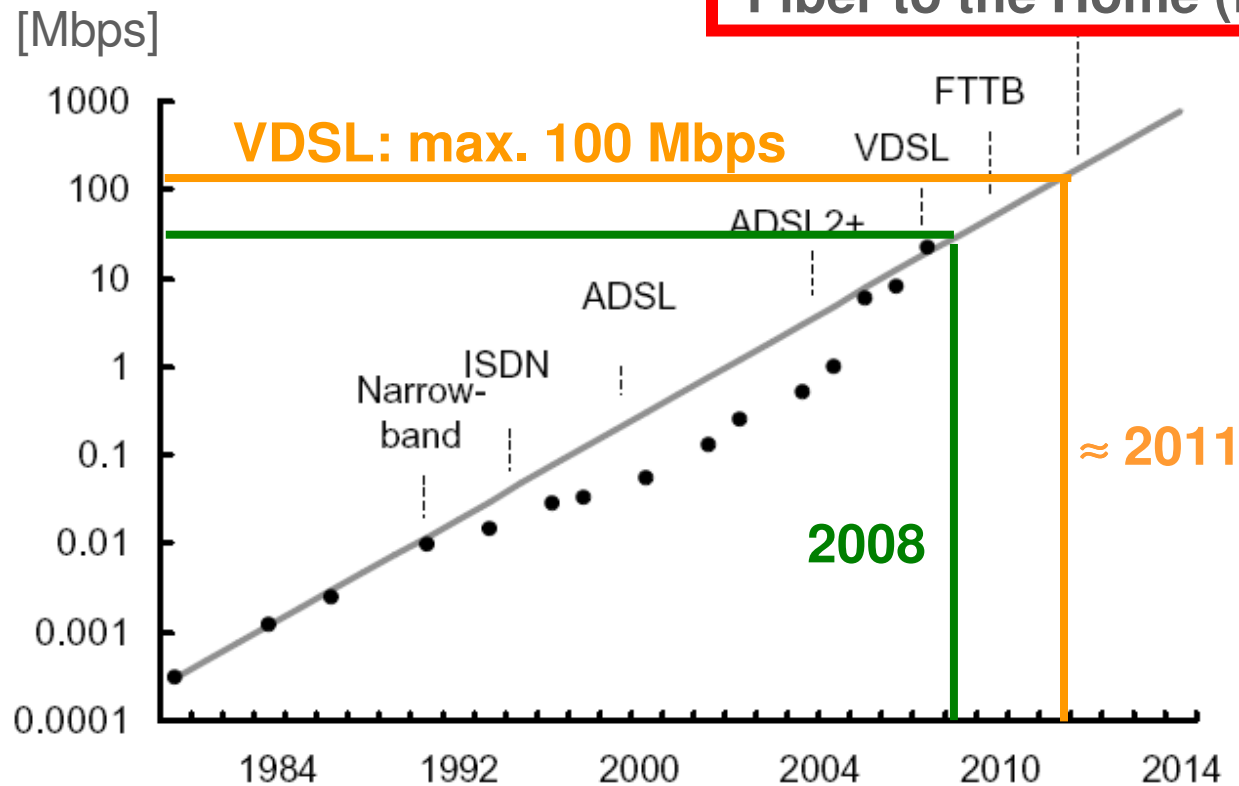
## *Rollout models*



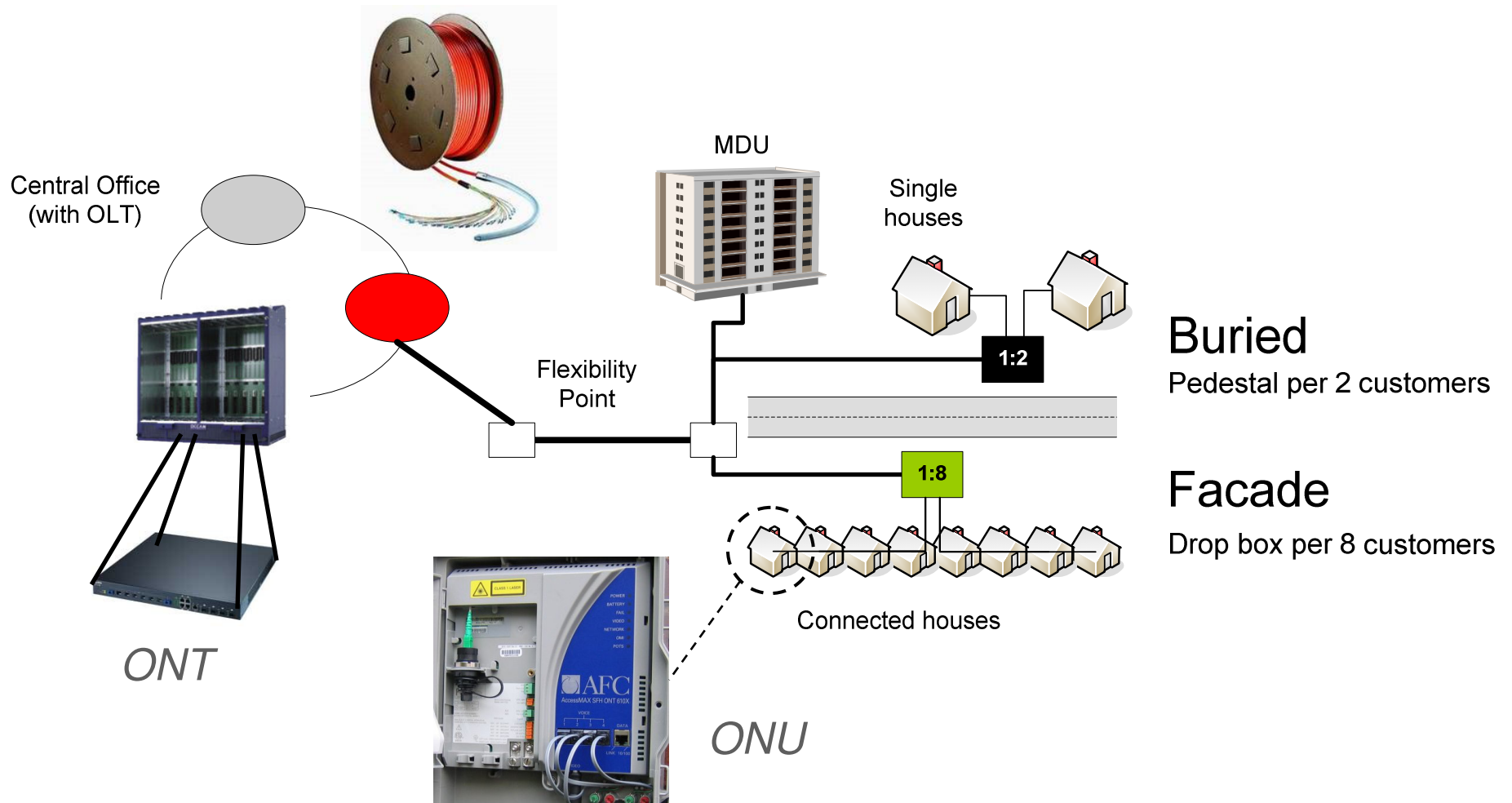
## *Case study*



## Bandwidth evolution, DSL example



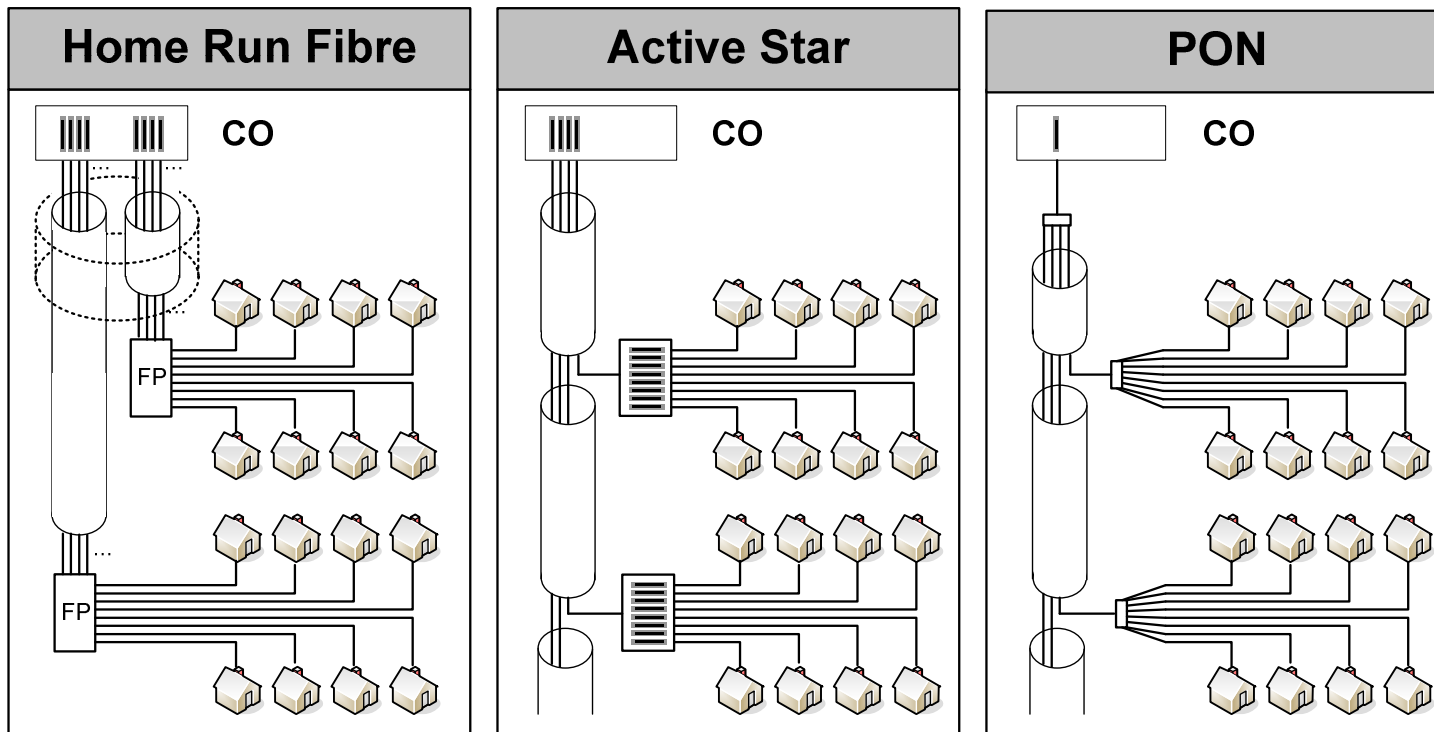
Bron:  
IEEE Spectrum



"The implications of community network rollouts on the future telecom market structure"



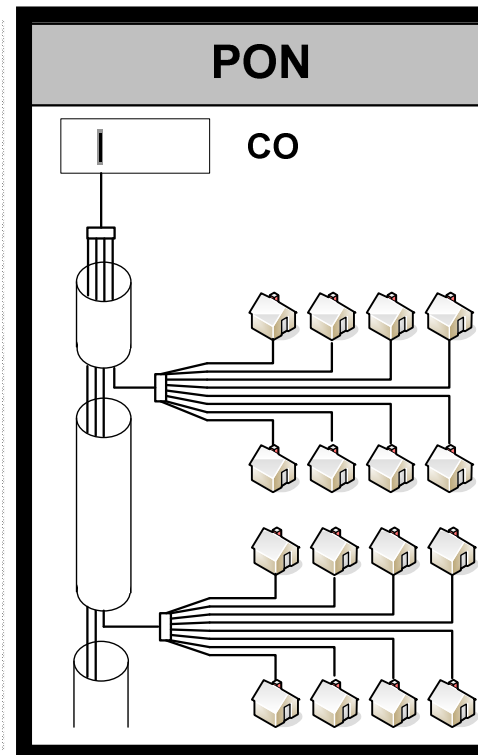
# There are 3 different architectures for FTTH



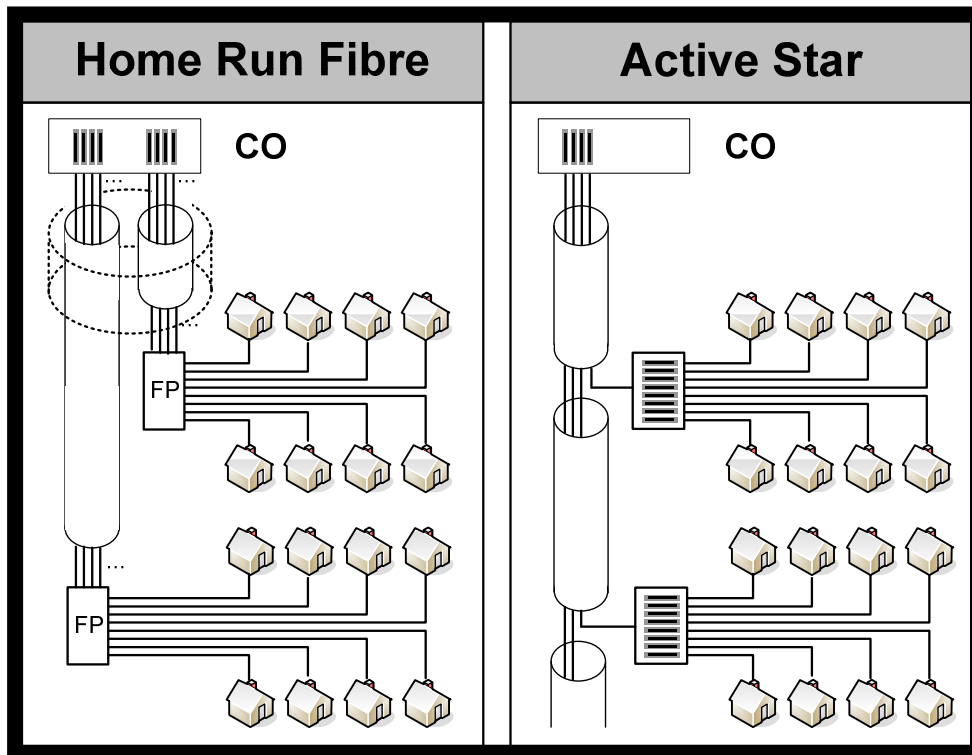
# There are 3 different architectures for FTTH

## Telecom operators Active Star

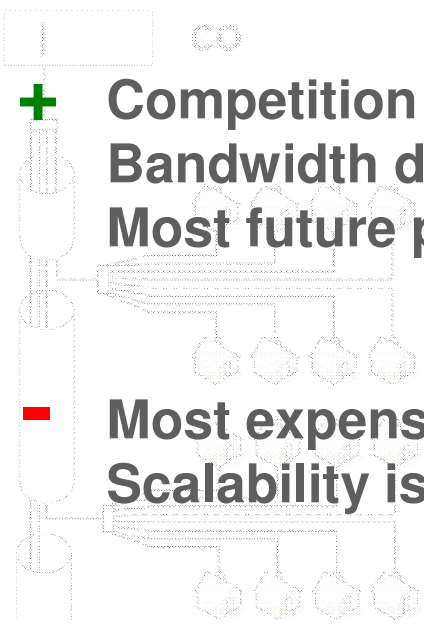
- + Cheapest network rollout**
  - Start from existing situation**
  - Passive components**
- 
- Shared bandwidth**
  - Opening network difficult**



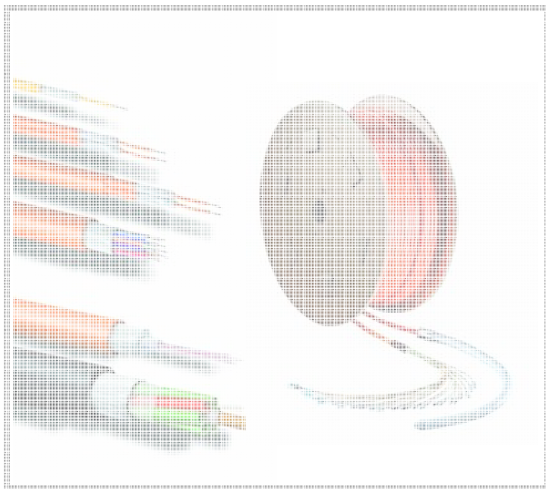
# There are 3 different architectures for FTTH



## *Community networks*

- 
- +** Competition
  - Bandwidth dedicated
  - Most future proof
  - Most expensive
  - Scalability issues

## *FttH networks*



## *Rollout models*



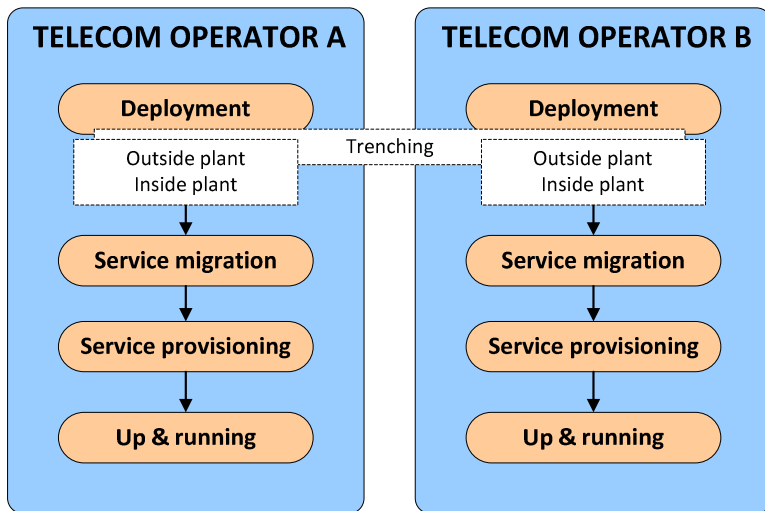
## *Case study*



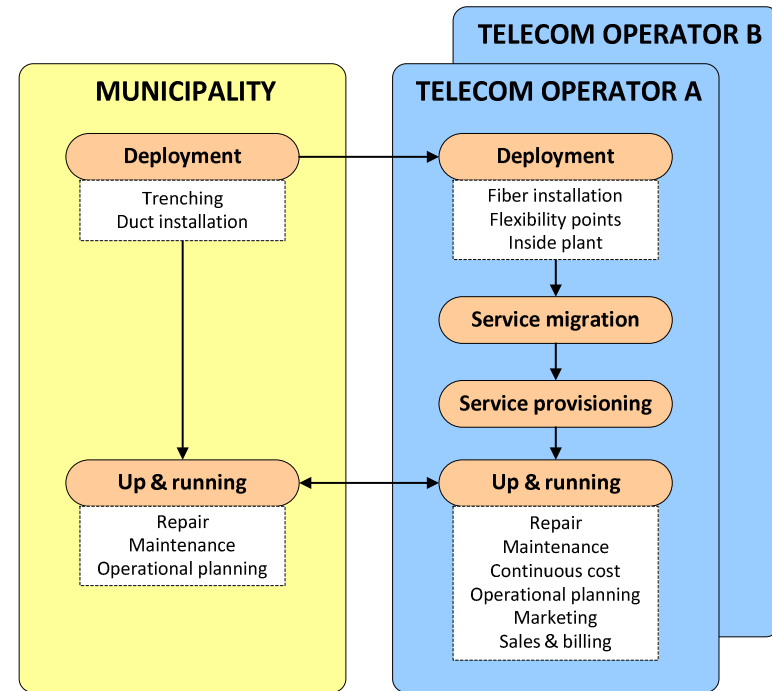
- No action from telecom operators
- Positive image for the city
- Extending the own service network
- Reducing the digital gap
- Independently of telecom operators
- Regulatory and cost advantages

- Private networks (competition model)
  - *Model 1: Closed competition networks*
  
- Municipality network rollout and ownership
  - *Model 2: Open duct network*
  - *Model 3: Open fibre network*
  - *Model 4: Open fibre infrastructure network*
  - *Model 5: Closed municipality network*

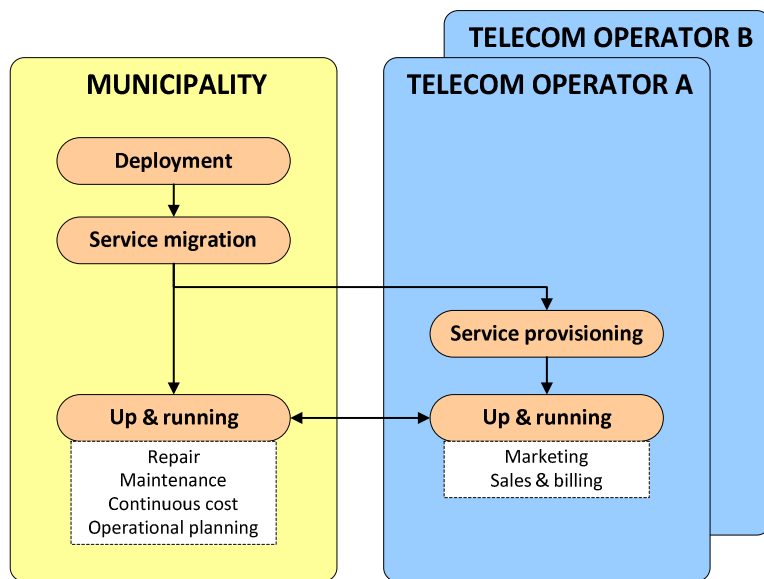
## Closed competition networks



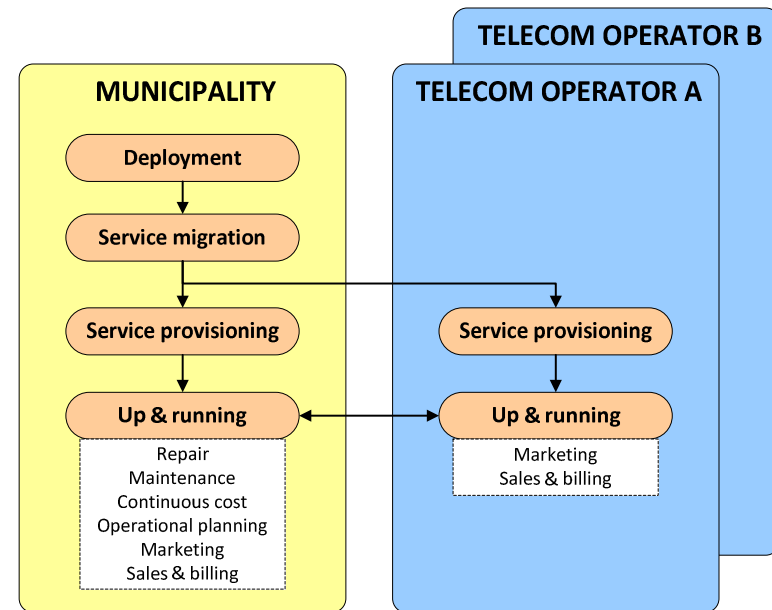
## Open duct network



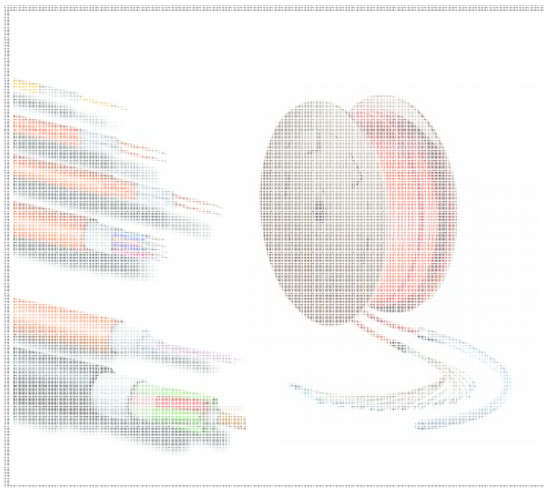
## Open fibre network



## Open fibre infrastructure network



## *FttH networks*



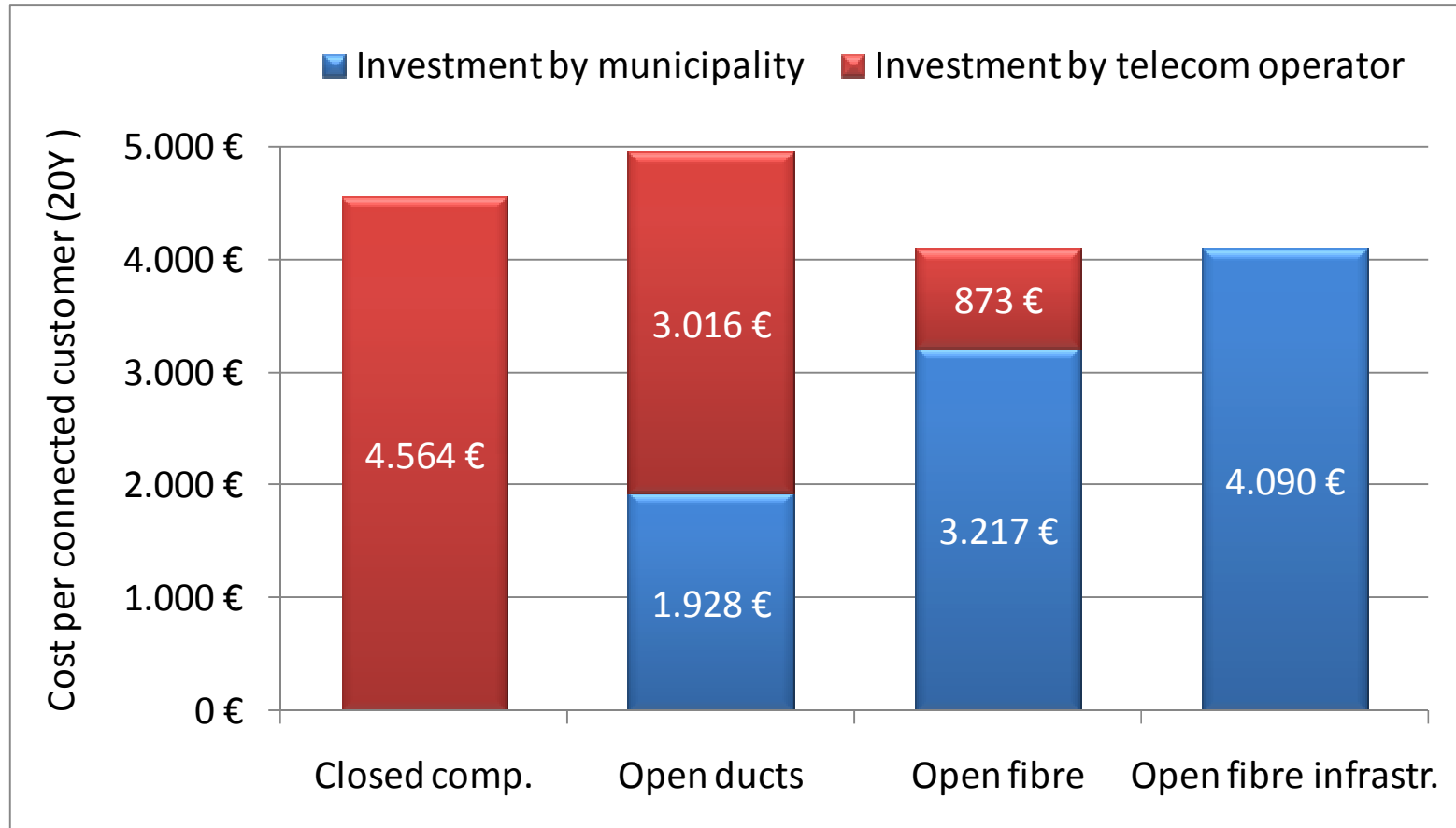
## *Rollout models*



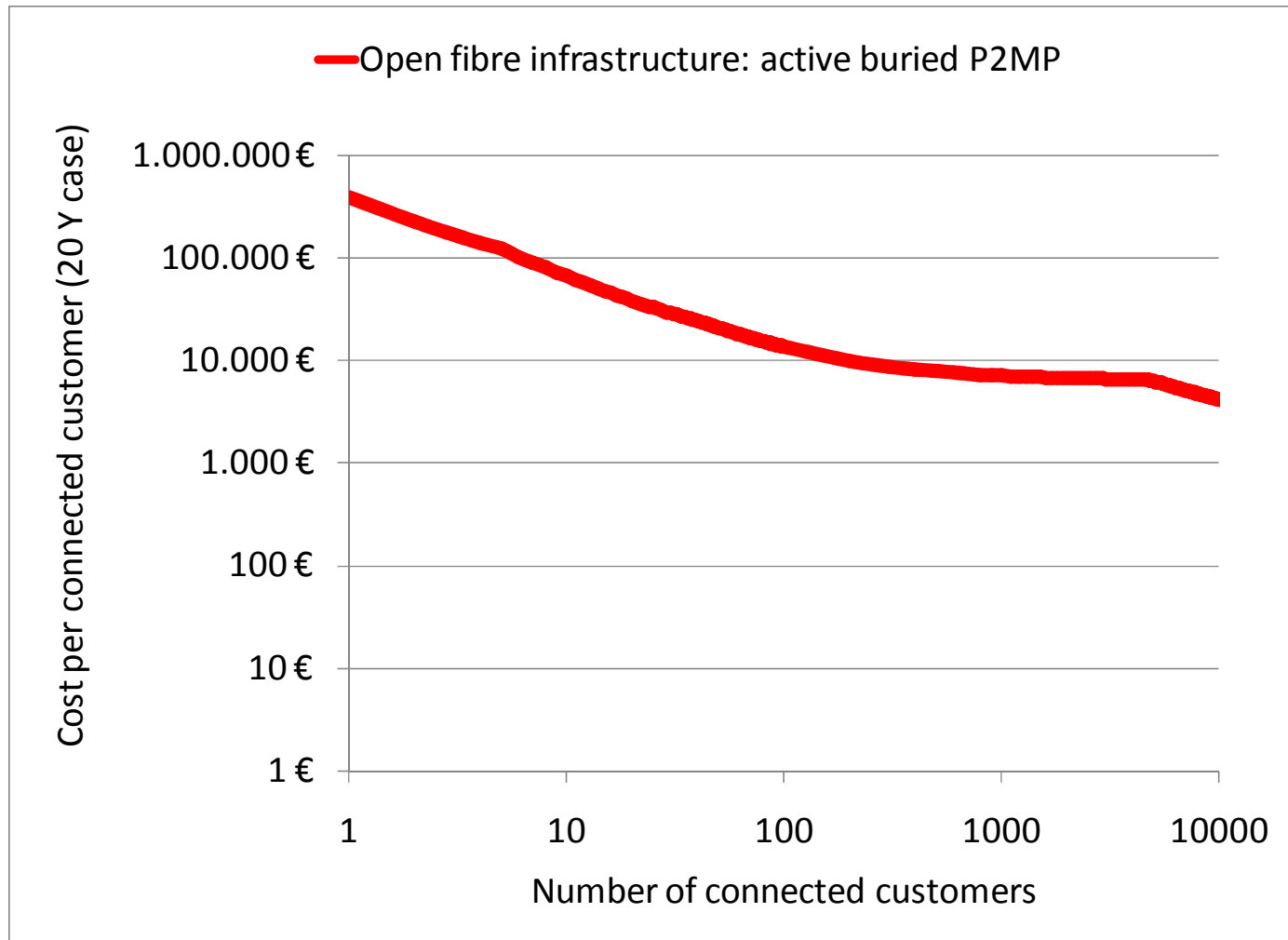
## *Case study*



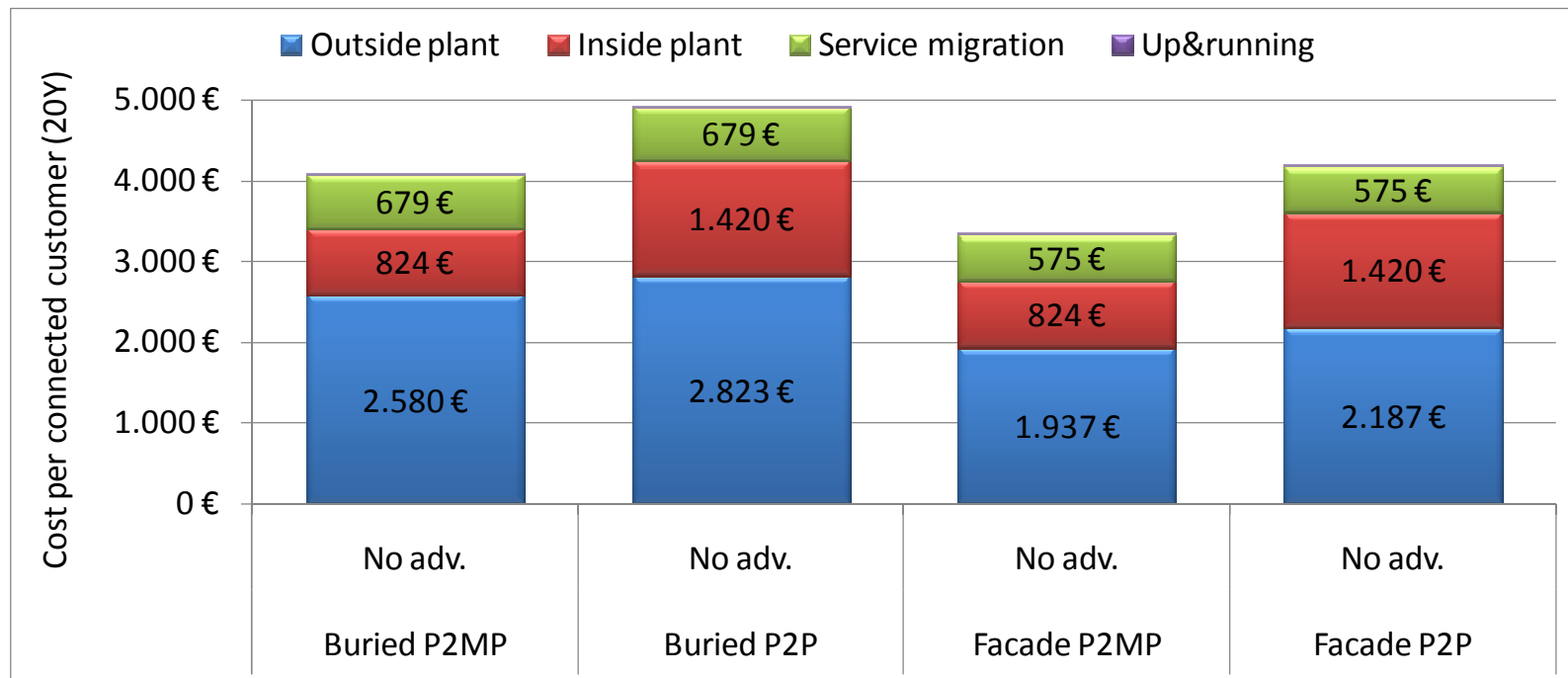
# Rollout model comparison



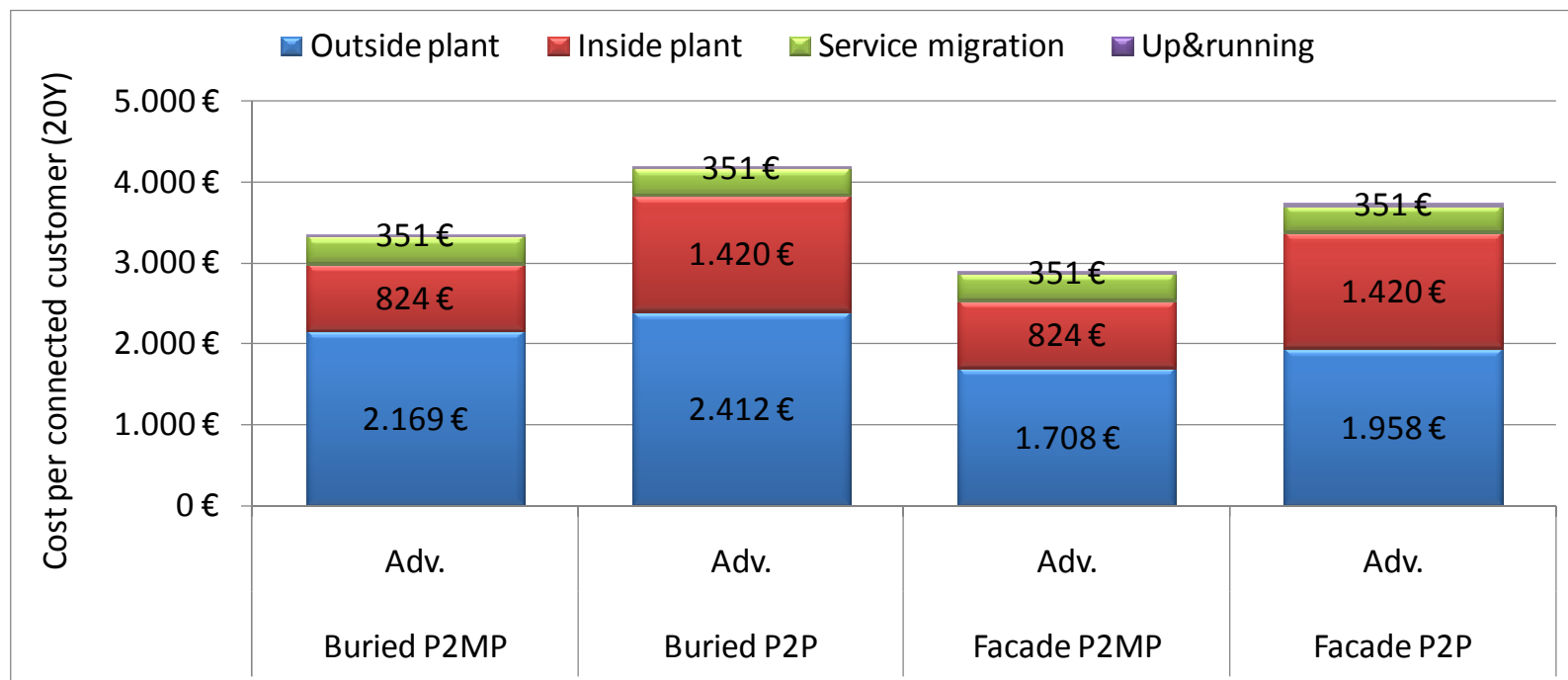
# Cost per connected customer



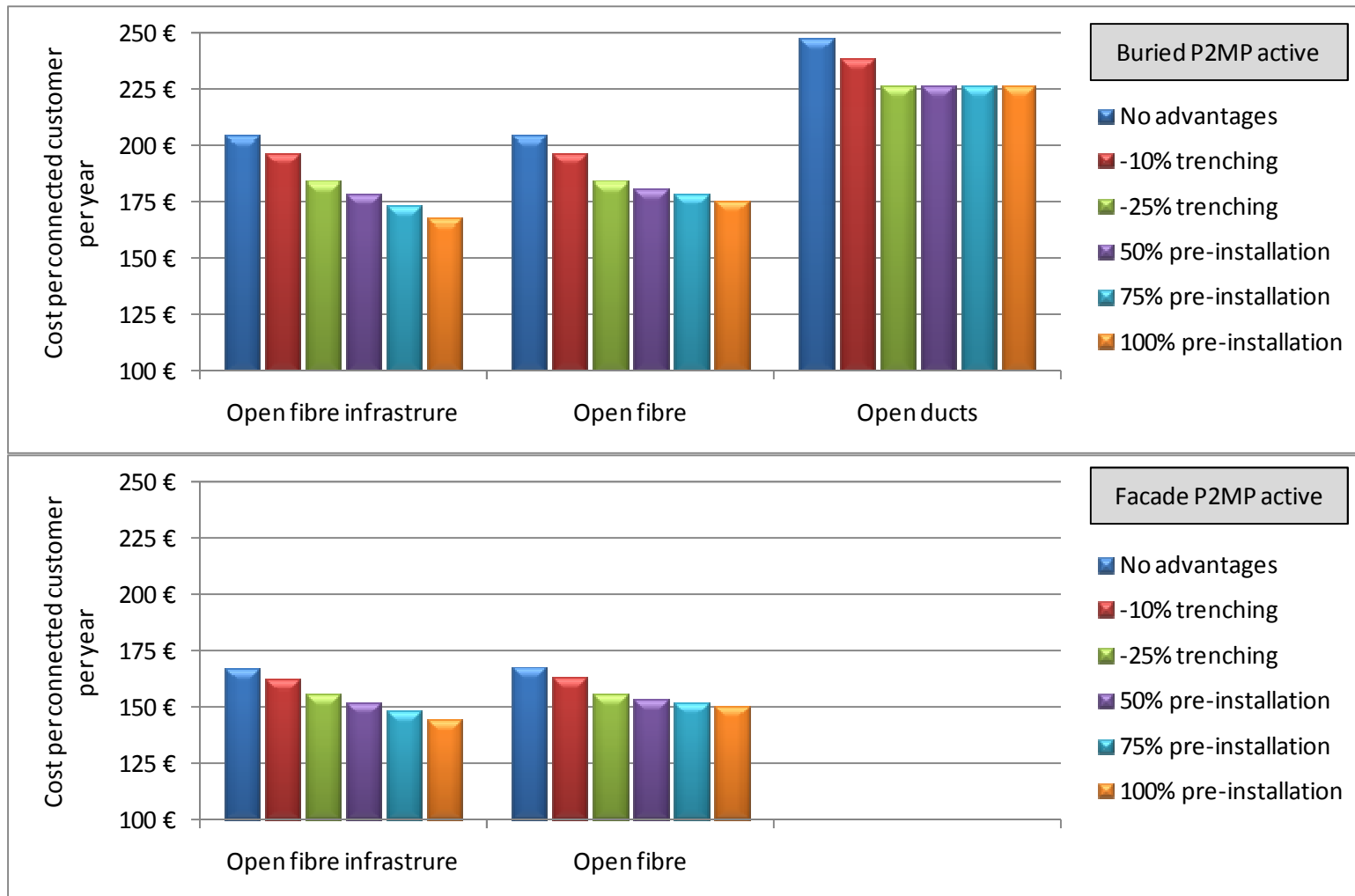
*No advantages*



## Advantages



# Cost per connected customer per year



- Telecom Operators
  - Use a gradual upgrade to meet the user's needs
  - Are put off by the high digging costs
  - A lot of uncertainties with respect to the regulation

Many telecom operators are hesitating to deploy FTTH

- Case study for municipality network
  - Cheaper than closed competitive networks
  - Direct advantages (aerial rollout, network planning, ...)
  - Indirect advantages (image, extra revenues, ...)

- Finding appropriate business models for community network deployment
- Identify reason for faster or slower adoption of FttH in different European regions (e.g. based on coverage of DSL and DOCSIS)

**Thank you for your attention**

**Questions?**

**Personal details:**

Name: Jan Van Ooteghem  
Company: Ghent University – IBBT  
Phone: +32 9 331 49 81  
E-mail: [jan.vanooteghem@intec.ugent.be](mailto:jan.vanooteghem@intec.ugent.be)

