

Milano, domenica 9 ottobre 2005

Broadband and Network Evolutions

Tomorrow's Network Today
Saint-Vincent
October 7th, 2005



Agenda

- **FastWeb: Company Background**
- Network Infrastructure and Services
- Broadband network Evolution

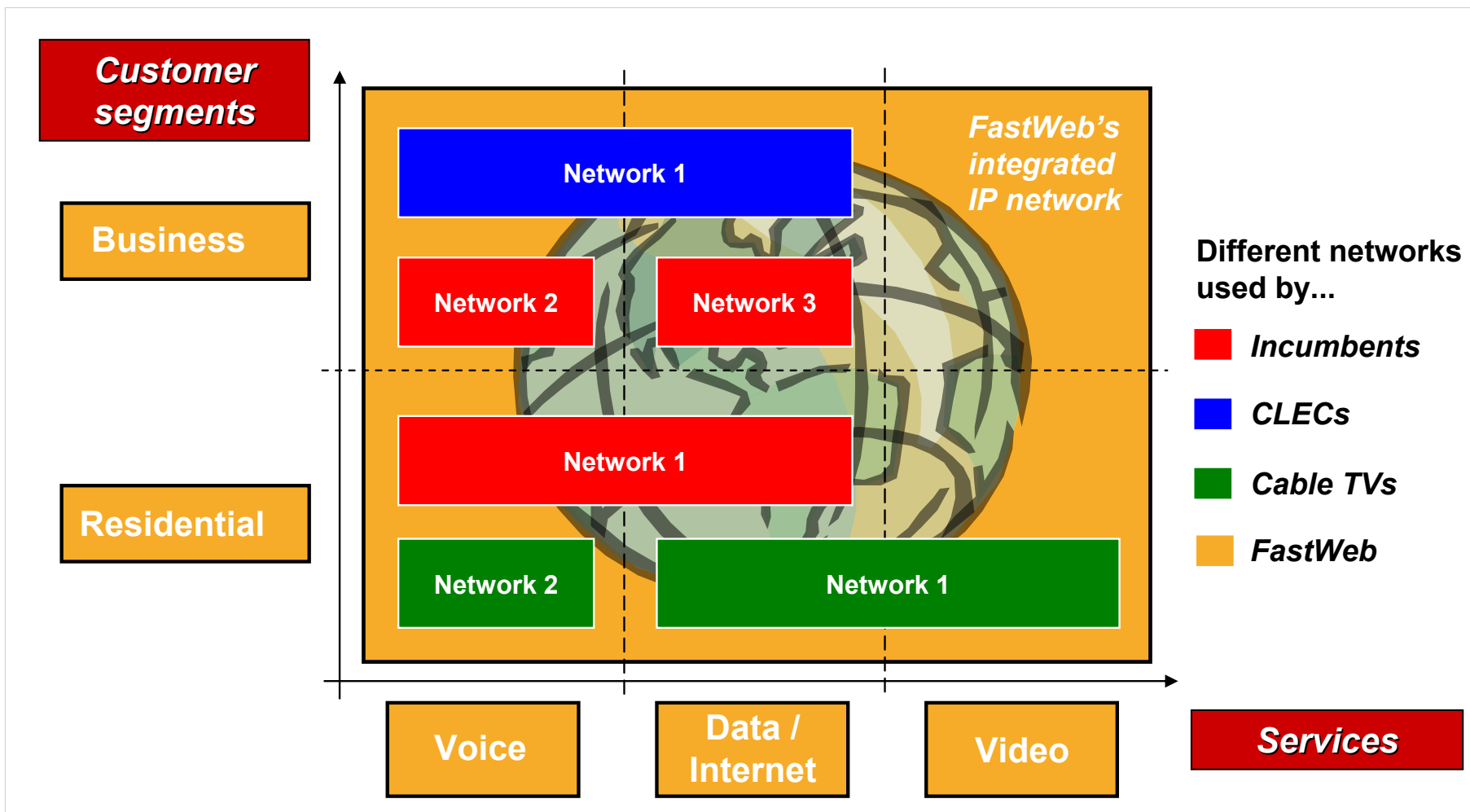
FastWeb: The Competitive Advantage



- Founded in 1999, with the mission of creating an innovative broadband infrastructure for the delivery of *Triple Play* services
- Fibre-based network infrastructure
 - Future-proof technology
 - Scalable backbone
- Broadband-To-The-Home
 - A single high-speed connection for integrated voice, Internet and video services
- Integration of multimedia services over IP
 - Second generation Internet applications: not only text and images, but also high quality interactive video, telephony and data

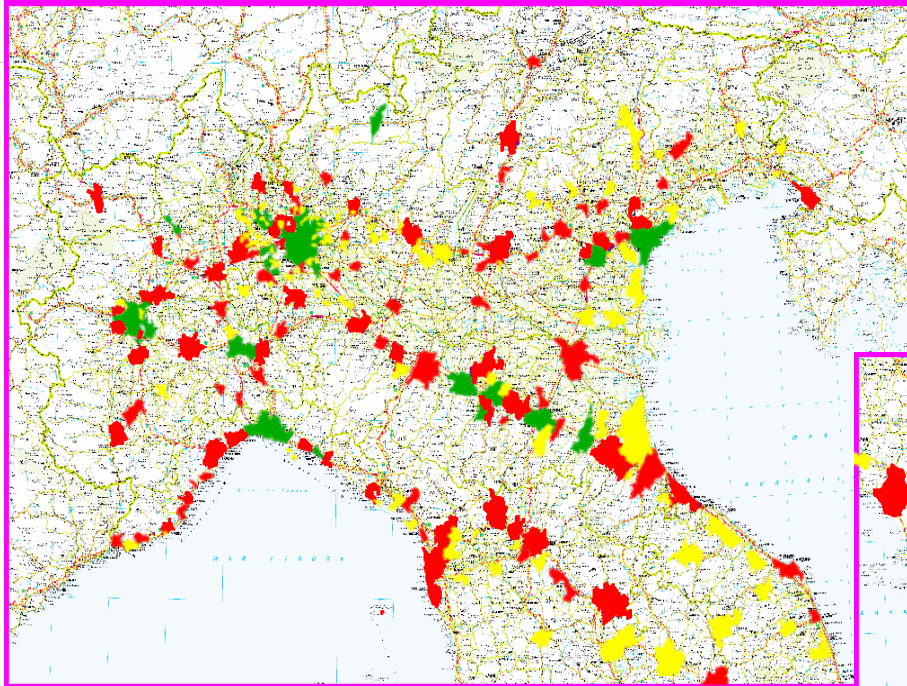





FastWeb's Value Proposition



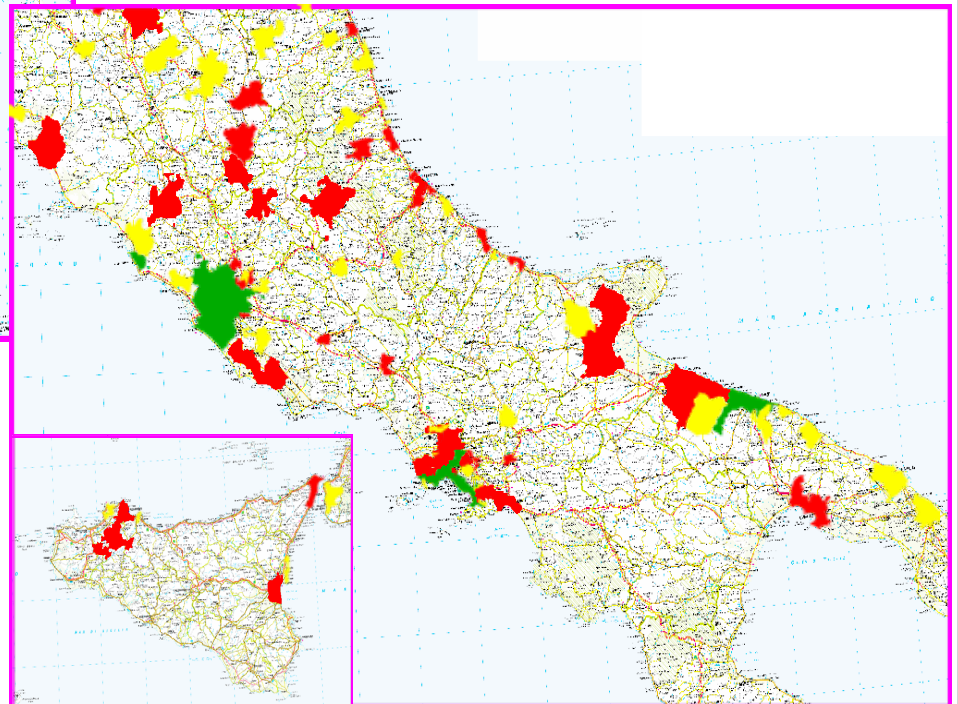


Network Roll Out Plan 2005 - 2006



 EOY 2004
 EOY 2005
 EOY 2006

EOY 2006
~ 1000 Central Offices
> 200 Metropolitan Areas
~ 10 Million Households



EOY 2004
304 Central Offices
14 Metro Areas
4 MI Households

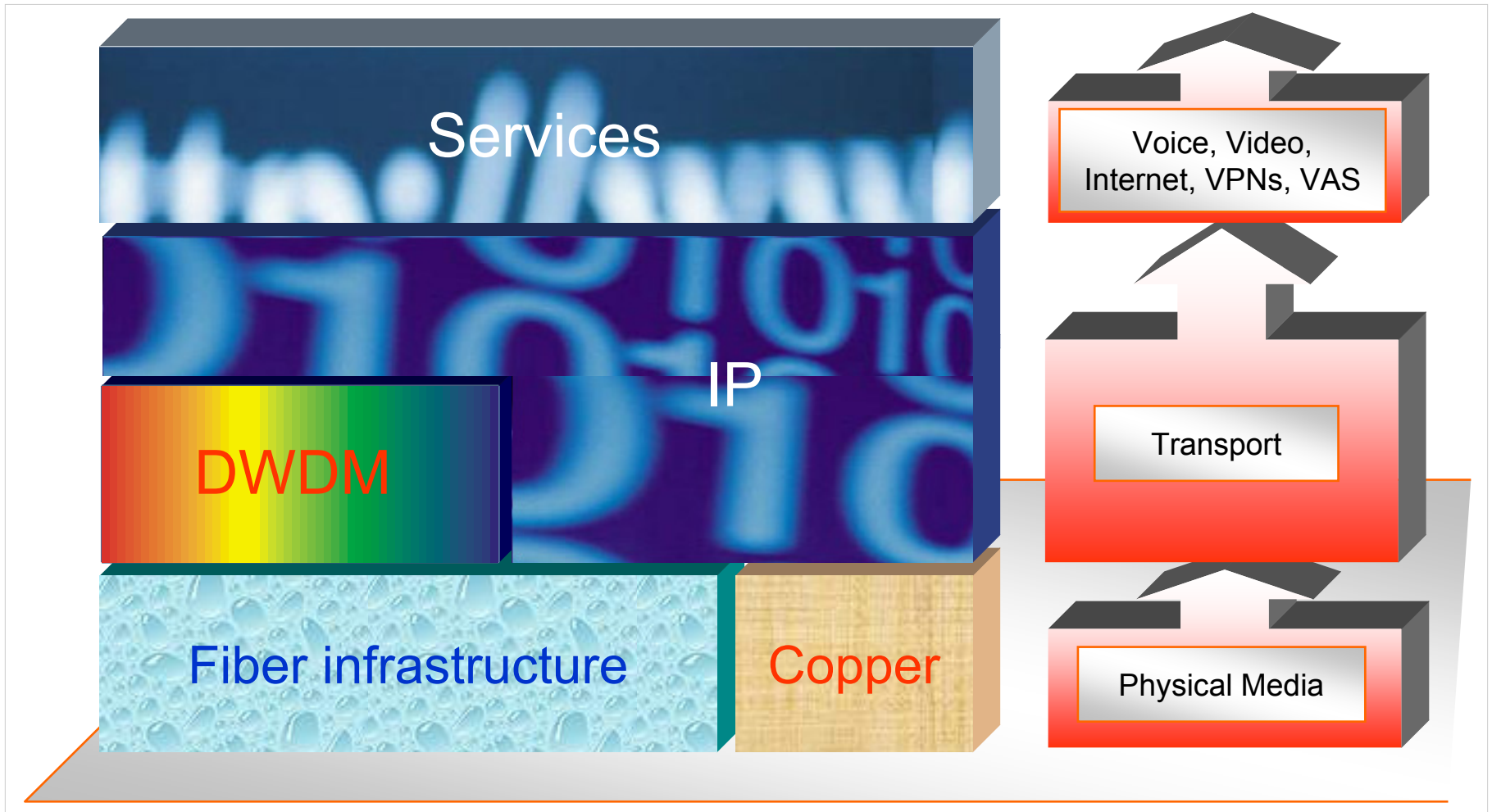
EOY 2005
> 700 Central Offices
> 130 Metro Areas
> 8 MI Households



Agenda

- FastWeb: Company Background
- **Network Infrastructure and Services**
- Broadband network Evolution

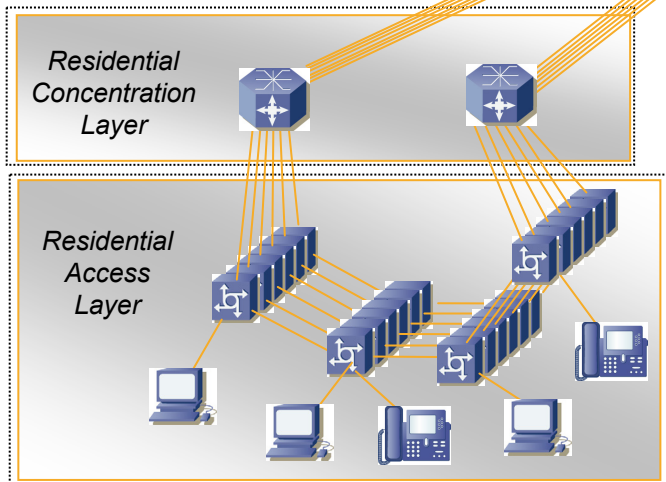
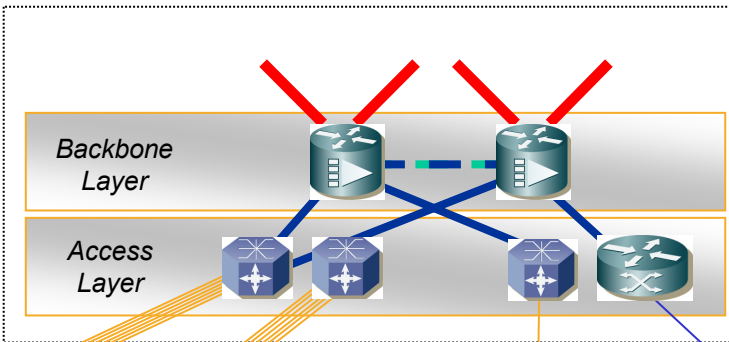
Streamlined Architecture and Protocols



Network Layer: QoS-enabled, Full-IP Backbone

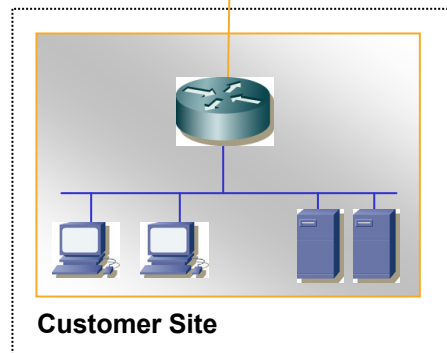


Point of Presence



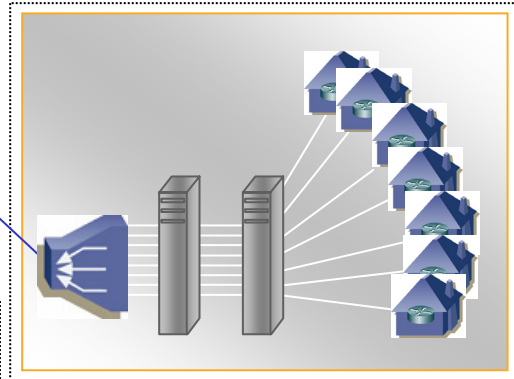
FTTB Customers

MetroEthernet



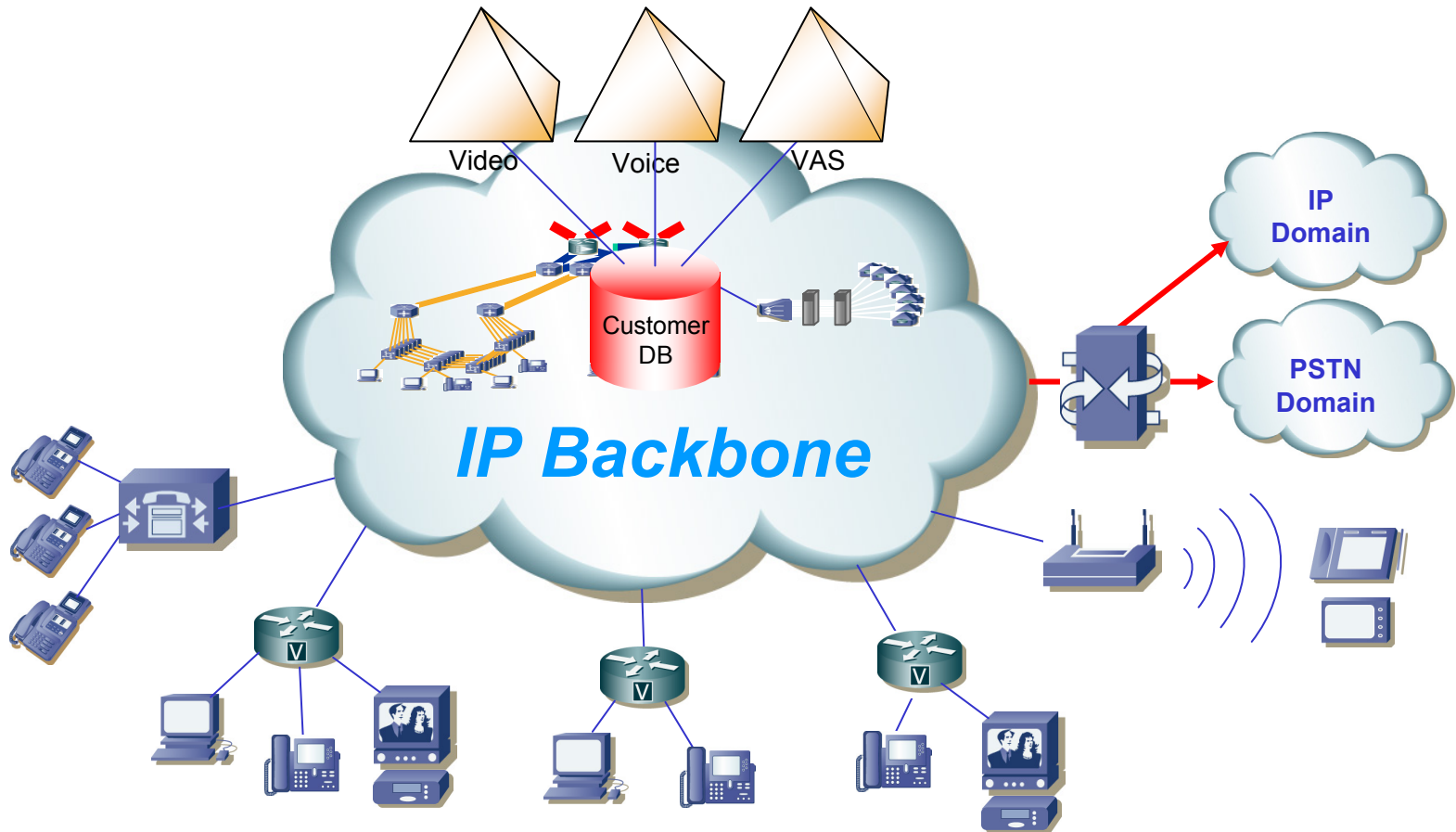
Customer Site

Central Office



xDSL Customers

Application Layer: Network-hosted VAS Platforms





Service support strategy

- Full parity in services offered on both access technologies, to both Business and Residential Customers

	Voice	Video Comm	Broadcast TV	Video on Demand/VCR	Internet/ VPN
FTTx	✓	✓	✓	✓	✓
xDSL	✓	✓	✓	✓	✓

- Actual attainable performance levels are largely Layer 1-dependent
- Same Customer experience, different technology-dependent implementations



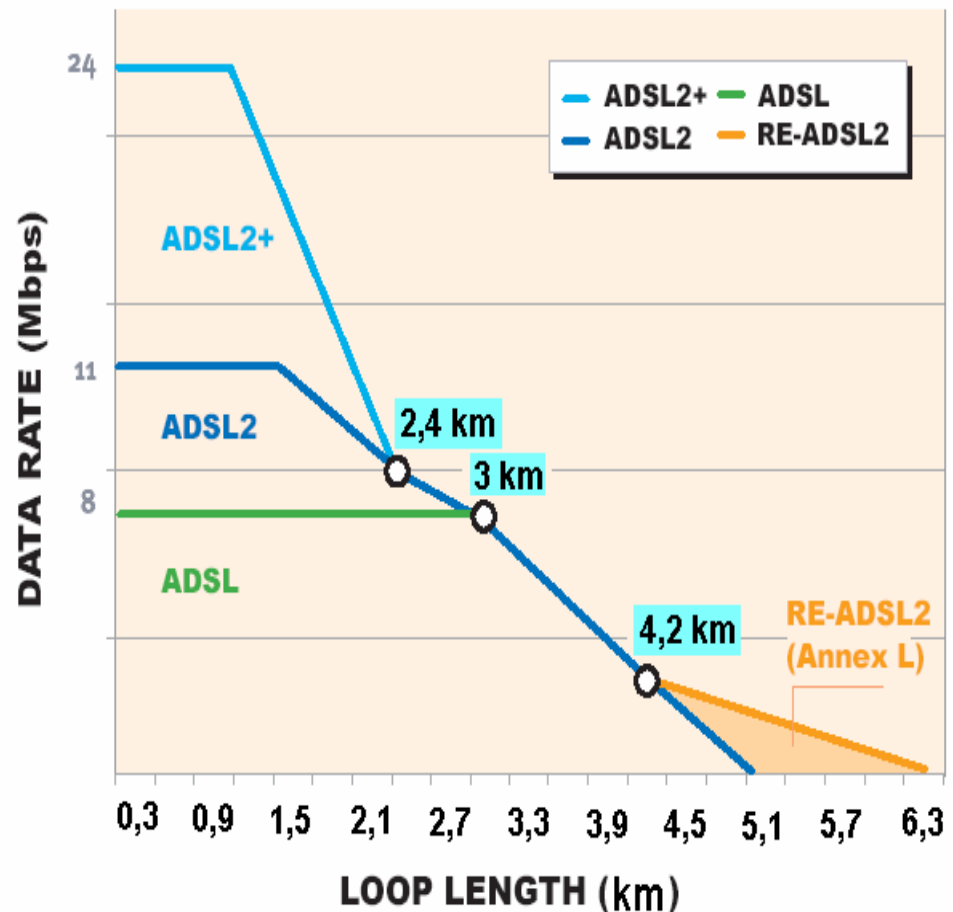
Agenda

- FastWeb: Company Background
- Network Infrastructure and Services
- **Broadband network Evolution**

Networks and Services: Infrastructure evolution path



- New DSL technologies (e.g. ADSL2+) are becoming increasingly popular among Telco's as a "good enough" vehicle for the supply of Broadband services, though predictability of service quality levels under any operational condition is still questionable (i.e. physical layer-dependent)
- Asymmetrical performance is still a limit for the delivery of services, especially in the Business customer space



Networks and Services: Services evolution path

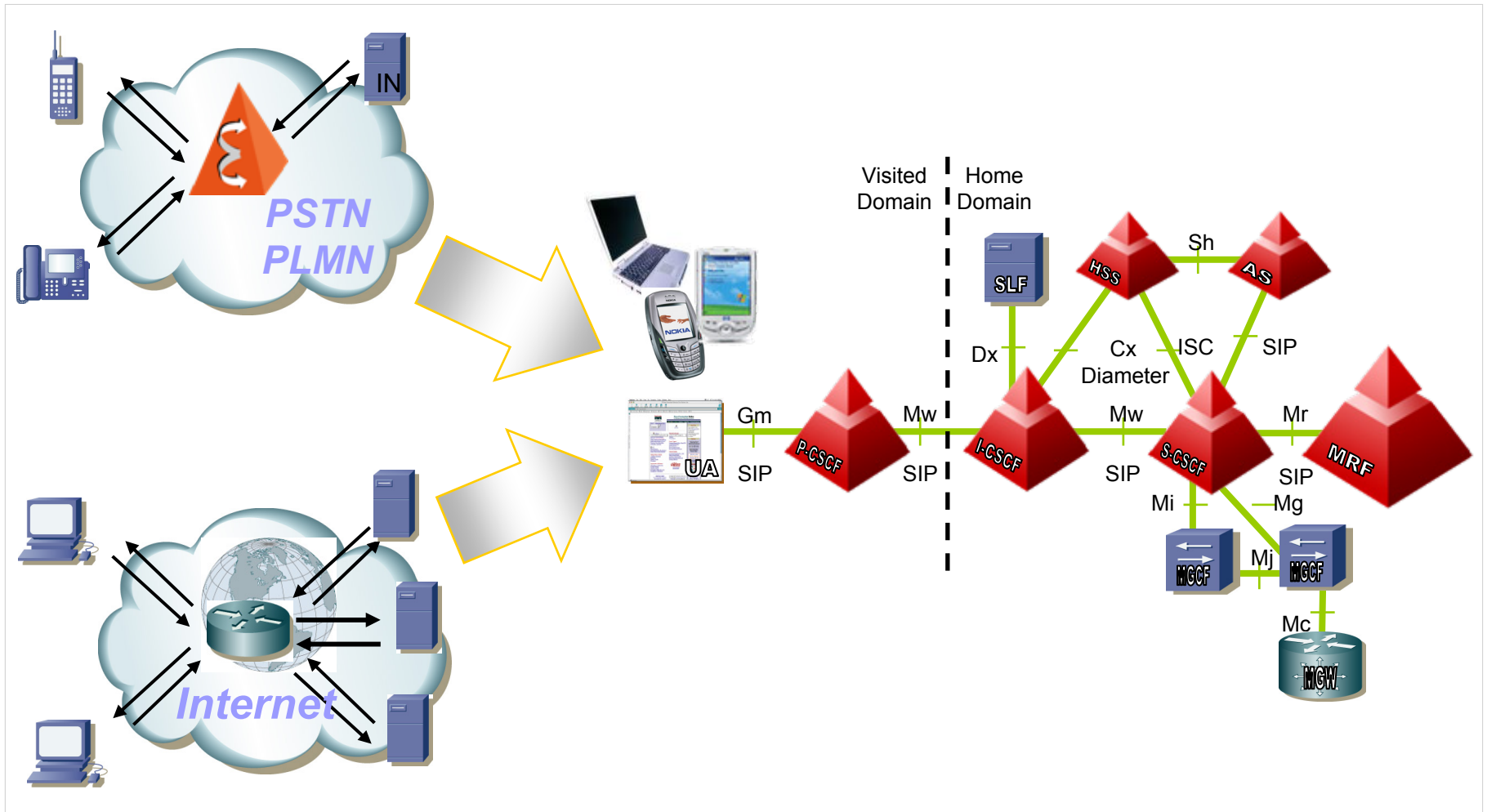


- FastWeb NGN evolution strategy: smooth transition to the IMS model

- Major building blocks
 - Platforms
 - Close integration of communication services (e.g. call control, user positioning and presence) with application logic
 - Dynamic management of Customers' service profile
 - Integration with external applications (business partners) thanks to standard interfaces
 - Terminals
 - Commoditization (consumer electronics)
 - User friendly interfaces, easy customer access to multimedia services
 - Wireless connectivity
 - Integration with Service Platforms thanks to the use of standard protocols (IP, SIP)



IMS, “Bridging the gap”



Broadband IP-enabled VAS applications: IP TV



Video On Demand

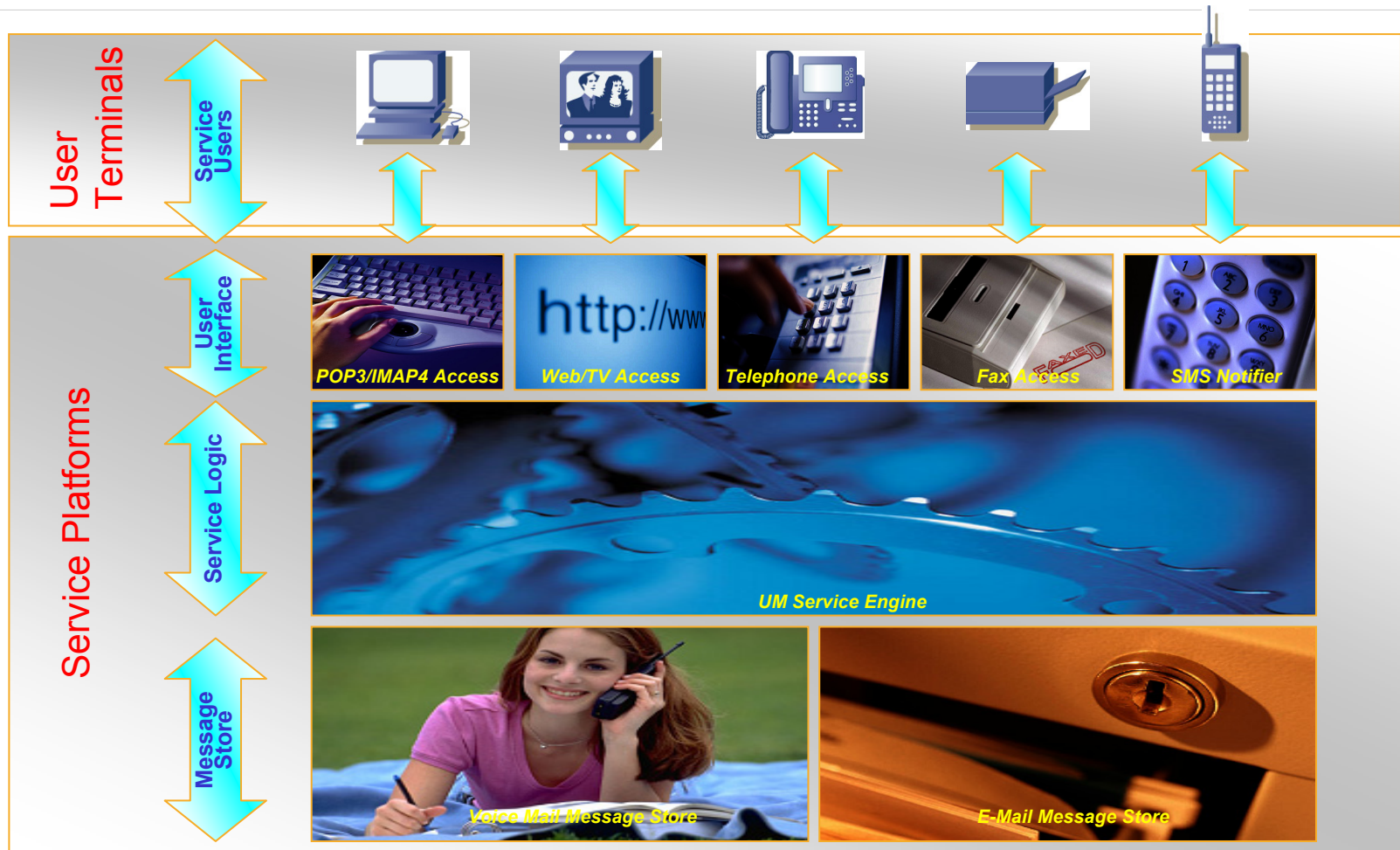


Gaming on TV

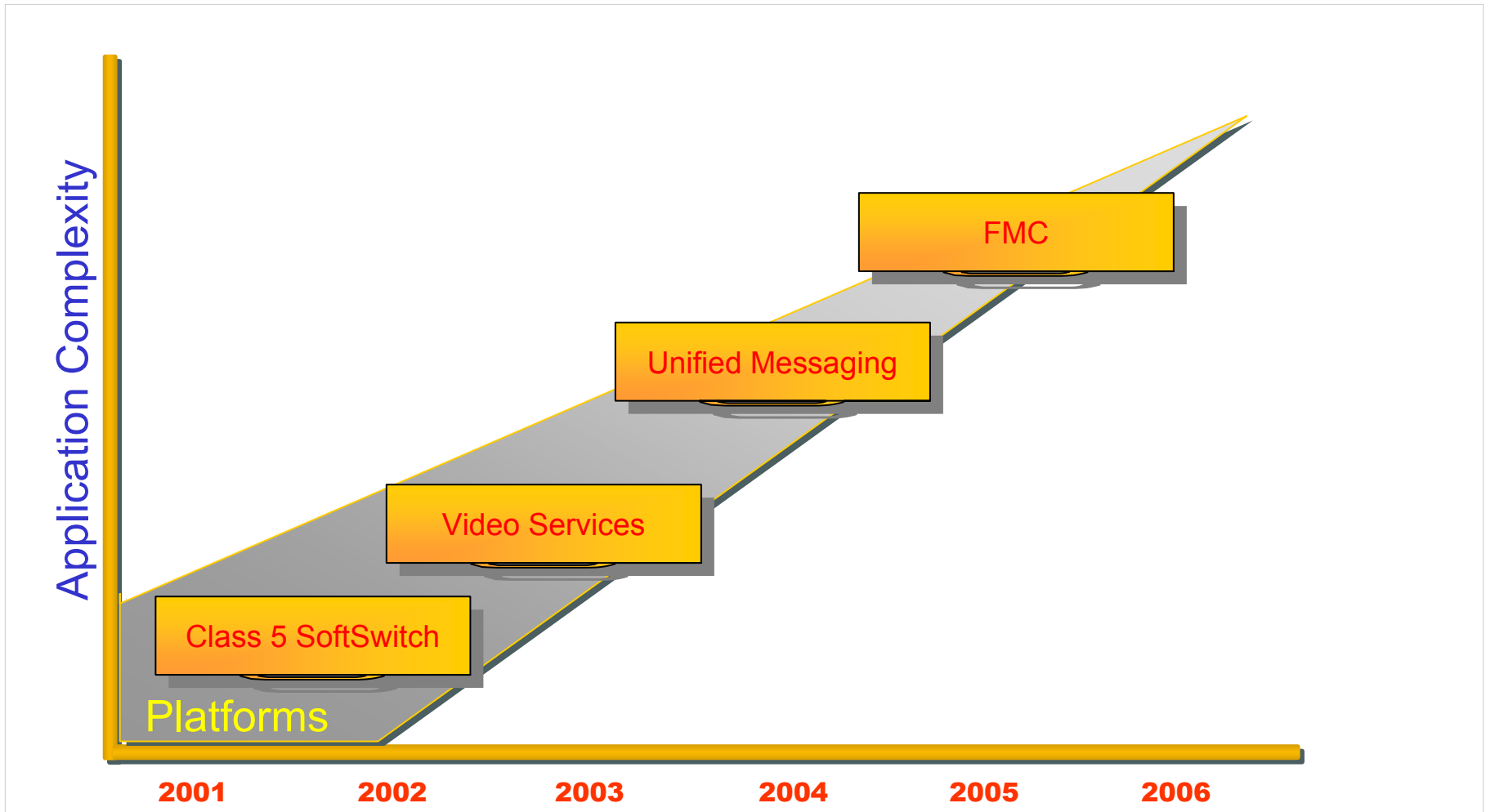
Broadcast TV, Pay TV



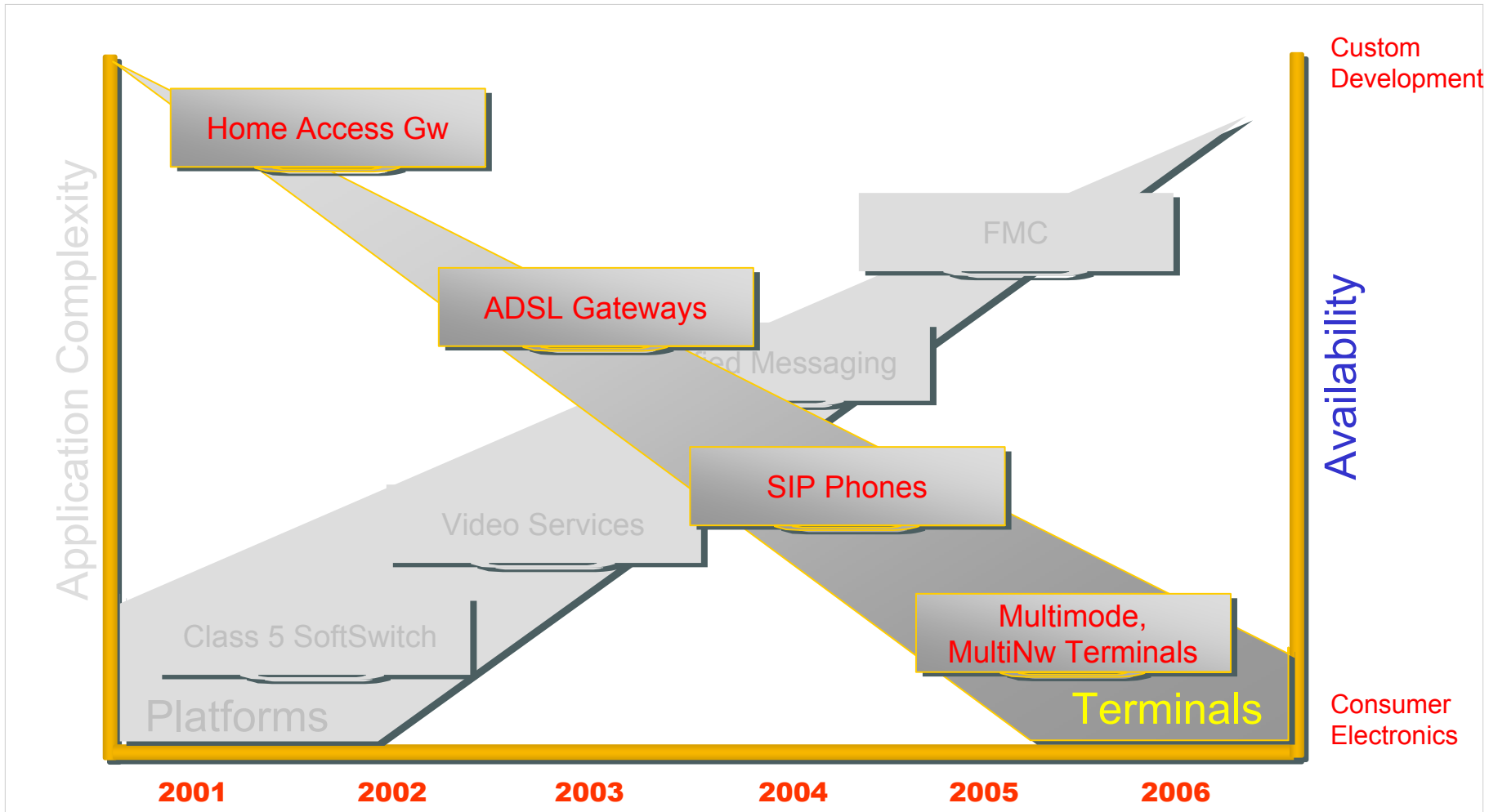
Broadband IP-enabled VAS applications: Unified Messaging



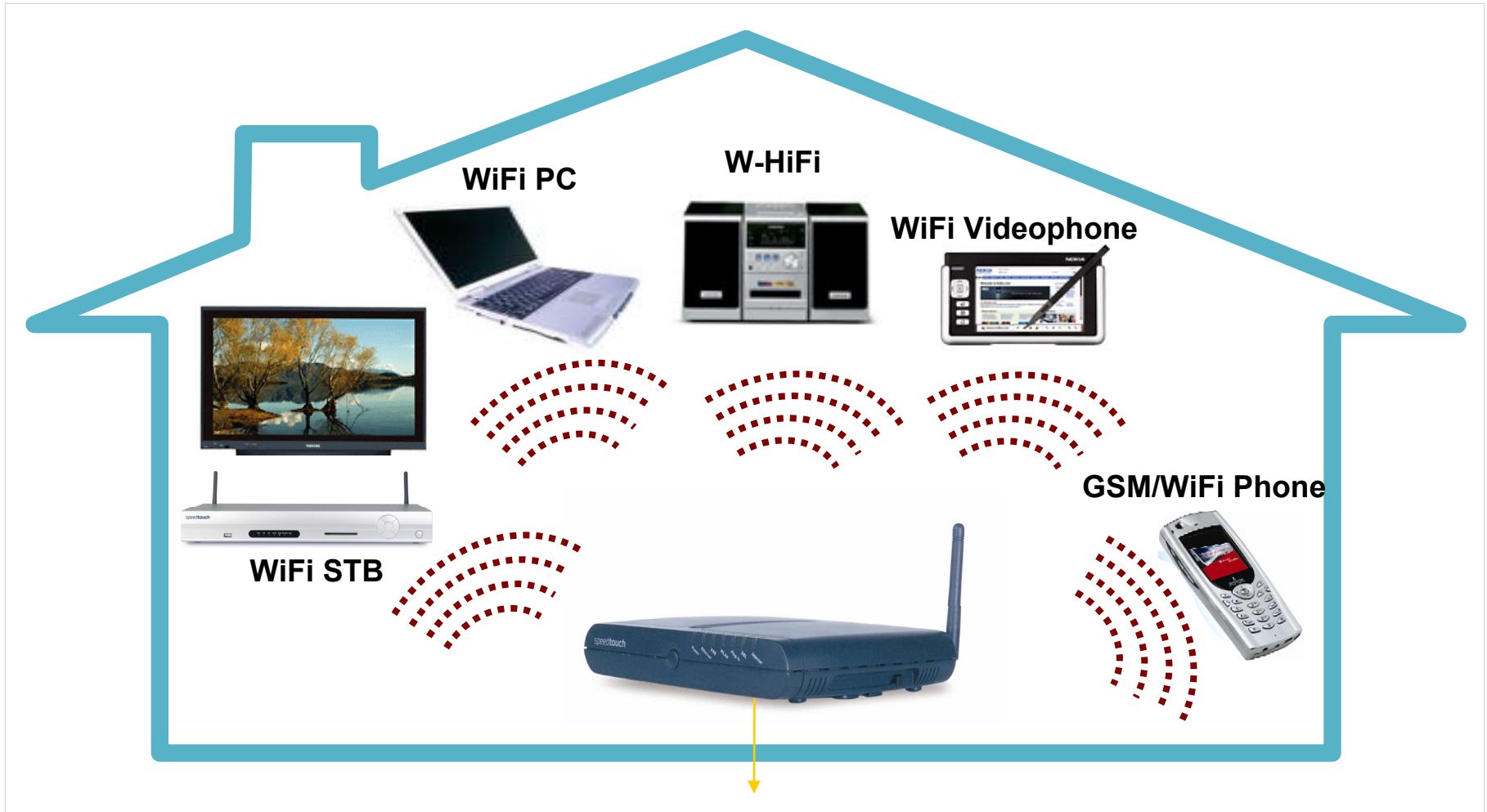
Evolution to IMS: Impacts on the infrastructure



Evolution to IMS: Impacts on the infrastructure



Broadband evolution: A Wireless House



Broadband and Network Evolutions: The challenges



Terminals and integration

- ✓ The development, industrialization and maintenance of user terminals require huge investments
- ✓ Custom developments are neither any longer economically viable nor technologically sustainable
- ✓ Economy of scale of the Consumer Electronics market is strategic for
 - ✓ Achieving a shorter Time-to-Market
 - ✓ Lowering barriers for new Customer acquisition
 - ✓ Lower terminal cost
 - ✓ Terminal reuse also in case of churn
- ✓ Integration efforts will still be a challenge, as new services (non regression) and new terminals are made available

Broadband and Network Evolutions: The challenges



Services

- ✓ Service creation is still a critical aspect of innovation, as they are expected to be attractive, easy to access and useful, not “just” innovative

Regulatory scenario

- ✓ National regulations play a major role in creating or denying opportunities for new service opportunities (e.g. FMC)

Broadband and Network Evolutions: Conclusions



- Technological evolution is driving networks towards a broadband, fully IP-based, NGN paradigm
 - Streamlined infrastructure
 - Flexible, standards-based equipment

- This turns into benefits for
 - Operators
 - Reduced operational costs
 - Easier and quicker introduction of new services
 - Additional revenue opportunities
 - Increased customer loyalty
 - Customers
 - Better services
 - Lower costs

- National regulations play a major role in making this happen



FAST  WEB