

FIBER TO THE HOME (FTTH) AND COMPETITION: DEVELOPMENTS IN THE NETHERLANDS & CANADA

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Context



- FTTH as the “final broadband service” due to high speeds?
- Japan & Korea: >40% of residential broadband connections
- Europe < 1%, U.S. ~3%

Many questions & uncertainties

- High upfront investments
- Technological superiority?
- Replacement of other last mile infrastructures?

→ Should FTTH be regulated?

- Incentives for investor to recoup investment
- Stimulate competition
 - If open access (service based competition): Opening at certain conditions
- Relation to technology?
 - PON vs. PtP
 - Costs, complexity of enabling open access, sharing of fiber between subscribers

Questions



1. How is FTTH changing the competitive landscape of broadband markets?
2. What factors underlie the growth of FTTH networks?

Developments in the Netherlands



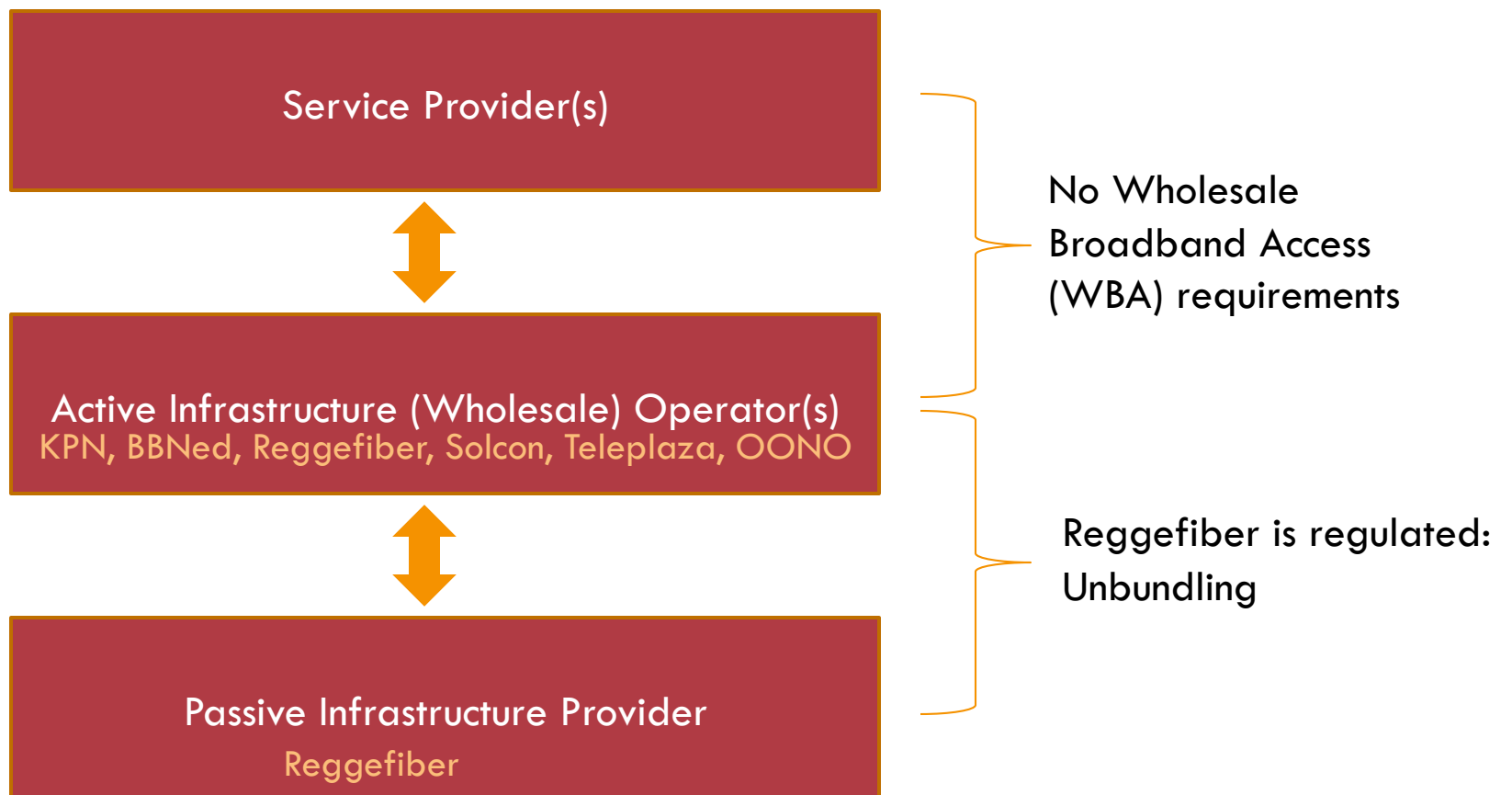
- Early 2009: 4% of broadband connections are FTTH
- Projections: > 70-80% FTTH coverage by 2020-2030

Currently:

- 349.000 homes passed
- 62% ready for service
- 139.000 active subscribers
- 61 ongoing FTTH projects (in different areas)

The three layered access model

Regulatory Requirements



Amsterdam Citynet



- Problems with the 3-layered model:
 - Who is responsible for marketing to end-users?
- Experience: Pure service provision is not highly desired; entrants want to act as active operators

- Result: Exclusivity period – couple active operator and service provider together
 - @Amsterdam Citynet all major CLECs expected to collocate

New Market Entrants



- Teleplaza (Intermezzo, Tilburg)
 - Active operator in Tilburg; passive provider in few projects
 - Provides Internet access services, resells Ziggo's RTV services
- OONO (Red Apple, Rotterdam)
 - 1st GPON network in NL
 - Active operator
 - Claims first structurally separated network
 - 3 different providers for Internet, telephony & TV
 - Wireless Campus acts as service broker
 - Lease tariff: €0, subscribers get discount on triple play services
- Both no interest in Reggefiber's networks

Effects: Infrastructure Competition



- Cable providers sticking with cable & upgrading
 - DOCSIS 3.0
 - UPC in Amsterdam to offer 120 Mbps service (Fiber Power broadband service), Ziggo is advertising to follow
 - Heavy advertising, including localized
- The future of FTTC/VDSL?
 - Incumbent KPN not very active anymore?
 - Tele2 to start offering VDSL2 from CO, under the name Fiberspeed

'Conclusion' NL



- Even though extent of service based competition remains unclear,
- Market growth stimulated by:
 - Proactive regulator with regulation that requires unbundling
 - Competitive market in general → facilities based competition
 - Investment not so much by telcos but municipalities, social housing agencies, etc.

A Different Story: Canada



- 0% footprint
- Mostly very small, rural, projects
- Unregulated
- Mostly use of GPON architecture, one project with dark fiber
- Problems:
 - ▣ Backhaul
 - ▣ Finding a service provider
 - ▣ Investment

'Conclusion' Canada



□ Growth impeded by:

- Limited competition in the market -> oligopoly leads to limited activity by incumbents, independents afraid to invest for fear of bankruptcy
- Small providers having difficulty obtaining funds
- Problems with backhaul (FTTH = very high speed? Nope – 5 Mbps)

Summary & Conclusion



- Prospects for service based competition remain questionable
 - ▣ At what level will competition take place?
- FTTH to stimulate infrastructure competition in competitive markets
- So what about markets where competition is limited?
 - ▣ Regulatory priority: stimulate investment
- Clear direction by the regulator is needed: with uncertainties no investments



Questions?