

NGN

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WIND Telecomunicazioni S.p.A.



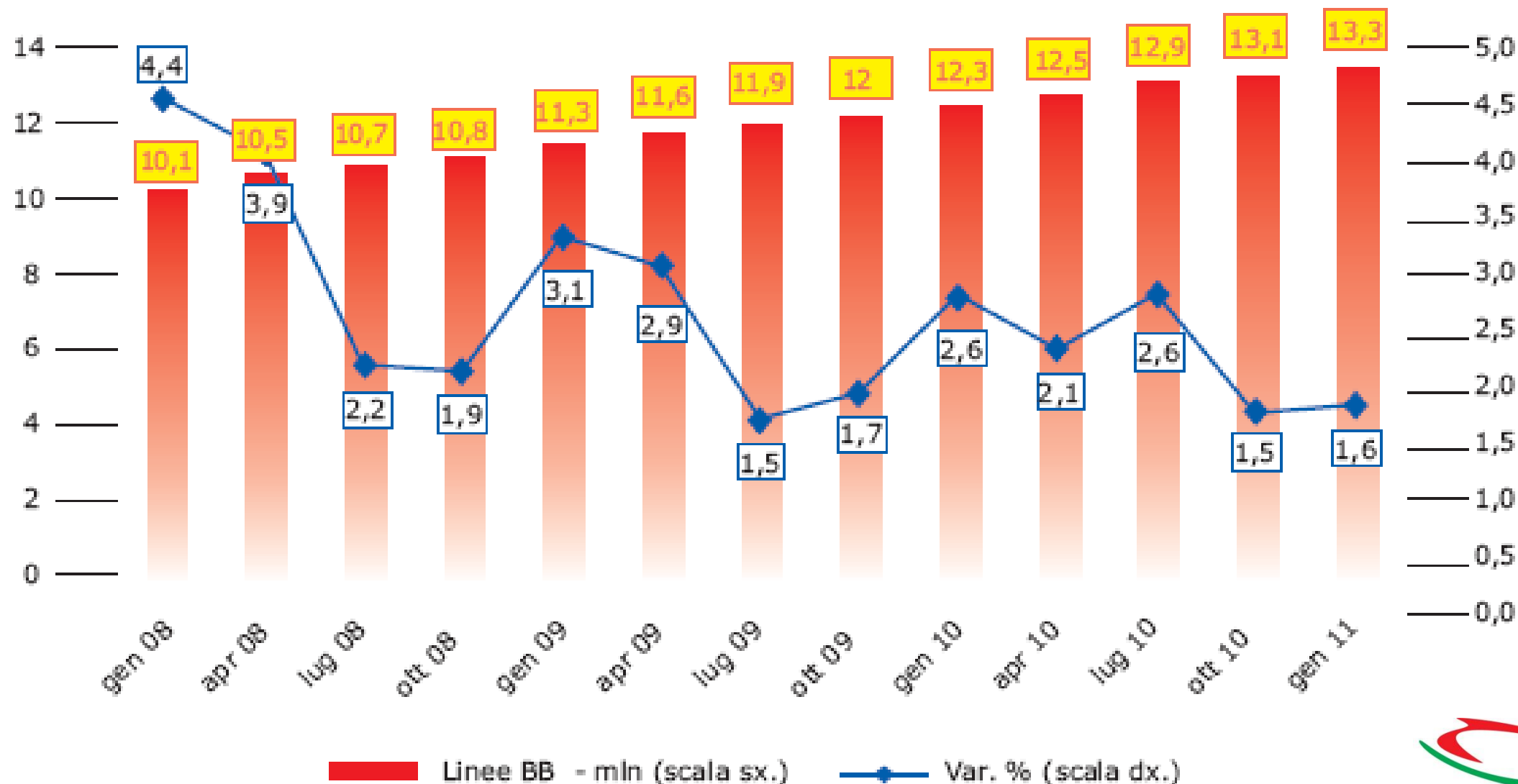
NGN & Wi-Fi

Bologna, 26 settembre 2011

- **Current Broadband situation In Italy**
- **FTTH models**
- **Conclusion**

Fixed Broadband in Italy

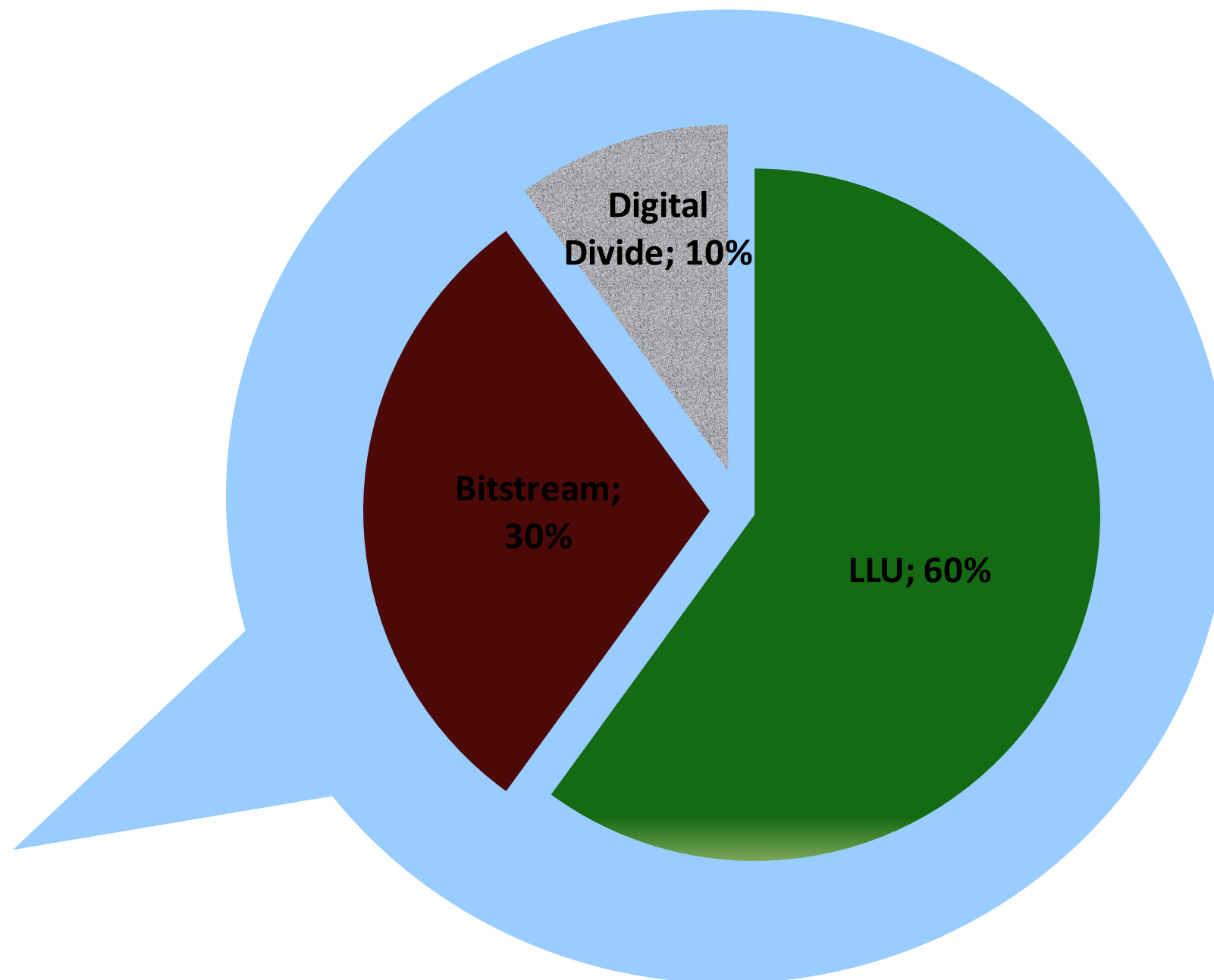
Figura 2.26. Accessi a larga banda su rete fissa (2008-2010)



Fonte: elaborazioni e stime dell'Autorità su dati aziendali

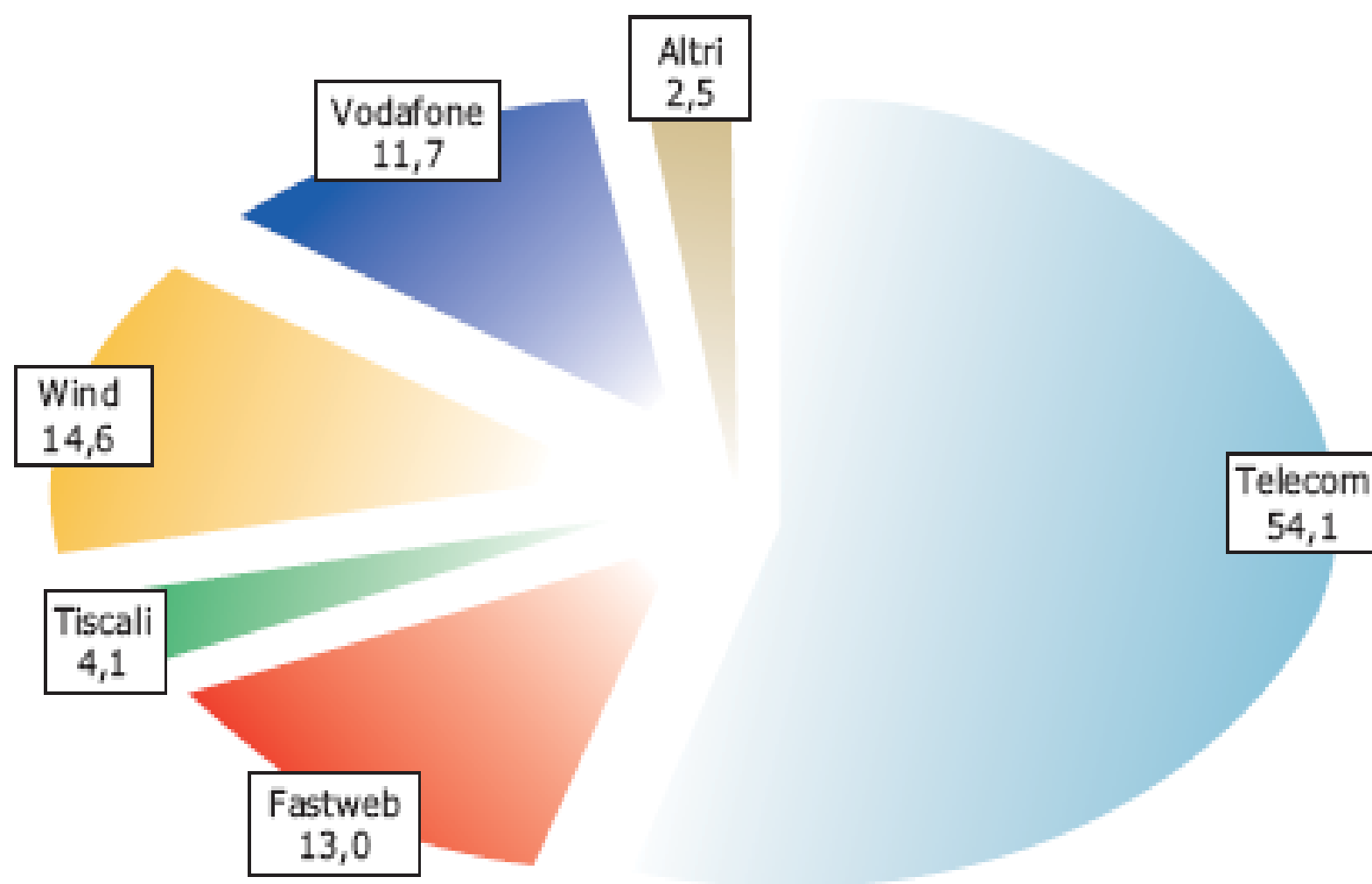


Fixed Broadband Coverage in Italy



Fixed Broadband Market share

Figura 2.29. Quote di mercato nella larga banda (dic. 2010, %)

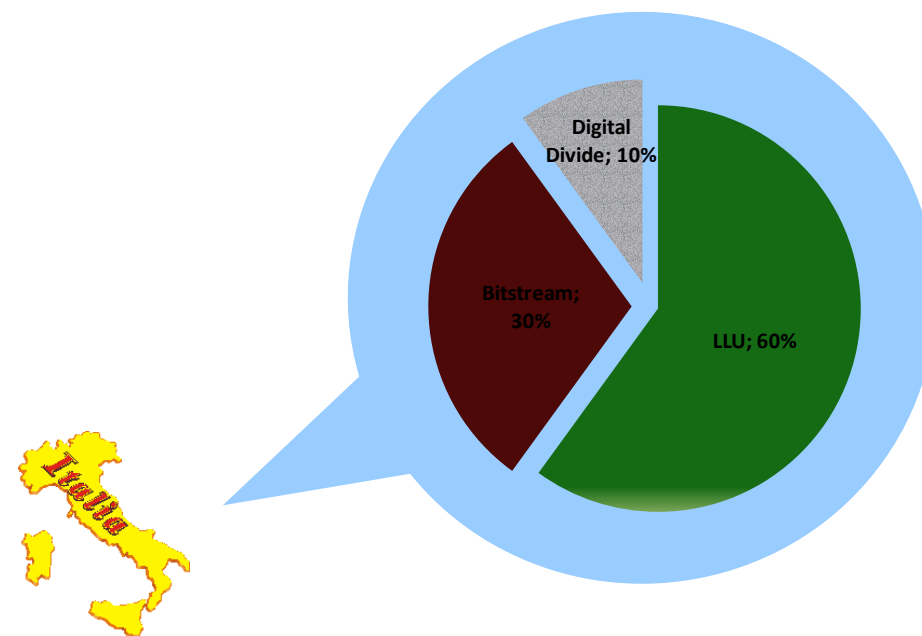


Fonte: elaborazioni dell'Autorità su dati aziendali



Broadband Competition is mainly in LLU area

- **WIND Broadband Market Share in LLU area is more than twice than in Bitstream area**
- **In LLU area there is real competition**
- **Bitstream model “as is” doesn’t work**



LLU is a success story

The Unbundling model used with the classical copper access network has been a case of great success in **opening** the access network and has allowed great development of competition and created great advantages for the consumers.

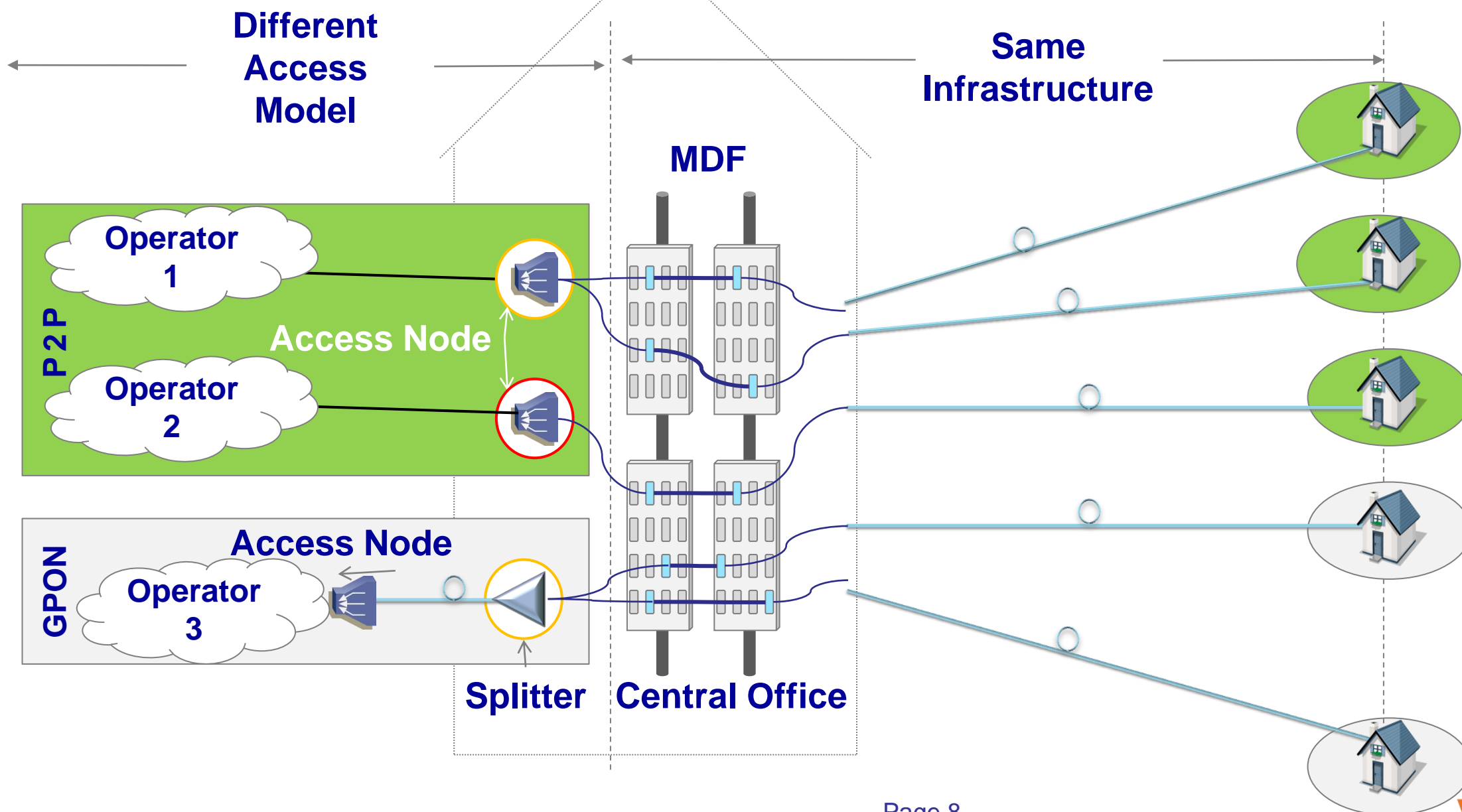
Copper Network is unique as:

- electricity distribution
- motorway
- railway
- sewers
- water ducts
-

Why not FTTH?

Fiber optic unbundling in FTTH

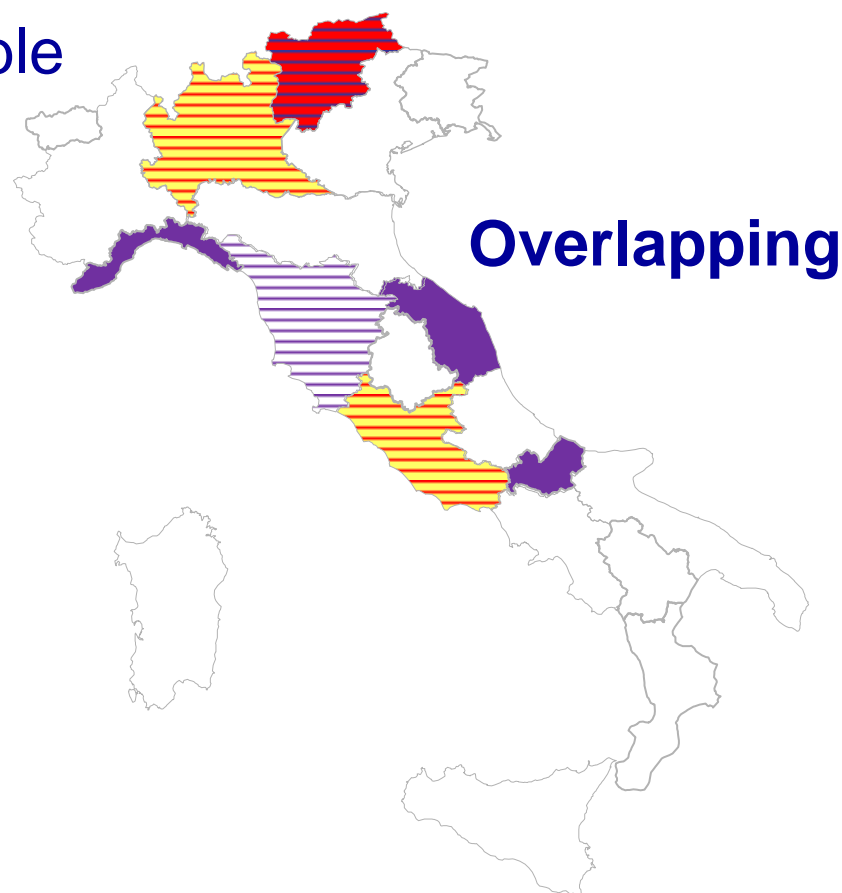
Point to point architecture, one fiber for user from the exchange to the home. The fiber optic unbundling can be provided at the exchange side. Solution is similar to copper unbundling.



- ❑ FTTH has long term viability
- ❑ Pay back investment **not less** than 7-10 years
- ❑ Crucial issue for credible business model is **Copper Total Replacement.**
- ❑ Copper fees totally transferred to the fiber network.
- ❑ Other solutions for enhancing the FTTH business model can be found by introducing new broadband services and by decreasing the cost per home passed (**100% take rate**)

FTTH Business Issues

- ❑ Many studies show that one infrastructure (e.g. P2P) can optimize the global investment and the TCO
- ❑ The total amount of available money is limited. Instead of overlapping several networks, the overall coverage could be enlarged with a single network, using the same amount of money
- ❑ Infrastructure could be a premium only in start-up phase
- ❑ Lesson Learned in Mobile Tower is clear: now each operator tries to share sites as much as possible



Investment for only one open infrastructure (e.g P2P) seems the best way



Infrastrutture a Banda Ultra Larga per "Italia Digitale" Tavolo Tecnico "Operatori - Governo"
28 Ottobre 2010



Final Report for Ofcom Competitive models in GPON 1 December 2009
Ref: 15340-493

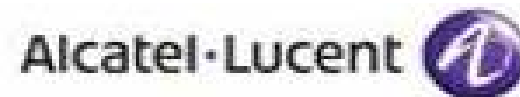
FTTH Deployment Considerations
© 2008 Cisco Systems,
Wolfgang Fischer



FTTH Business Case and Implications
FTTH Business Case and Implications



European FTTH Forecast, 2009-2014 Graham Finnie
Chief Analyst Heavy Reading
24 February, 2010
FTTH Council Conference, Lisbon



WW FTTx access – market view and the needs for fibre access
All Rights Reserved © 2 | High leverage Network | Alcatel-Lucent 2009



Pure P2P cost VS Multi-GPON



MINISTERO DELLO
SVILUPPO ECONOMICO
DIPARTIMENTO PER LE COMUNICAZIONI

Memorandum Of Understanding Italia Digitale
Sviluppo dell'infrastruttura per Reti a Banda Ultra Larga
Roma, 10 novembre 2010

A MOU has been undersigned between Operators and the Government who has promoted it , in order to stimulate the development of Ultra Broad band Networks in Italy.

From the evaluations carried out within the MOU, it can be deduced that the additional capex needed to implement a fully P2P architecture would be around 10% vs multi-GPON

P2P +23% vs Single GPON, but Multi-GPON +47% vs P2P

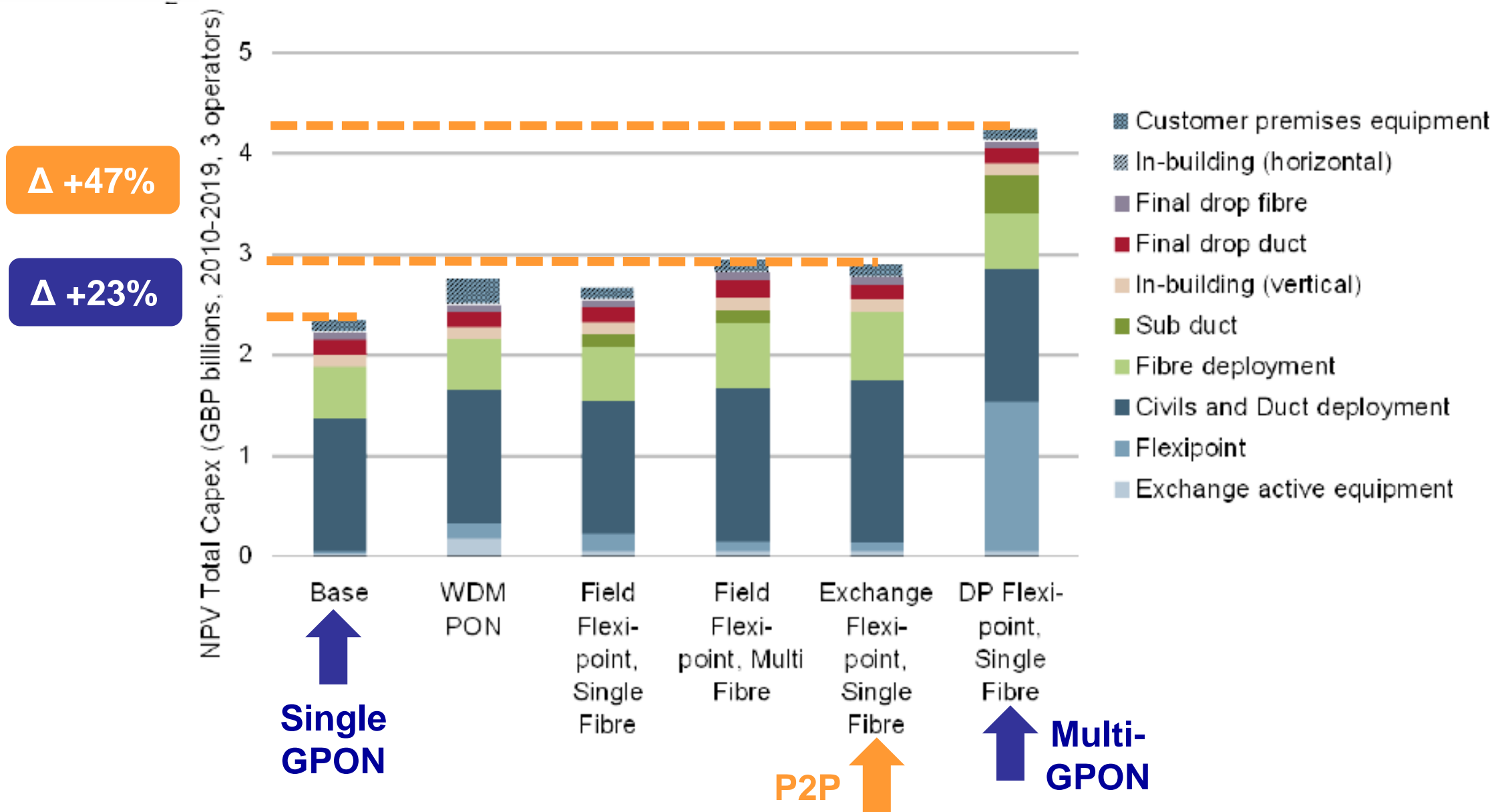


Figure 4.1: Breakdown of total capex (2010–2019) under the six scenarios [Source: Analysys Mason]

Average Capex difference between Base Case (Std GPON) and Exchange Flexi Point (1 fiber per user from the Exchange to the Household, PtP like) is about **23%**



Multi-GPON: the worst scenario also from Opex point of view

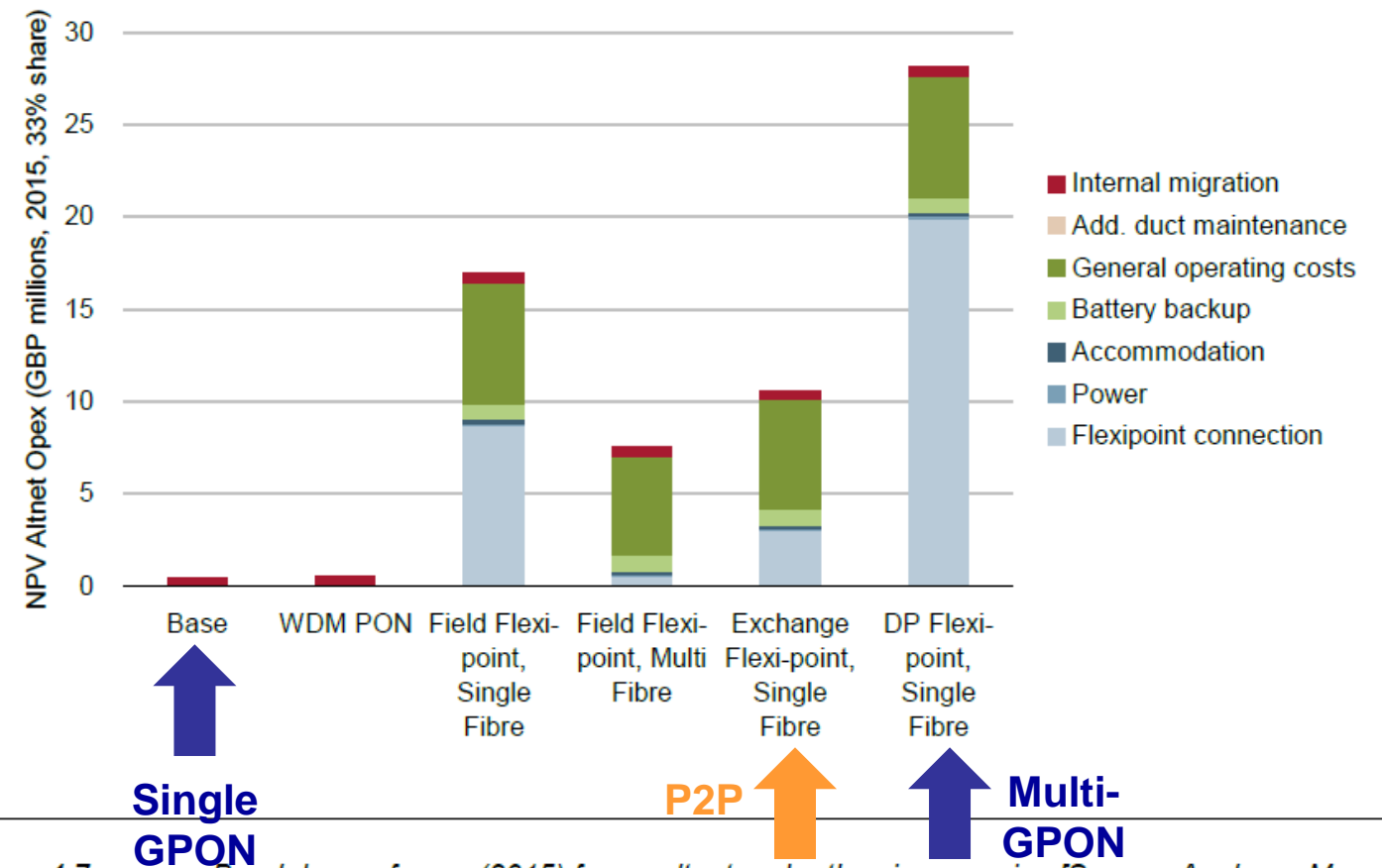
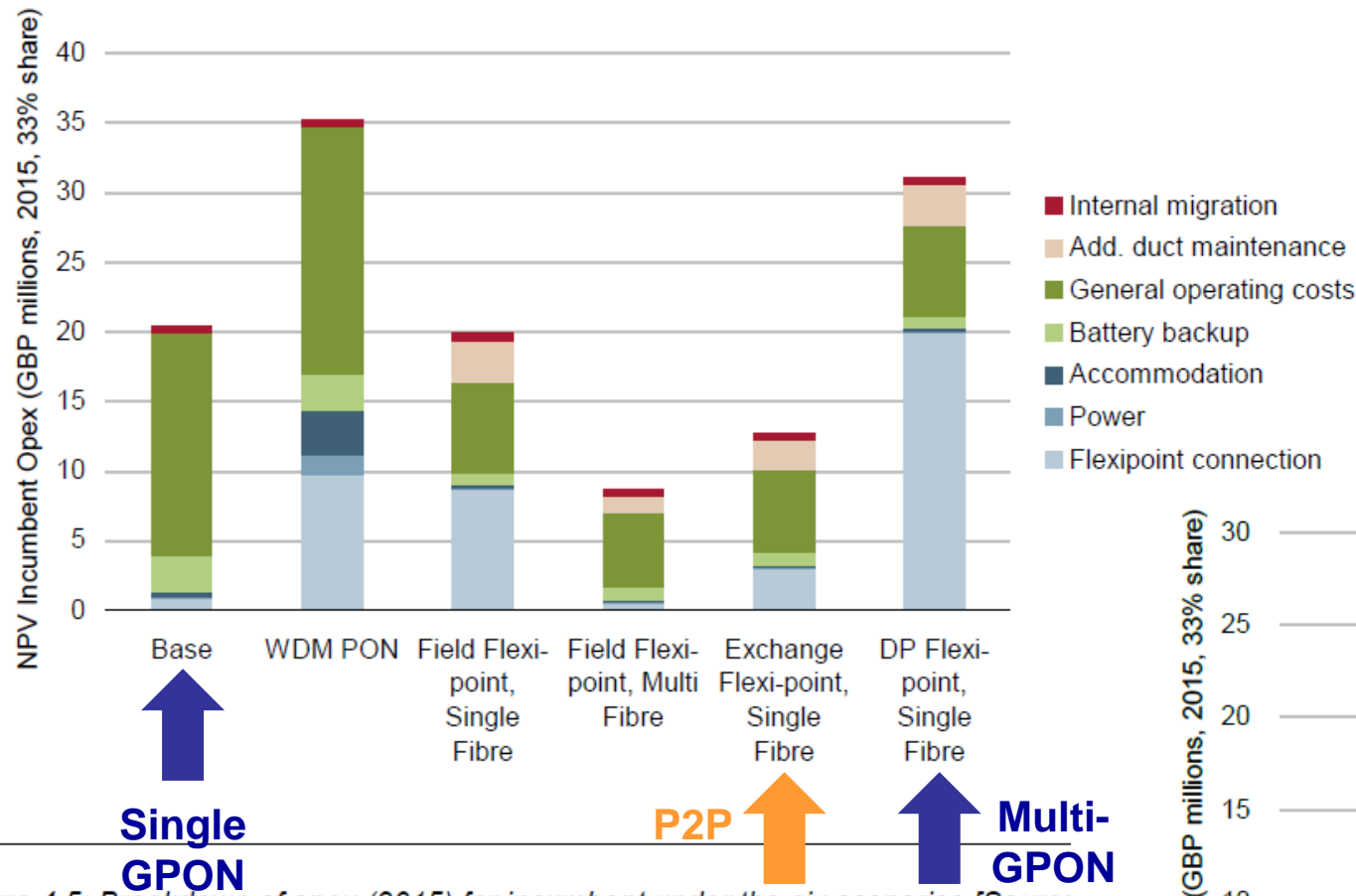


Figure 4.7: Breakdown of opex (2015) for an altnet under the six scenarios [Source: Analysys Mason]

NGAN development have to consider current Economic Scenario

- ❑ Global economic scenario
- ❑ Italian economic scenario
- ❑ and LTE licences costs!

Dipartimento per le Comunicazioni

Direzione Generale per i servizi di comunicazione elettronica e radiodiffusione

**Procedura per l'assegnazione di diritti d'uso delle frequenze nelle bande 800, 1800, 2000 e 2600 MHz
Fase dei miglioramenti competitivi**

Tornata n. 325

22/09/2011 [18:30 --->18:37]

LTE Auction near to

*** CHIUSA ***

*** CHIUSA ***

Vincente n. 1	W077	Wind Telecomunicazioni S.p.A.	[tornata n. 307]	481 700 000,00
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Partecipanti attivi:				
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be closed

*** CHIUSA ***

*** CHIUSA ***

Vincente n. 1	V084	Vodafone Omnitel N.V.	[tornata n. 283]	496 200 000,00
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Vincente n. 2	V085	Vodafone Omnitel N.V.	[tornata n. 283]	496 200 000,00
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Vincente n. 3	T084	Telecom Italia S.p.A.	[tornata n. 281]	496 100 000,00
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Vincente n. 4	T086	Telecom Italia S.p.A.	[tornata n. 281]	496 100 000,00
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Vincente n. 5	W074	Wind Telecomunicazioni S.p.A.	[tornata n. 282]	496 000 000,00
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Partecipanti attivi:				
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at ~ 3,9 Miliardi di €

- ❑ LTE licence costs will have a **significant effect** on the Telco's future investment

- ❑ It becomes even more important to search an agreement/model to exploit the opportunity to build **only one open fiber agnostic infrastructure** with copper total replacement in order to:
 - ❑ Avoid duplication
 - ❑ Enlarge as much as possible FTTH area
 - ❑ Enable services ecosystem and Country economy
 - ❑ Reduce TCO and guarantee future profness