



# **Bridging the Broadband Gap**

**South East Europe Observatory**

Forum 4 - Istanbul - November 9, 2007

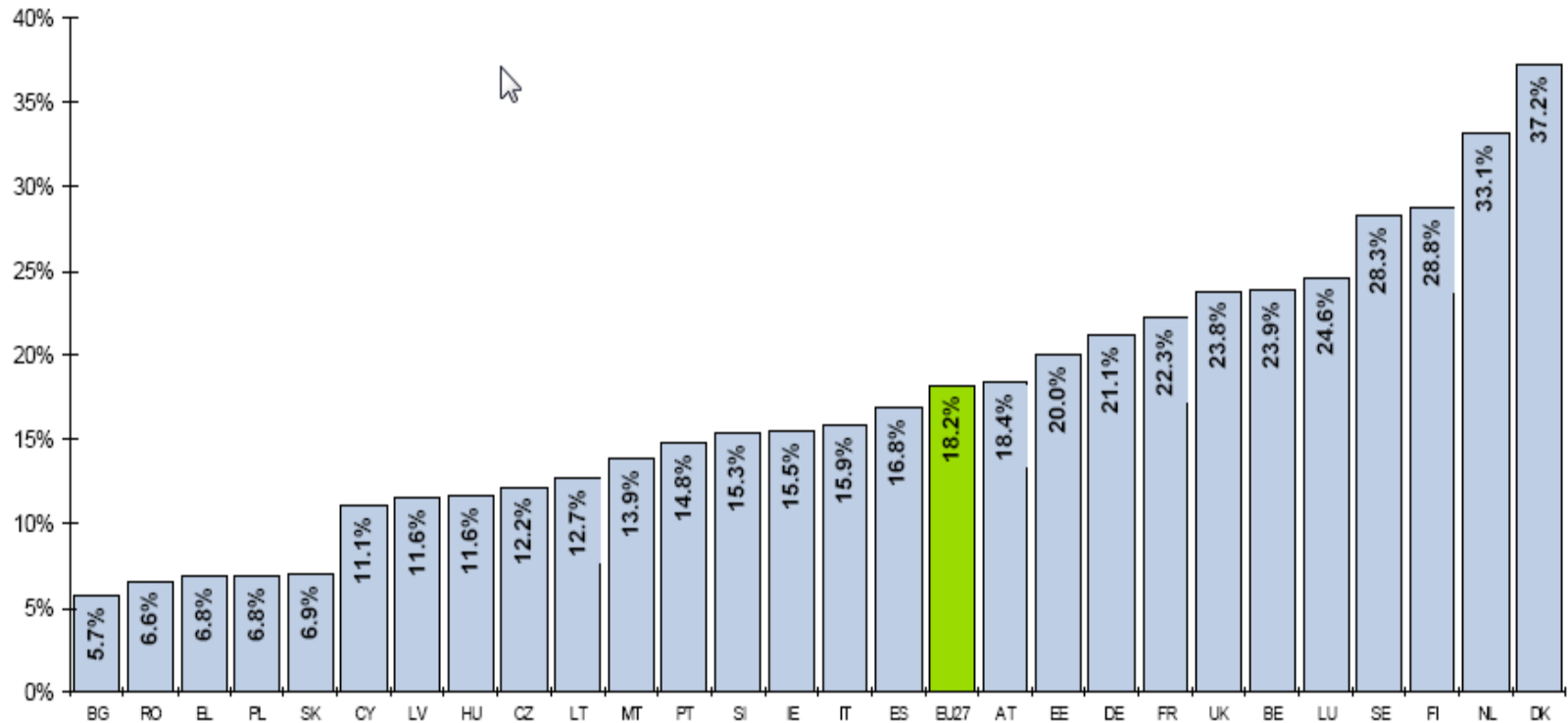
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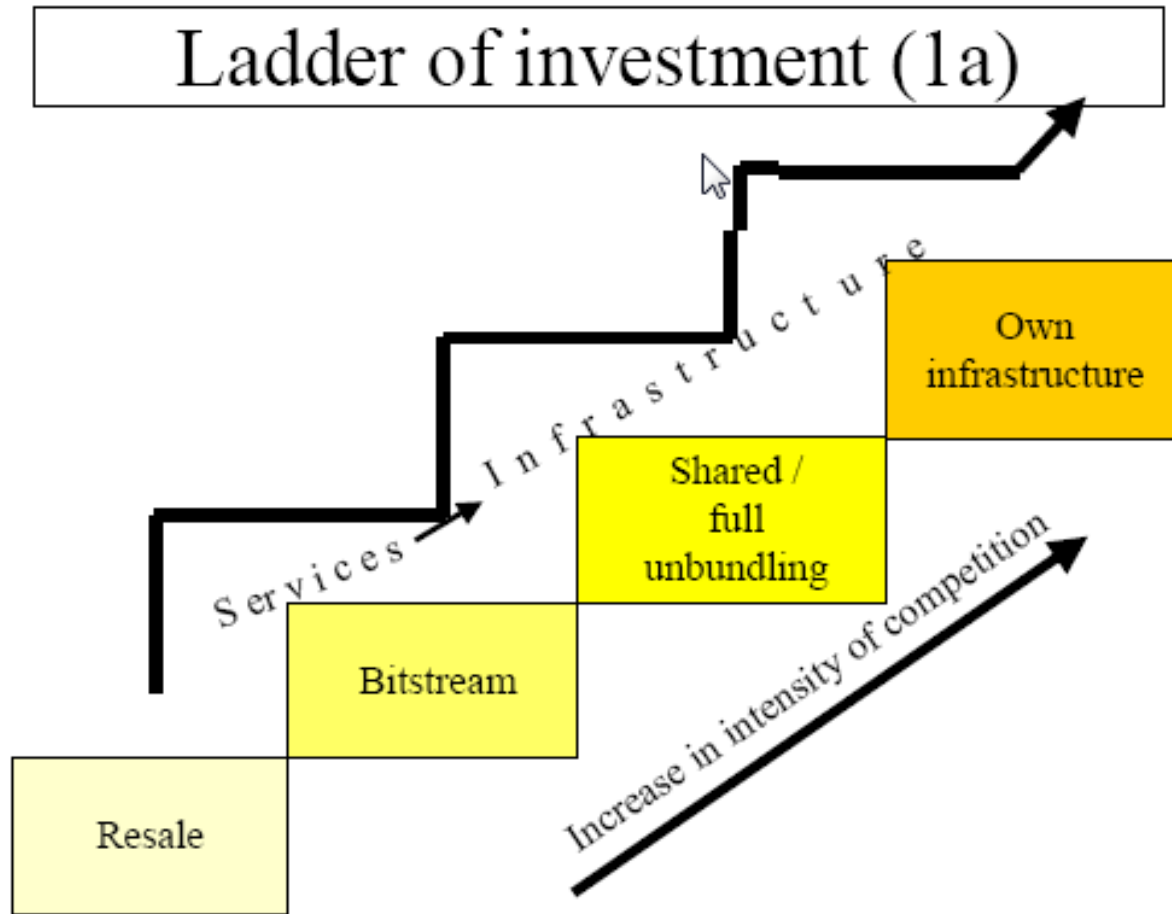
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# Need to bridge the gap

EU Broadband penetration rate (July 2007)



# The ladder of investment



# Logic behind investment ladder



The diagram consists of four horizontal, arrow-shaped bars pointing to the right, stacked vertically. Each bar has a white outline and a central rectangular cutout. The bars are colored from top to bottom: dark purple, light purple, medium purple, and dark blue. The text is centered within each bar's cutout.

**Penetration**

**Investment**

**Competition**

**Regulation**

# Investment ladder: assumption

**Assumption:** investments are made step by step by alternative operators (ALTs).

Once ALTs have a critical mass generating revenues to finance the investment, they will deploy their own infrastructure taking them to the next rung.

- Increasingly able to differentiate their service
- making them less dependent of the incumbent's infrastructure

# Where to place the rungs

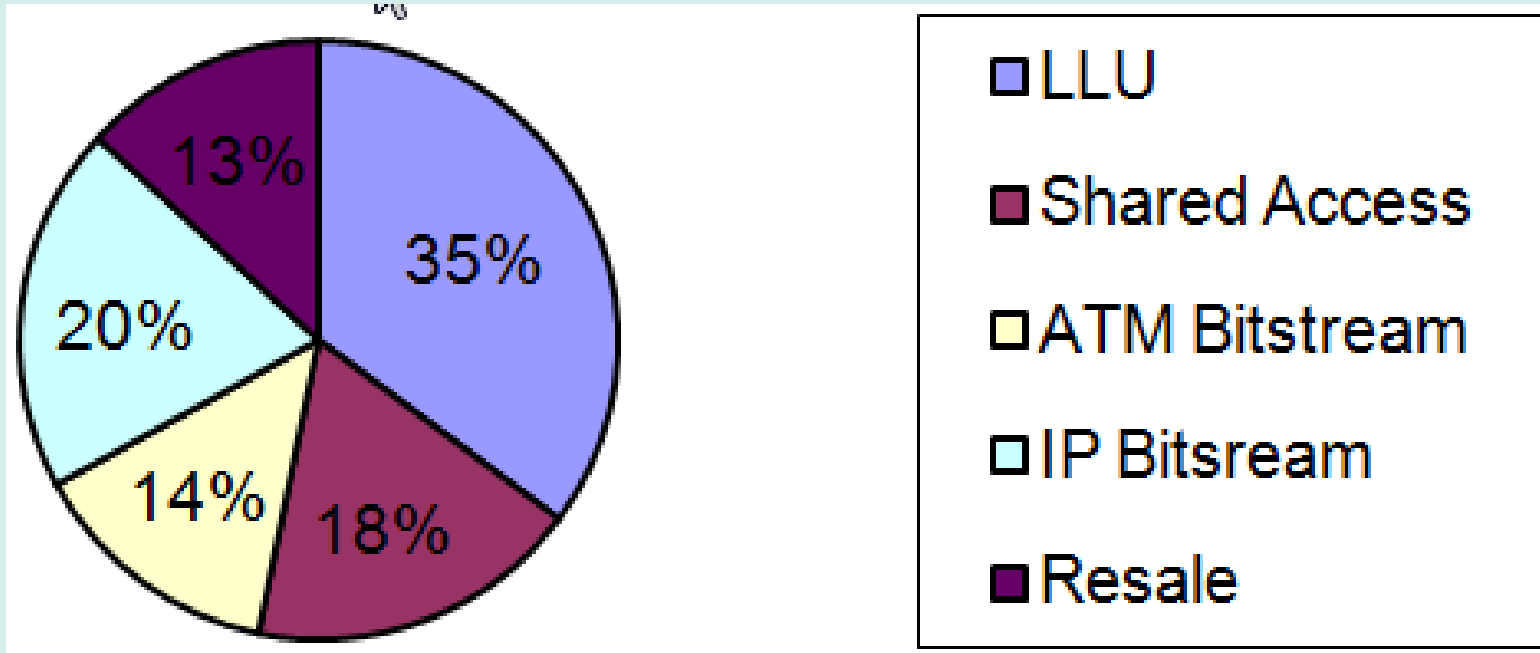
When rungs are too far apart, the move to the next rung becomes too risky

when rungs are too close, it would not pay to move to the next rung.

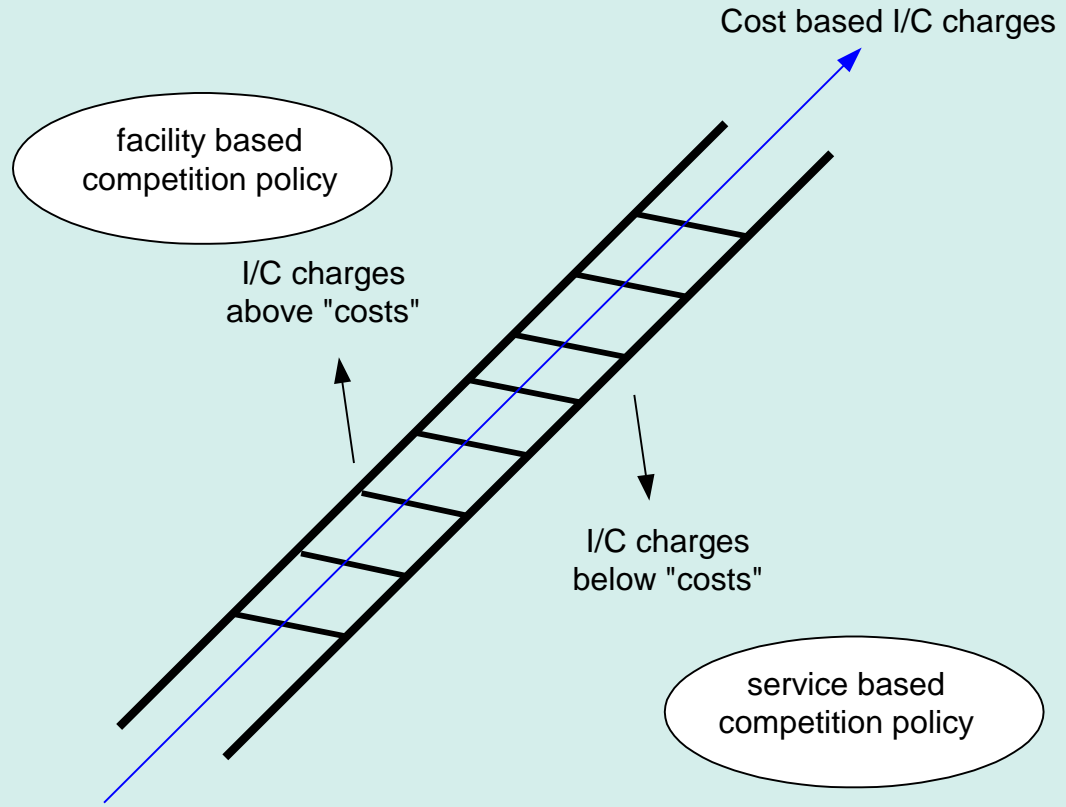
- Rungs too far: NGN and dismantling of MDFs?
- Rungs too close: bitstream at DSLAM level?

# Which rungs are used in practice

→ ALTs use of access options (source: ECTA Q1 '07)



# Pricing the rungs



# Pricing the rungs (1)

prices must give the right incentives

pricing of access products must be consistent, i.e. the relative prices must reflect the difference in cost between the products.

price difference or margin must satisfy the margin squeeze test of covering the incremental costs of providing the “wider” product.

## Pricing of the rungs (2)

Importance of the choice of the cost model

French NRA calculation for capital costs of local loop for 2002 (excl. other costs e.g. operating costs or common costs).

- based on historic costs: FT's monthly cost per loop was € 2.80
- based on current costs: the monthly cost per loop would be € 7.50

# Deviations from strict cost orientation

- Equally efficient operator  
vs. Reasonably efficient operators
  - economies of scale and scope
  - cost of capital
  
- French policy set France Telecom's bitstream prices at "a level sustainable for efficient new entrants"



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# Replicability test vs. ex post price squeeze



# Migration

- Migration procedures are essential
- Smoothless *handover* between the rungs
- Undisruptive for the end-users

# ETNO's position on the investment ladder

LEGC study – September 2007

- econometrical relationship between access regulation and investments in telecommunications infrastructures
- based on historical data (2002-2006)
- data for 12 Member States
  - various sizes
  - with different broadband penetration
  - with/without strong cable penetration
  - Austria, Czech Republic, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and the UK

# LEGC study

## Key findings

- a drop of 10% in the LLU price leads to an 18% fall in market share of alternative access lines providers in less than a decade

## LEGC study

Impact over a 8-year period (2003-2010) of a persistent 10% difference in LLU price

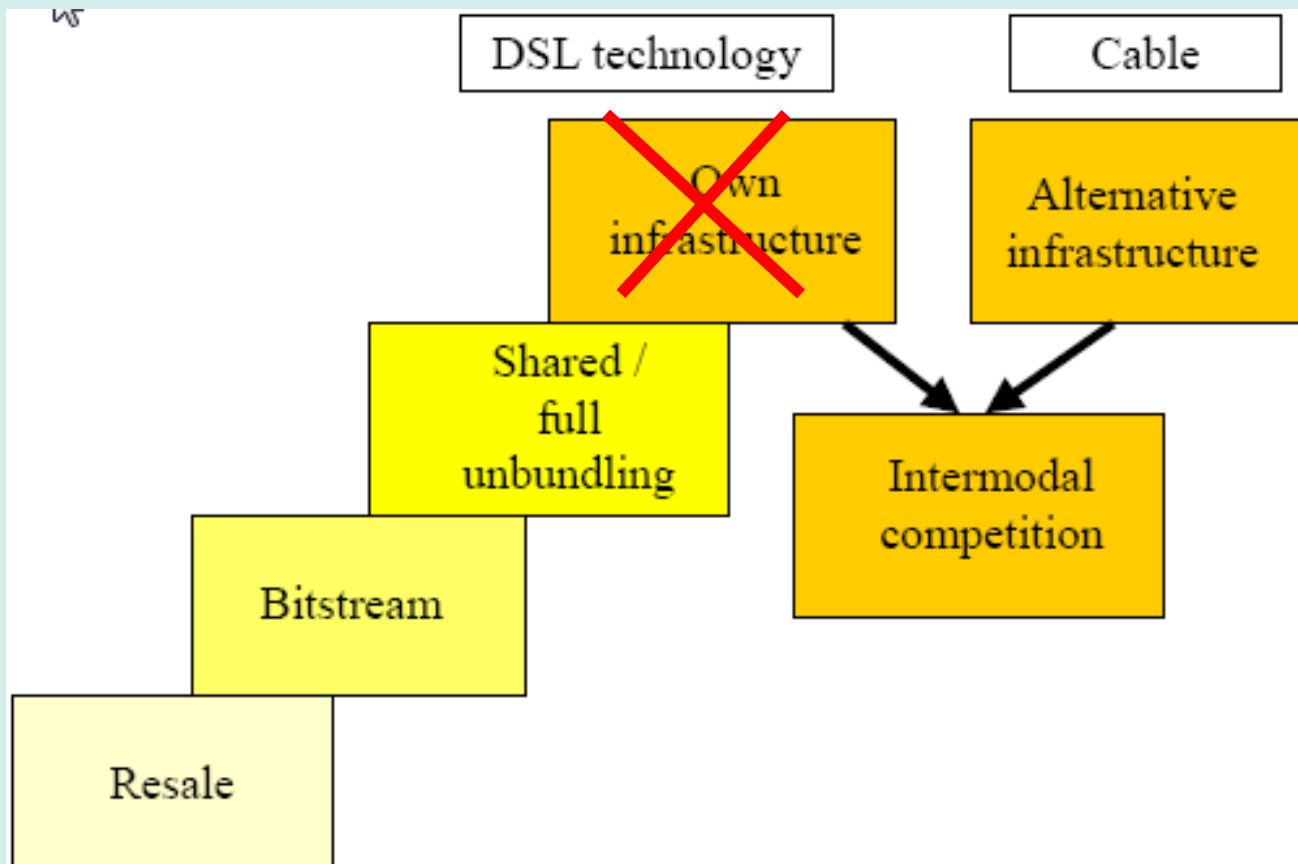
- almost 12 million less broadband access lines served by alternative access infrastructure (i.e. cable);
- assuming €1,000 per home-passed as the average level of network expansion expenditure, a loss of investment of €12bn (over the 8 year-period).

# LEGC study

- ➔ conclusions of the study are in contradiction with ERG's assumption that the investment ladder leads to inter-platform competition

# ETNO's position on the investment ladder

- Service-based competition discourages infrastructure-based competition



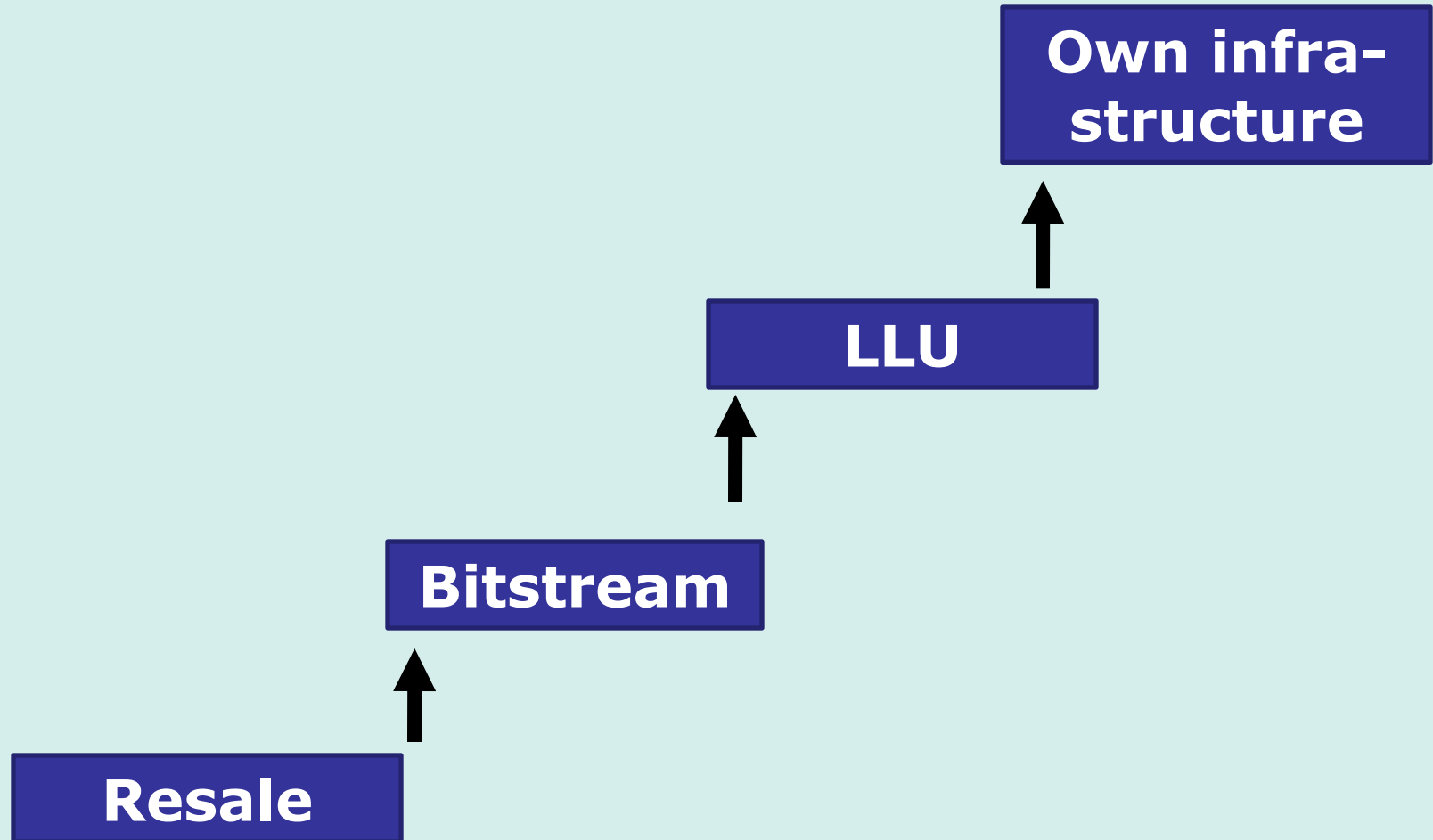
# Next Generation Networks

- NGN: threat or opportunity for competition?
  - Reinforce economies of scope/scale
  - New interconnect models (e.g. BAK)
  
- NRA's role is to ensure interconnection and interoperability at all levels
  - PSTN: stable technology; three levels; one service
  - NGN: ?
    - multiple standards
    - Quadruple play
    - More or fewer PoI?

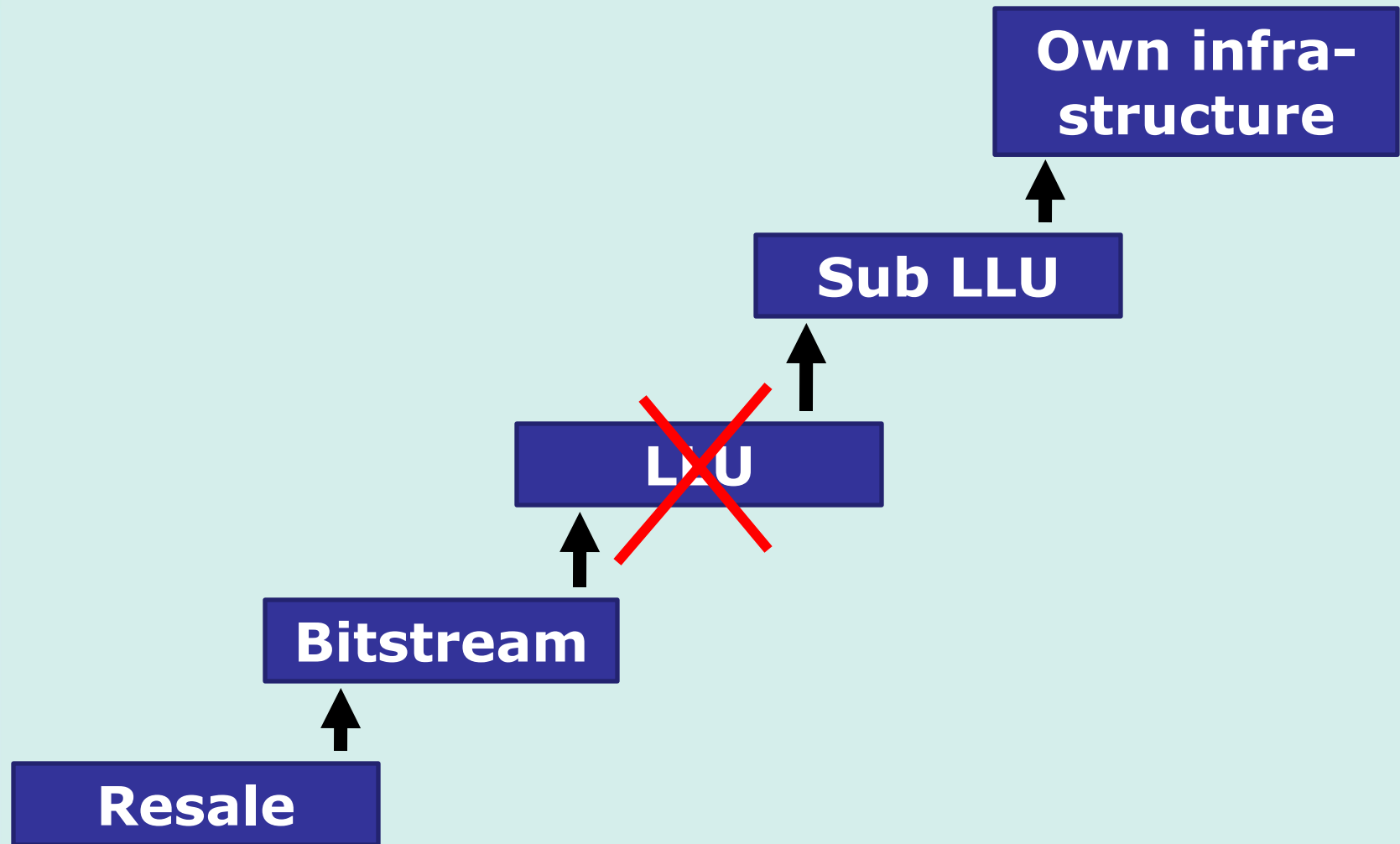
# KPN All-IP network

- ➔ KPN plans to migrate to cost-effective broadband All-IP network over next few years
- ➔ Fibre network built to street cabinets
- ➔ KPN plans to offer unbundled access at street cabinet level (unbundling of sub-loops - SLU)
- ➔ Phasing out of MDF locations

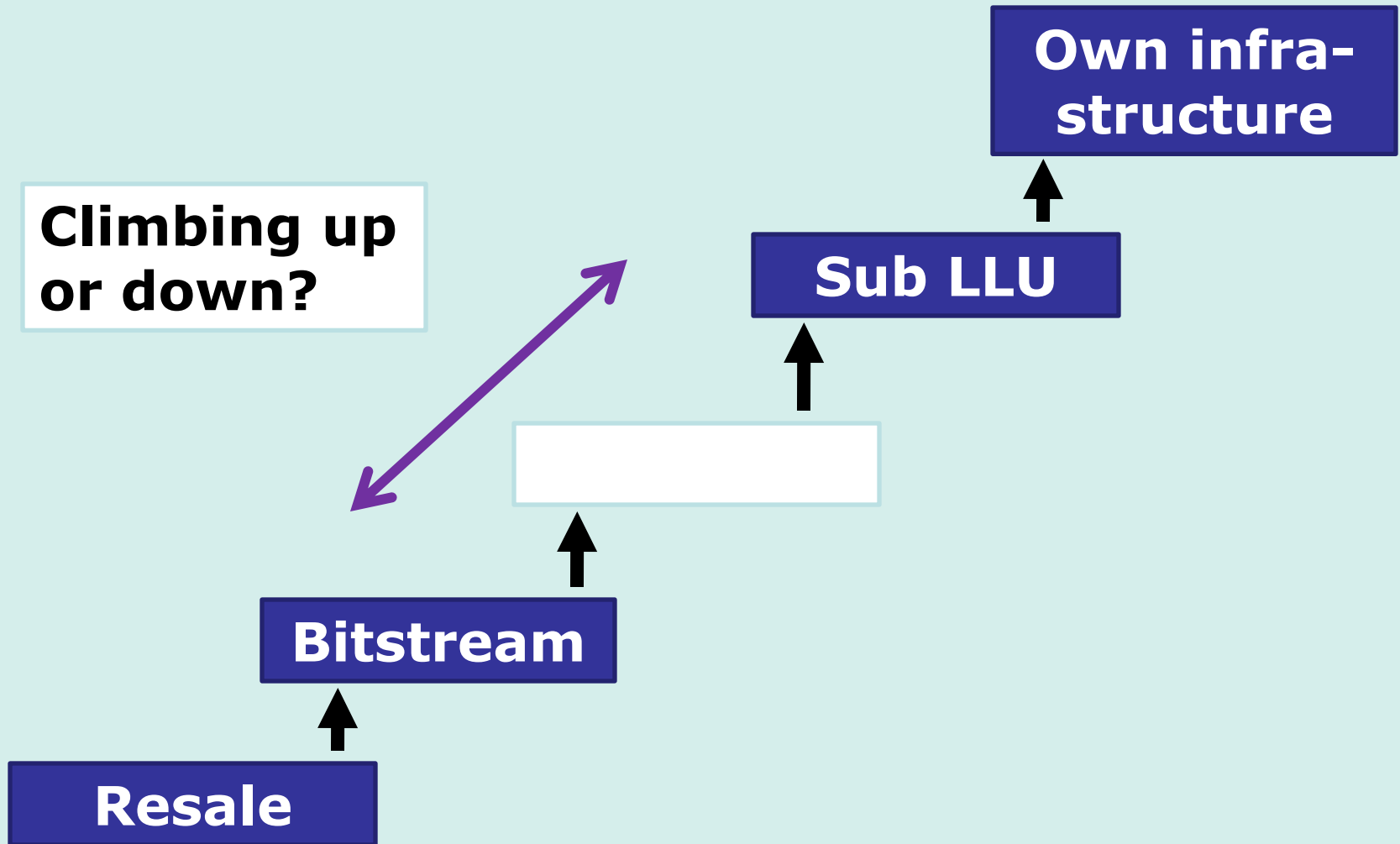
# Phasing out of MDFs: impact



# Phasing out of MDFs: impact



# Phasing out of MDFs: impact



## KPN All-IP network

- OPTA study (January 2007) shows that SLU is not a full alternative to LLU because of higher costs for ALTs (and smaller target market at a given MDF)
- Only for a limited number of street cabinets is SLU deemed economically viable for ANOs
- Dilemma for OPTA
  - KPN invests in a NGN that will deliver additional services and lower costs
  - ALTs can no longer use MDFs
  - Fall back from LLU to bitstream?
  
- Climbing down the investment ladder?

# Functional separation

- ➔ F.S. likely to be included in the list of remedies in the Access Directive
- ➔ F.S. Supported by ERG ‘if everything else has failed’
- ➔ Pionnered by the UK (Openreach)
- ➔ National debates underway in several MSs:
  - ➔ Positive: Italy, Sweden
  - ➔ Negative: F, NL
- ➔ F.S. is very complex to administer