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Policy Forum of the IKINET Project
Regional "Competence Centres" and European Knowledge and innovation networks:
an international comparison of innovation cluster policies.

Roma, September 19-20, 2007

Theme 3. How to promote an effective governance of networks of competence Centres:

- Digital Divide: the "Broadband Divide" generations
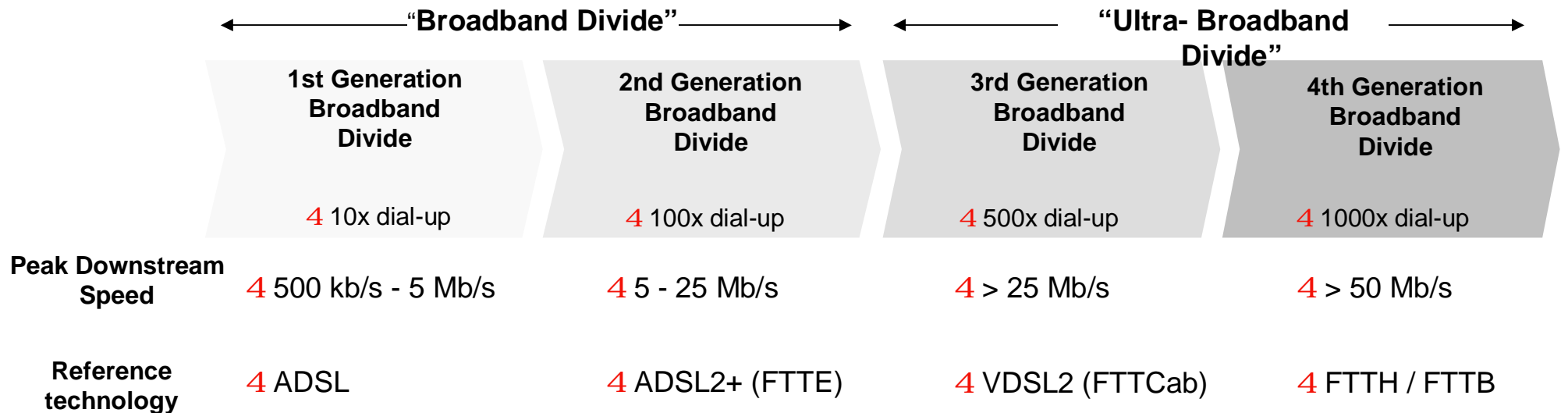
Nicola Barone

Agenda

4 Get over Digital Divide

4 Telecom Italia broadband strategy: the NGN2 project

4 Services: first wave on new digital applications for Consumer and Business

Digital Divide: the "Broadband Divide" generations

Distinctive "Broadband Divide" generations, in relation to tech evolution and network deployment:

	"Broadband Divide"		"Ultra- Broadband Divide"	
	1st Generation Broadband Divide	**2nd Generation Broadband Divide**	**3rd Generation Broadband Divide**	**4th Generation Broadband Divide**
	10x dial-up	100x dial-up	500x dial-up	1000x dial-up
Peak Downstream Speed	500 kb/s - 5 Mb/s	5 - 25 Mb/s	> 25 Mb/s	> 50 Mb/s
Reference technology	ADSL	ADSL2+ (FTTE)	VDSL2 (FTTCab)	FTTH / FTTB

4 Different "tech innovation waves" allow gradual services delivery with non-homogeneous deployment in terms of access and adoption.

Nicola Barone

Get over the Digital Divide in Italy

Telecom Italia target for ADSL Coverage (based on a total of 26 Mln eq. telephone lines):

- 4 At the end of 2006: **89,4 %**
- 4 At the end of 2007: **95 %** (expected)
- 4 At the end of 2008: **98 %** (expected)

To reach this objectives and get over the First Generation of Broadband Divide, Telecom Italia has defined a specific **"Anti Digital Divide Project"** which is based on:

Continue the **basic evolution ADSL coverage plan**, based on **"Full DSLAM"** technical solution and following market demand and economic objectives.

Costs reductions, using the **"Mini DSLAM"** + nx2Mbit/s backbone technical solutions, specifically conceived for Small COs, in area of non economic convenience, and with lower potential target customers.

New forms of collaborations with Public Entities:

4 Contributions, according to European Commission principles;

4 Collaborations and Agreements to stimulate the broadband services demand and develop new ICT initiatives

NGN2 Projects: motivations and drivers

Network Status:

- Increasing Capex& Opex to face network obsolescence and inertial evolution

- Not enough bandwidth for launching future bandwidth hungry services (media, ICT, …)

- Physical saturation effect: the Broadband lines to copper cable lines ratio is close to its physical upper limit (50 to 60%)

Tech Drivers

All-IP as unifying tech choice, to simplify, flex and reduce cost structure

Ultrabroadband access: from copper to fiber

Traditional switching network obsolescence: migration to IP-based systems and solutions

Market Drivers

Answer to continuous growth of bandwidth needs to **support content-based services** (e.g. multiple play, broadband mobile)

Enabling new scenarios for ICT applications and services (e.g. IT managed services, Home control and Automation, e-Health)
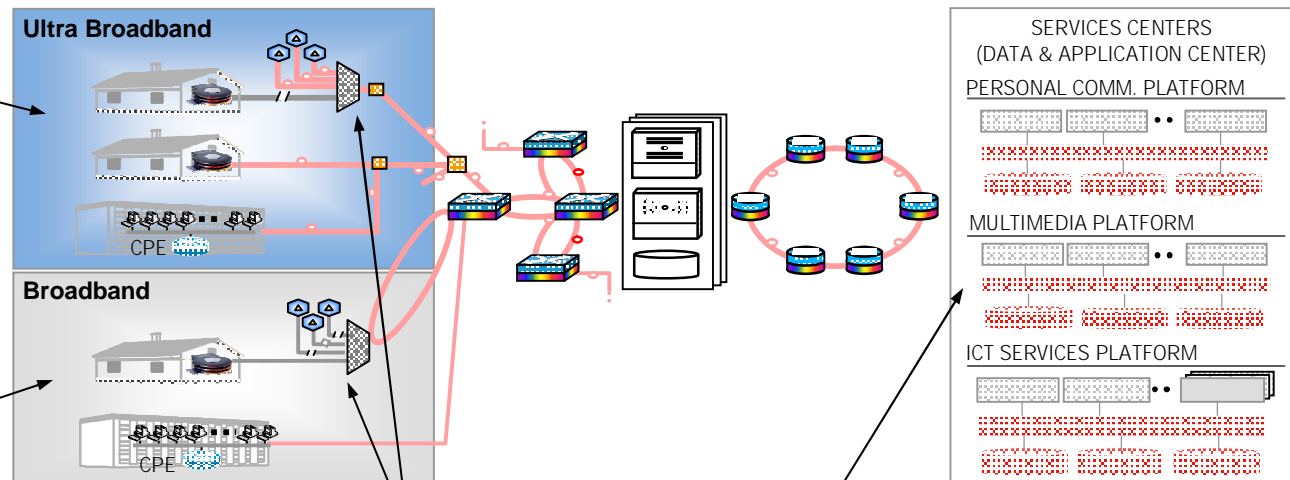
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NGN2 Project: key milestones

4 Implementation of "Full-IP" network

4 Progressive full migration to ToIP starting from 2009

4 Massive introduction of Fiber (FTTx) in the access network & installation of VDSL2 technology

4 Strong push on ADSL2+ / 3-Play (FTTE) platform deployment to be ahead of FTTx's time and to eliminate the 1st Generation Digital Divide

Ultra Broadband

CPE

Broadband

CPE

SERVICES CENTERS
(DATA & APPLICATION CENTER)
PERSONAL COMM. PLATFORM

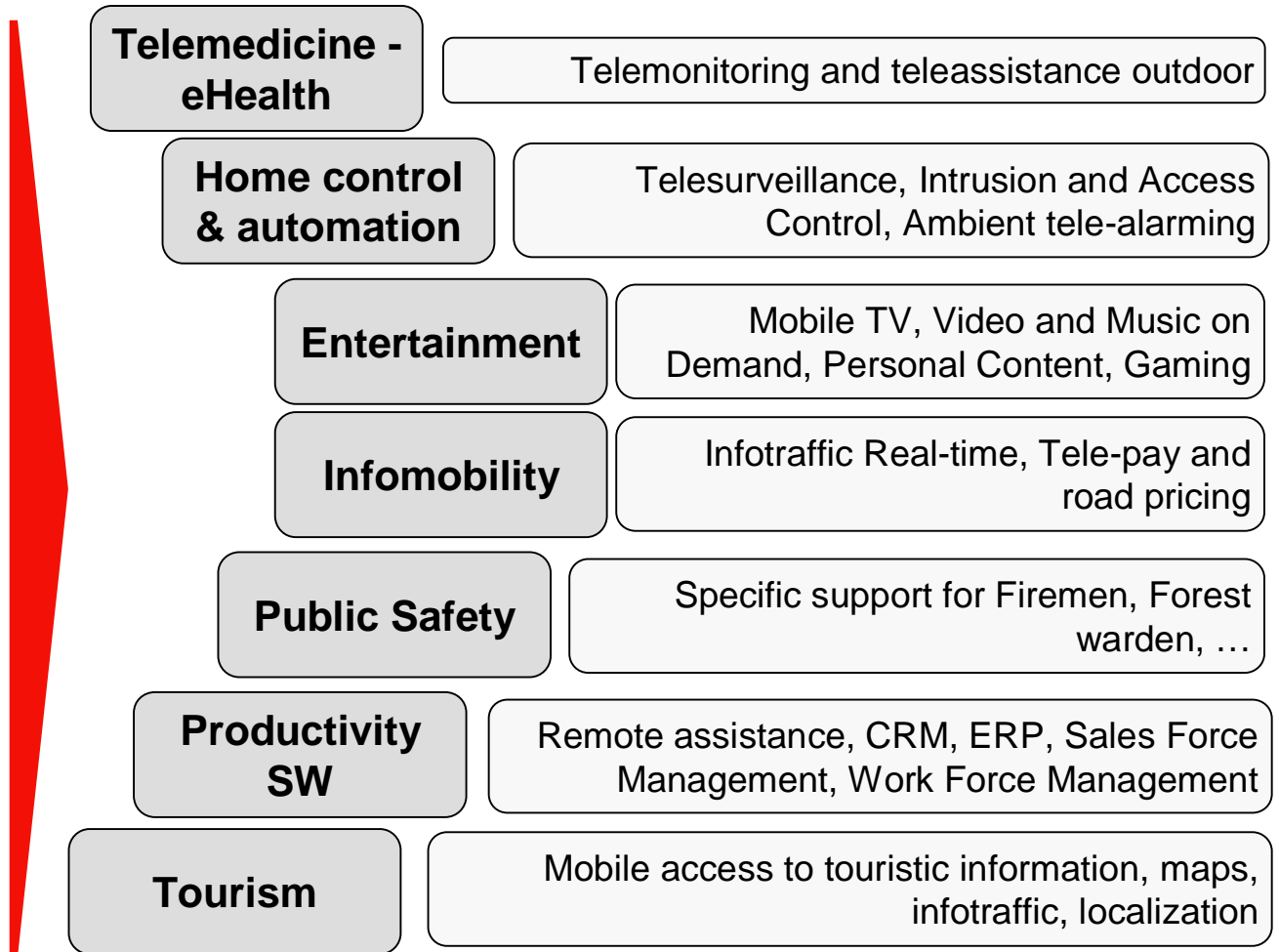MULTIMEDIA PLATFORM

ICT SERVICES PLATFORM

4 Introduction of ultra-broadband connectivity for mobile access (deployment of fiber-based access solutions)

4 Deployment of new regional Data Center to enable the distribution of "vertical application"

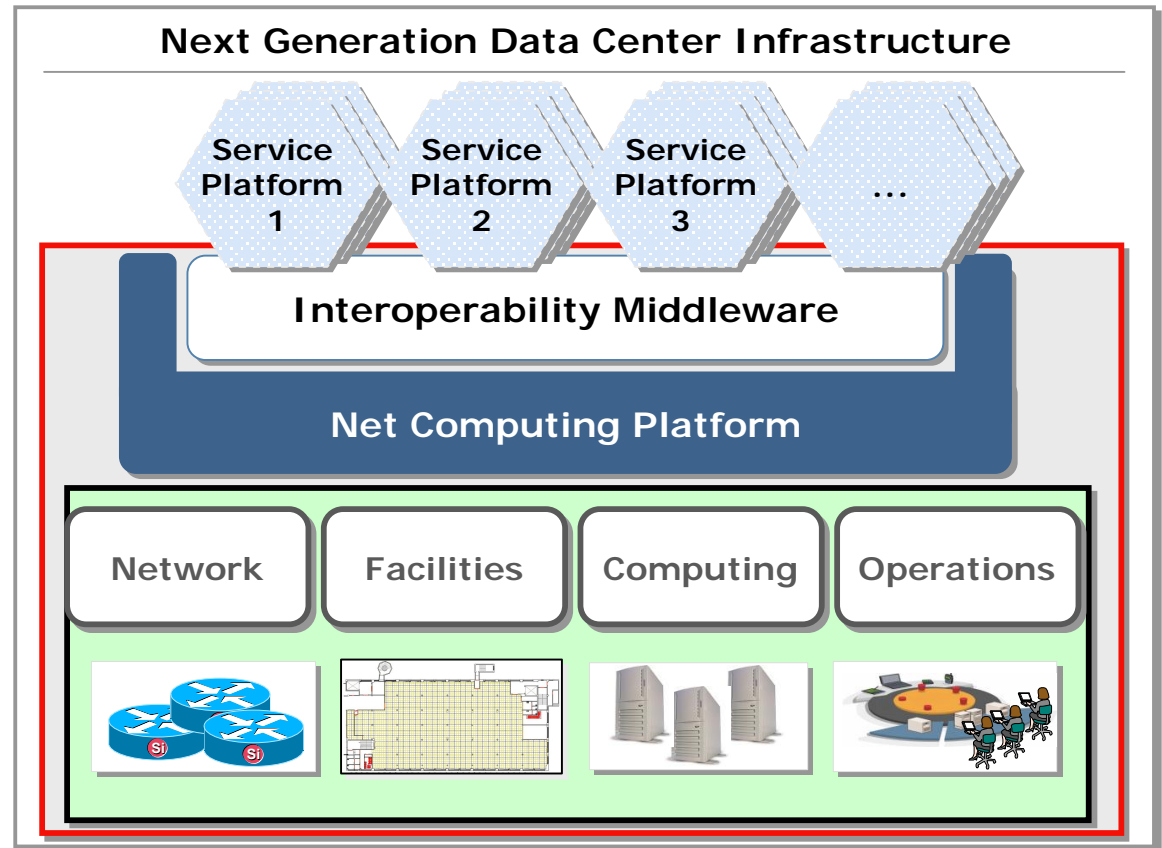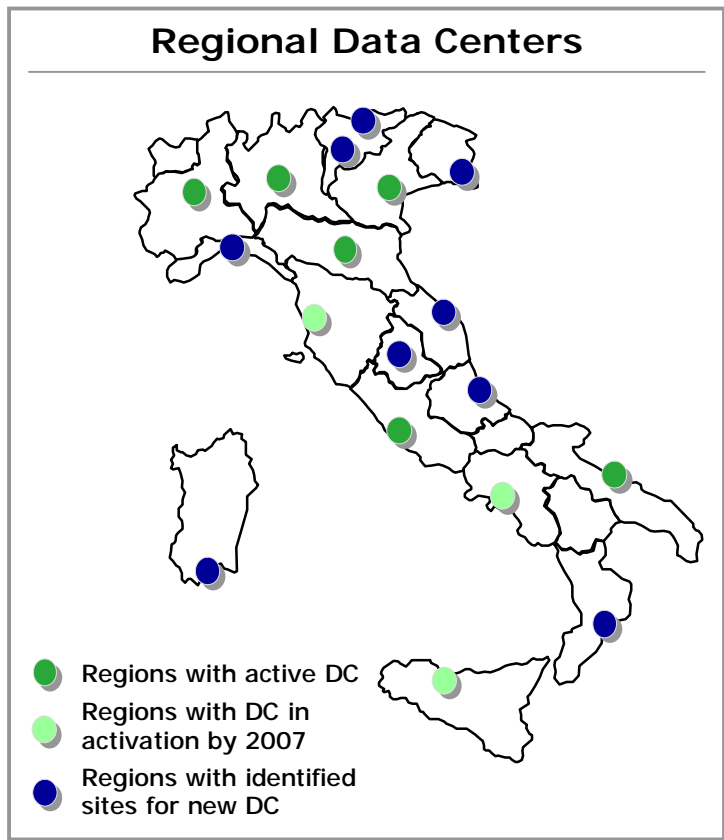# New Digital Applications and Services for families and enterprises

4 Create the conditions to develop **new business models and paradigms based on broadband**

4 **Stimulate the demand of new digital services** ("not only e-mail and chat")

Telemedicine - eHealth	Telemonitoring and teleassistance outdoor
Home control & automation	Telesurveillance, Intrusion and Access Control, Ambient tele-alarming
Entertainment	Mobile TV, Video and Music on Demand, Personal Content, Gaming
Infomobility	Infotraffic Real-time, Tele-pay and road pricing
Public Safety	Specific support for Firemen, Forest warden, ...
Productivity SW	Remote assistance, CRM, ERP, Sales Force Management, Work Force Management
Tourism	Mobile access to touristic information, maps, infotraffic, localization

TIM

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Net Centric Platform

An innovative approach to host and provide IT services, using specific "Regional Data Centers".

Regional Data Centers

- Regions with active DC
- Regions with DC in activation by 2007
- Regions with identified sites for new DC

Next Generation Data Center Infrastructure

Service Platform 1 · Service Platform 2 · Service Platform 3 · ...

Interoperability Middleware

Net Computing Platform

Network · Facilities · Computing · Operations

Thank You

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