ANCOM
National Authority for Management and
Regulation in Communications of Romania

Broadband Issues
- a Romanian Perspective-

Catalin Marinescu, President of ANCOM

Digital Agenda for South East Europe Conference
Brussels, December 13, 2011

The Romanian Market: A Combination of 3 HIGHs & 3 LOWs

HIGH Competition levels

- Infrastructure based, minor LLU take-up after 9 years of regulation
- The only EU market with no WBA regulation

Very LOW Penetration

- Constantly at ½ EU average with 15% population, 39% households
- 22nd place in the EU at accession in 2007, now the last place

HIGH Speed

- One of the fastest internet countries in the world
- 34 Mbps average connection in peak time, top 3 fastest cities in Europe

LOW prices

- Some of the most competitive prices in Europe

10 euro/month for 3P package incl FTTH 100 mbps
3,5 euro/month 3G internet & unlimited traffic (first 5 Gb uncontained)

HIGH Urban/Rural divide

- 66% urban usage, 68% rural non-usage
- 20% population lives in localities without wireline internet

LOW DSL

- DSL < 30% active connections (EU avg. 77%)

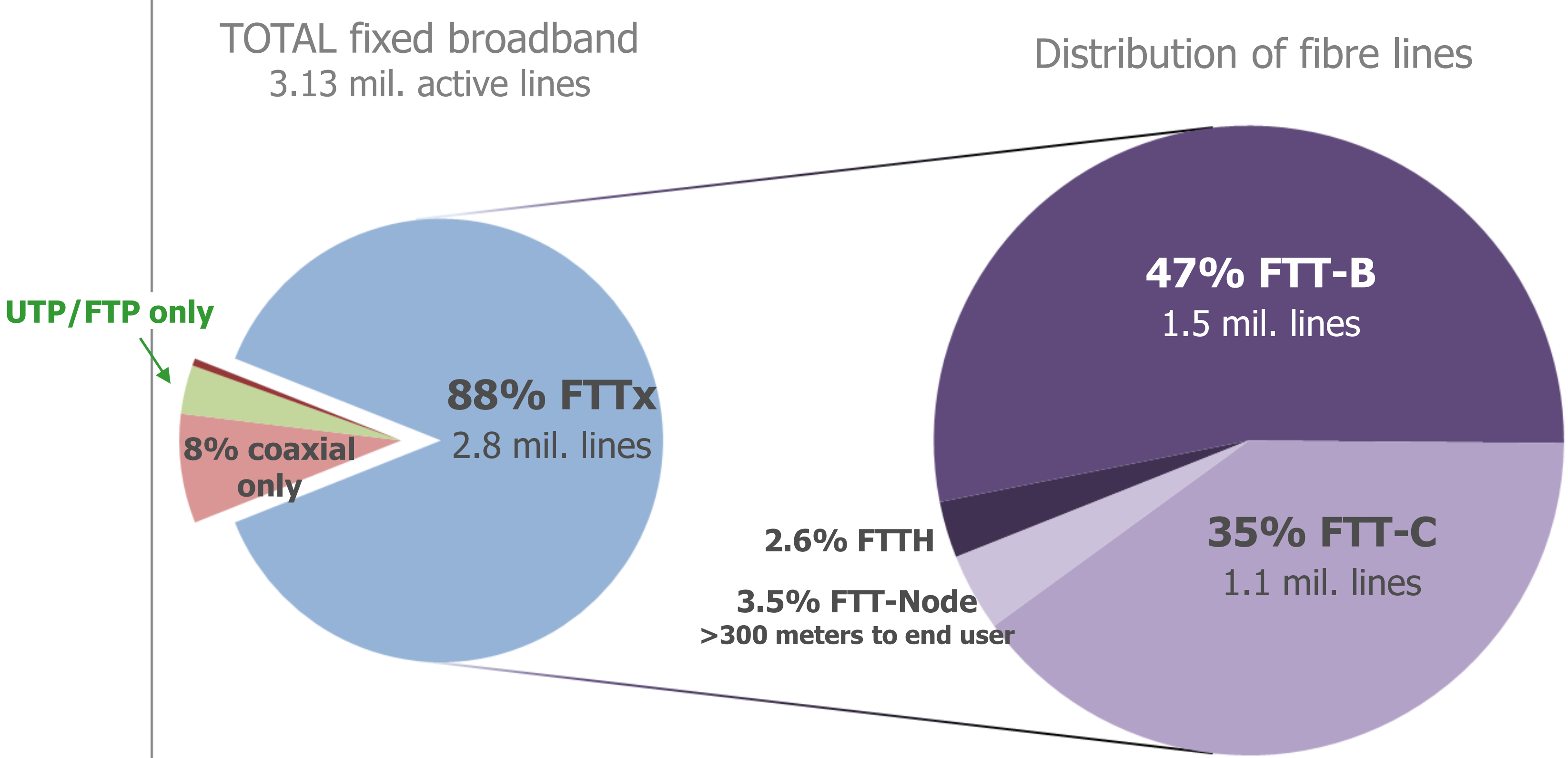
A market unlike most European peers

A Mix of Factors

- Concentrating to cream the market on voice, the incumbent lost precious momentum
  - a window of opportunity (nearly 3 years) for the first mover in urban areas
  - exploited especially by cable operators under competitive bundle offerings
- Opaque framework regarding rights of way & urban planning rules favoured a *de facto* no mans' land, where aerial cables could hang virtually everywhere
  - enhanced business opportunities for rapid network deployment in density areas
  - with competition between infrastructures, incumbents' network becomes less interesting, even with competitive LLU regulation
- Business consolidation & emergence of large cable operators followed by significant networks overlapping
- Incumbents' fibre deployment - a direct response to fierce competition & high customer churn
  - Incumbent goes further and grows a… **low cost subsidiary!**

circumstances similar to … a race for investment

With some fibre in ~ 90% of total broadband loops… …the "Fibre-nation" is one major advantage of "the race"



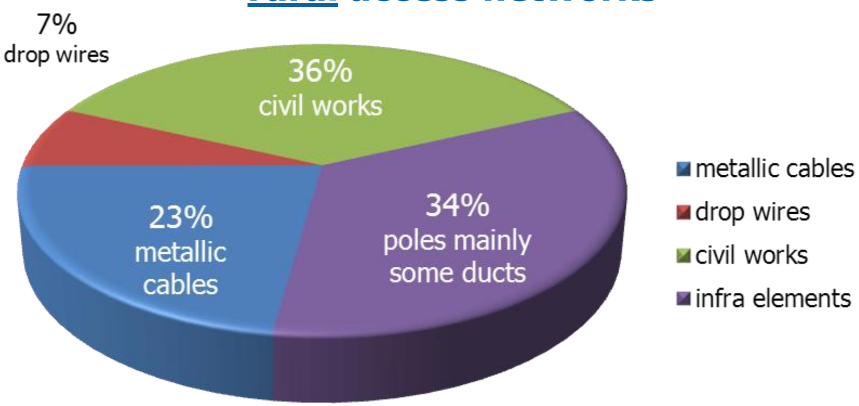
ANCOM statistics, H1 2011

The Downsides

- **Environmental issues in urban areas**
  - Burying of aerial cables has embarked on a sluggish path in major cities *(e.g. Bucharest, Cluj, Brasov)*
  - First notable results seen as late as 2011, no impact on retail prices (yet?)

- **Little incentives to race for most of the rural areas**
  - ~ 70% of the investment needs are in civil works & passive infrastructure
  - compared with country average, economies in civil works seem offset by the costs of poles
  - little economies of density

Direct investments in deployment of rural access networks



Source: ANCOMs' bottom-up model

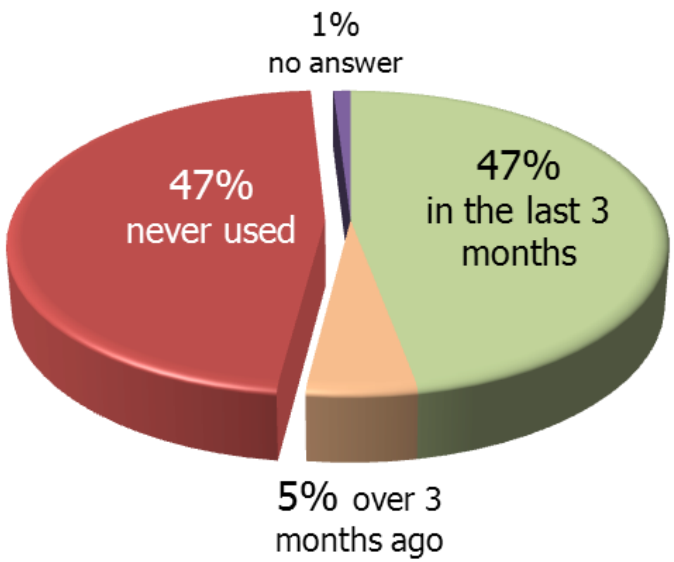
  - Except for mobile/wireless networks *(e.g. 12 months after 900 MHz liberalisation for 3G use, one operator covered 98% of population with 3G)*

Demand for Broadband is our first concern

Given the positive externalities of the "fibre-nation", the matter is of public/even strategic interest:

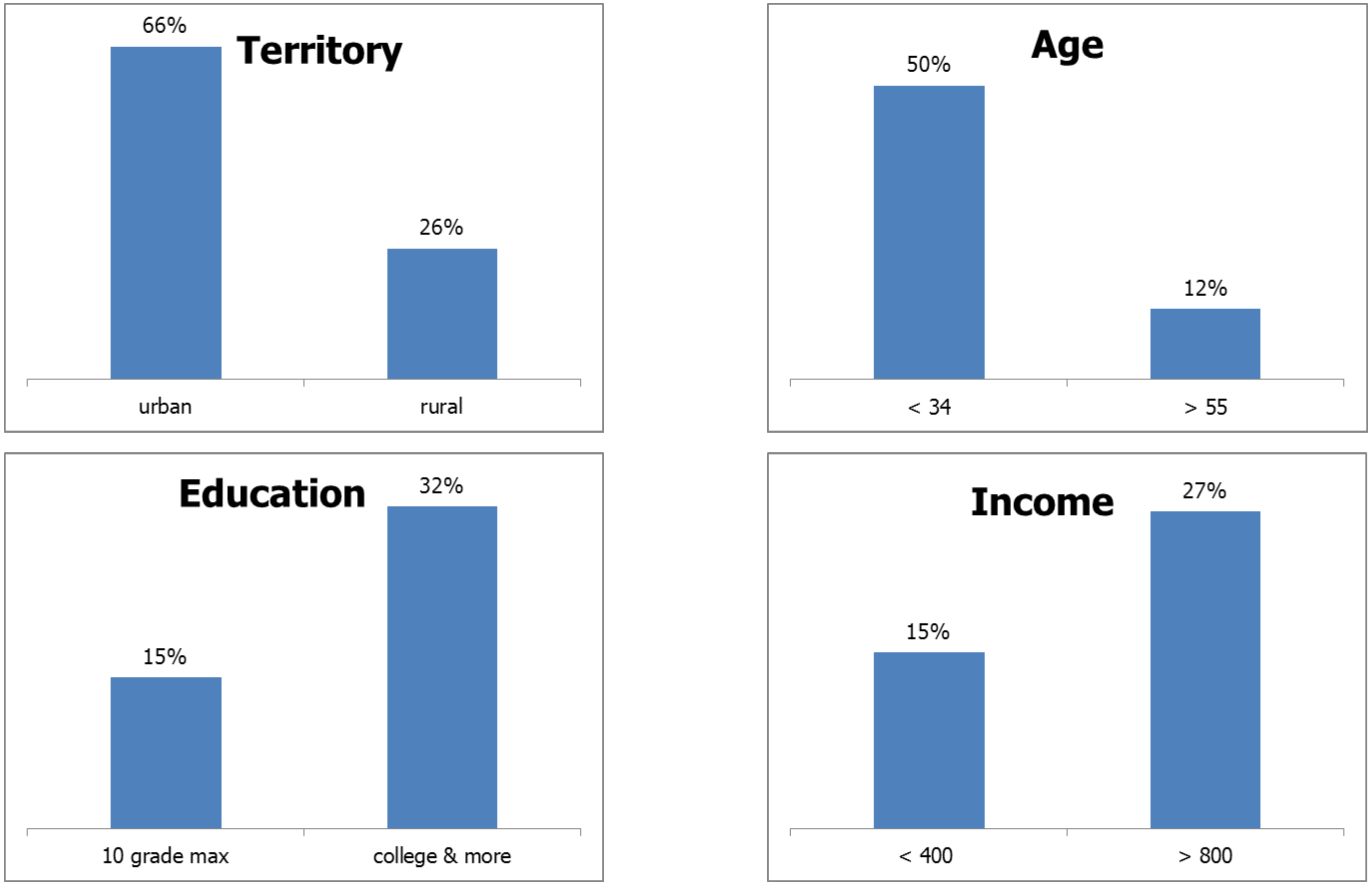
- **Equity**
  - ✓ before mass adoption effects, the significant upfront investments with NGA seem riskier (to the operators)
  - ✓ end-user equipments & toolkits to get online come at a cost, even though subsidised (by the operators)
- **Productivity**
  - ✓ new content & applications of the digital economy expected to lead to productivity gains in all sectors & spill over effects
- **Cost of digital exclusion**
  - ✓ already huge & rising
  - ✓ exacerbates territorial imbalances

When did you last use internet?



Source: market survey for ANCOM, individuals

Main Dividing Lines on Broadband Adoption



% adopters in the group

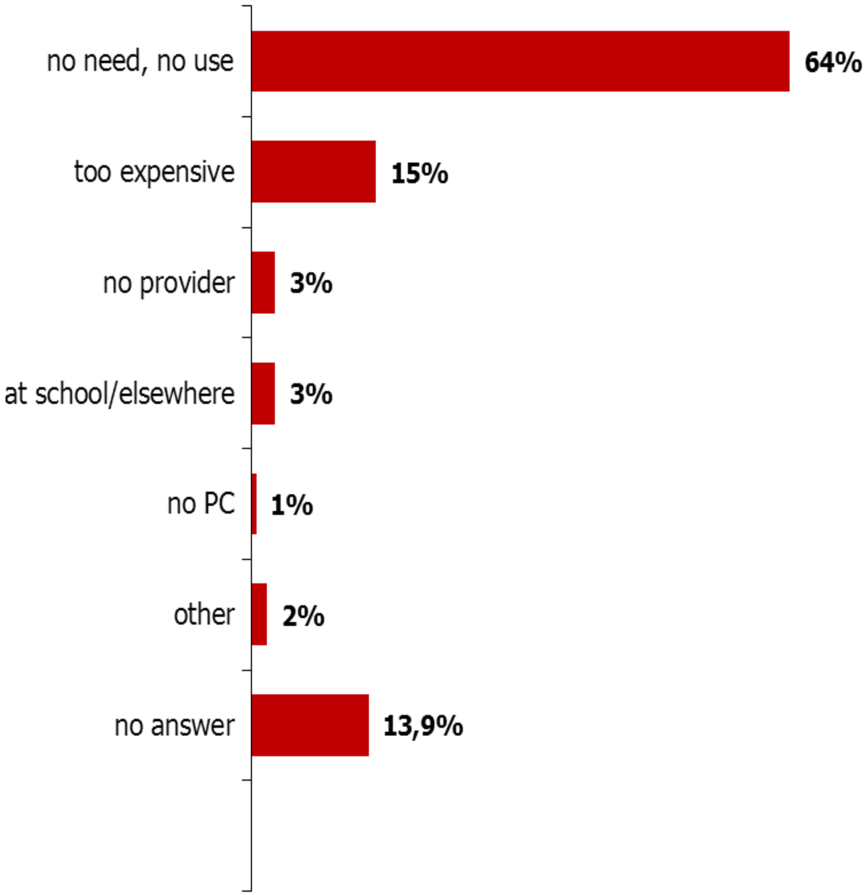
Source of data: market survey for ANCOM

Non-Adopters

- Understanding the reasons of non-adopters is not easy
  - ✓ Several reasons often quoted
  - ✓ Digital illiteracy & lack of relevance surely hide behind the *"no need, no use"* reason
  - ✓ *"Too expensive"* may in fact reveal stagnant/declining incomes

- Non-adopters need to be provided compelling reasons to get online
  - ✓ A task for both the industry and the authorities

Why is there no internet in your household?



Source: market survey for ANCOM, individuals

The Questions:

- Would competitive dynamics in the broadband market put pressure to extend networks in search for "white" rural areas?

- Can LTE/HSPA be a first step to get non-adopters online & make them "climb the ladder"… of demand?

- Can passive infrastructure sharing deliver in a market characterised by platform competition?
  - would cheap & regulated infrastructure access deliver where LLU has failed?

- Does the Universal Service remain a solution for the "last resort"?

Thank you for your attention!

Cătălin MARINESCU, ANCOM

President

catalin.marinescu@ancom.org.ro