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End-user applications over 3G

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Agenda

1. Market Dynamics
2. Market Trends & Opportunities
3. Seizing Opportunities with Alcatel-Lucent

1

Market Dynamics

Expectations & drivers

End-users demand and expectation

Convenient, personalized and blended services

End-Users want **convenient & easy to use** services

End-Users expect services suited to their **personal needs**

- Not limited to the capability of their device or their network

"**One service fits all**" doesn't work

- Operators need to support plenty of services for plenty of different user groups with continual renewal

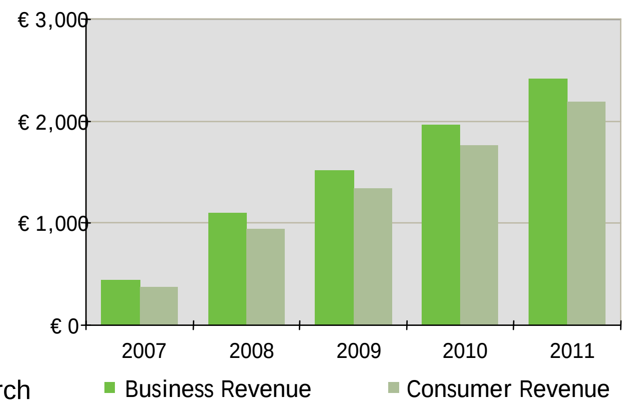
End-users expect to pay only if there's a **true added value**

- Compared with the introduction of IT competitors (Google, Skype, etc)

Percentage of Western Europeans Expressing Willingness to Pay for Feature

Packages Features	
SMS	82%
MMS	67%
Interactive Internet TV	64%
Instant Messaging	63%
Mobile Video	53%
Video Mail	48%
Push-To-Talk	35%
Dual Mode Phone Service	32%

Personalized and Blended Service Revenue Forecast — Western Europe (Thousands of Euros)



Source: Bell Labs Market Research

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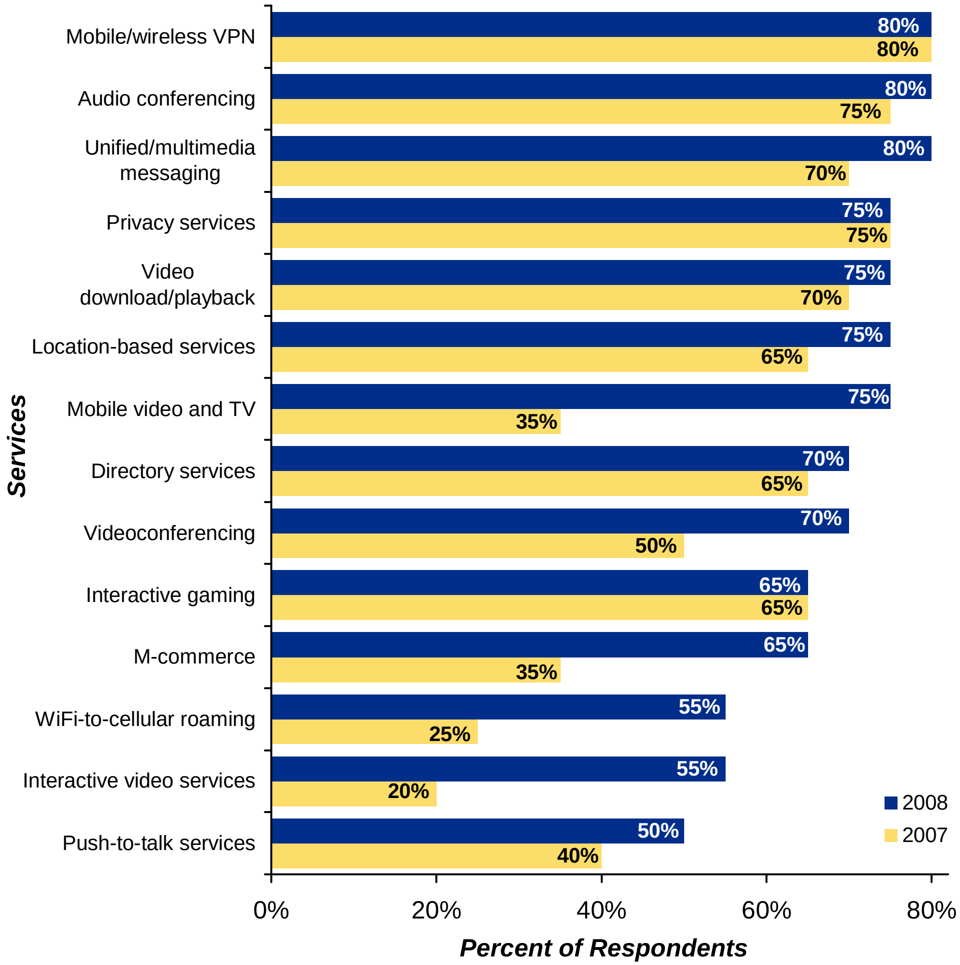
Service Providers going for Next Gen Mobile/Wireless Broadband

Service portfolio and short-term evolution



- Several service providers offer all or nearly all of the services listed
- Growth is especially strong for **interactive video services**
- **Mobile video and TV services** more than double
- **WiFi to cellular** roaming doubles--UMA and IMS grow

Source: Infonetics Research, Inc., 2008.

Based on a survey of 50 service providers in North America, Europe and Asia that offer next gen mobile (2.5/3G / 3G+) or wireless broadband services (WiMAX / WiFi).

Mobile Services Dynamic

The More Bandwidth, the Better the End-User Experience, the more fragmented Offering

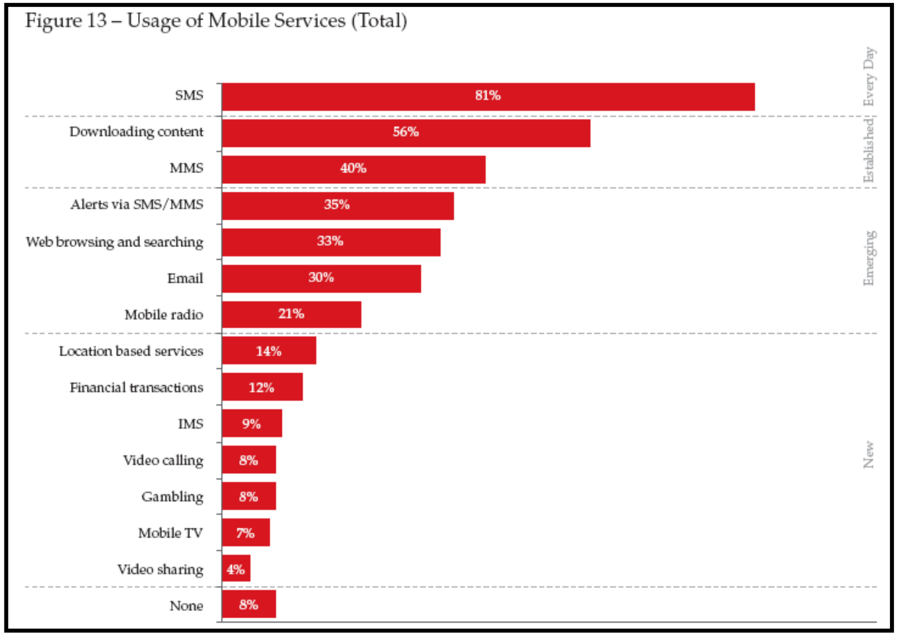
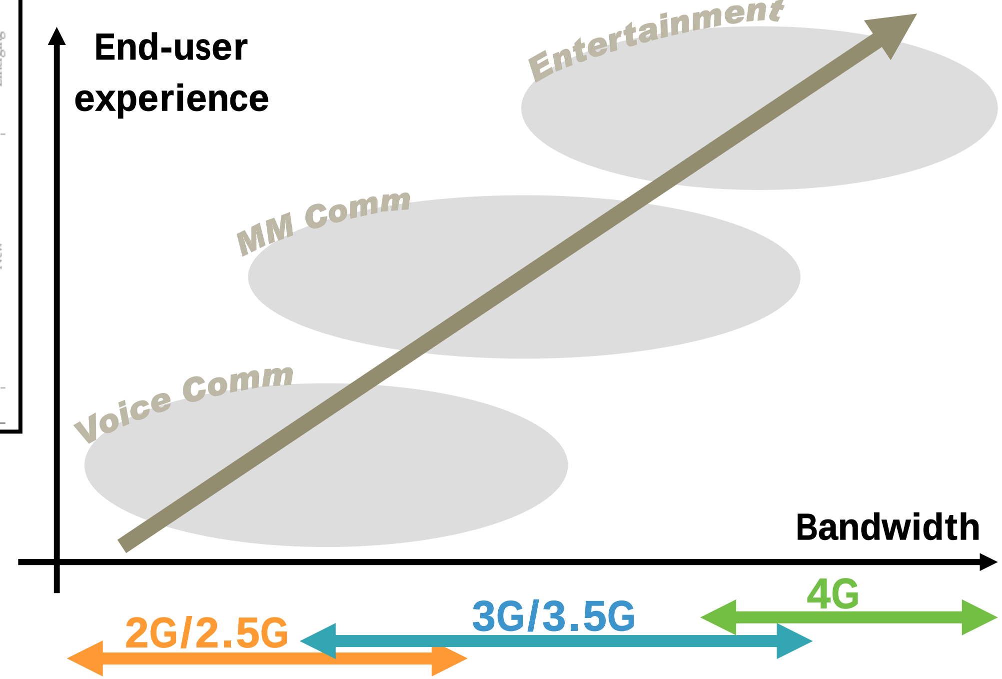


Figure 13 – Usage of Mobile Services (Total)

Source: GSMA, Dec 2006.

Increasing fragmentation of user base makes the “killer application” much less likely.



3G, an opportunity to improve End-user experience & introduce new multimedia services

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2

Market Trends & Opportunities

Around key service domains

3G Technology – Today

- **400** commercial networks in **135** countries
- **686** million of subscribers
- **1095** devices
- **632** highlighted data services worldwide

Source: www.3gtoday.com

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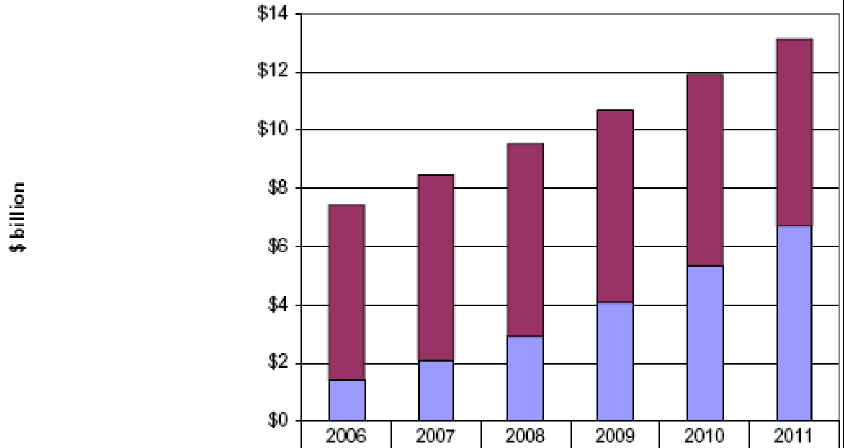
Global Trends in 3G Technologies

Key Figures



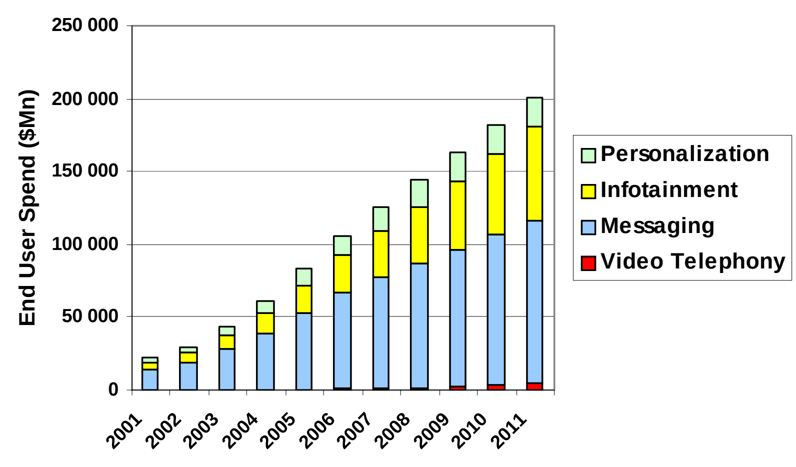
	2006	2007	2008	2009	2010	2011
Legacy Mobile	$6.02	$6.37	$6.58	$6.60	$6.54	$6.41
Nextgen Mobile Telecommunication Software	$1.43	$2.08	$2.94	$4.10	$5.37	$6.70

Source: OSS Observer, 2007.

- Growth in 3G technologies, mainly in WCDMA with upgrade to HSPA, to support higher bandwidth in anticipation of strong demand for multi-media services.
- 3G Femto cell gaining industry attention with the rapid uptake of the residential broadband service market.

- Messaging remains the dominant data revenue stream.
- P2P SMS growth slowing in mature markets in favor of new messaging tools, particularly email and IM.
- Infotainment revenues will double by 2011.
- Growing functionality/usability of handsets/networks drives growth of Web browsing with positive outlook for Web 2.0 services.

Figure 3. Global Spend by Data Segment



Source: Strategy Analytics, 2007.

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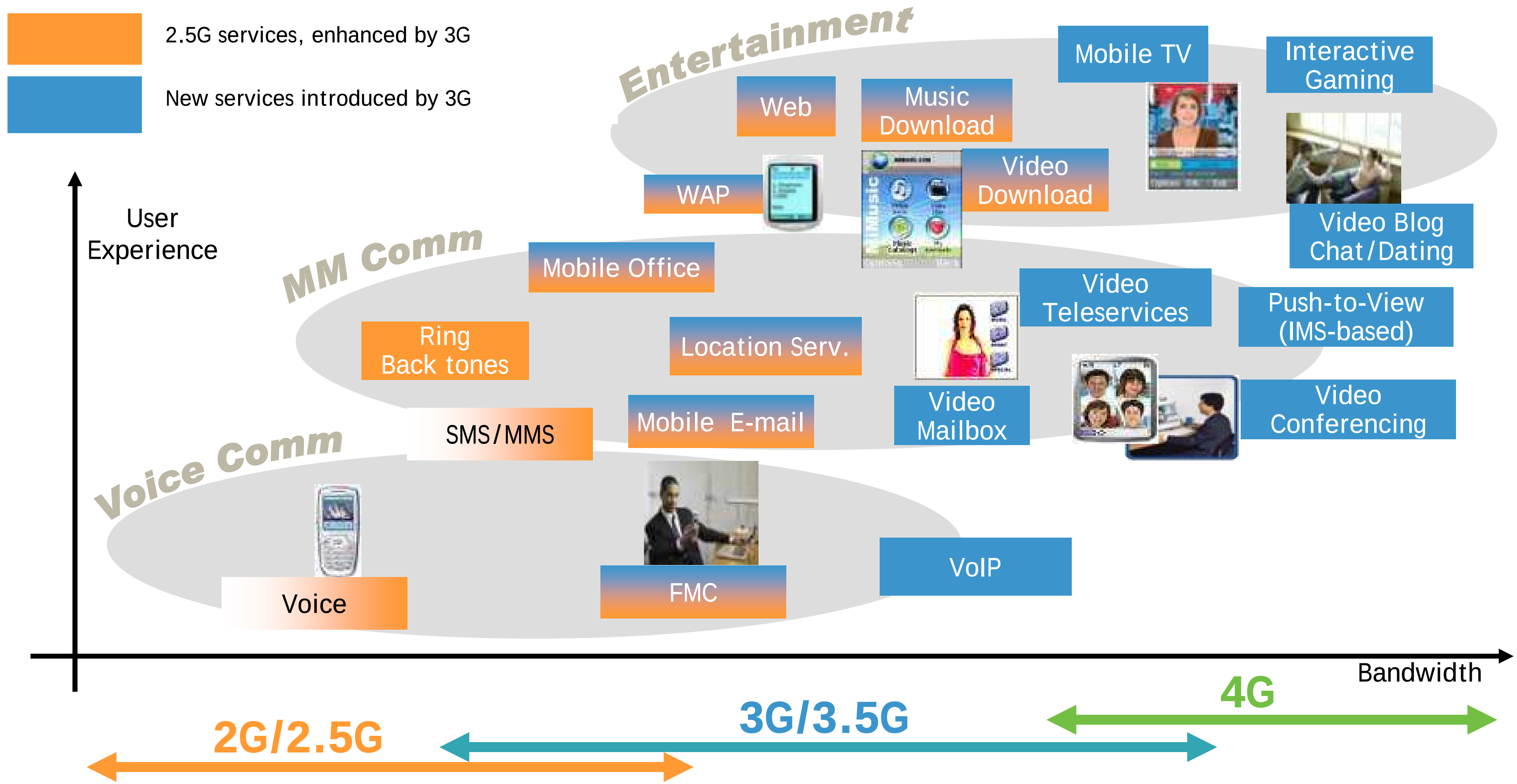
From mass market to community and personalization leveraging innovation

Strong synergies between Capacity & Terminals



3G helps SP engage into an innovative services roadmap to create and maintain differentiation

Mobile Messaging

Market figures

Text messaging	'Augmented' text messaging	Multimedia messaging

SMS

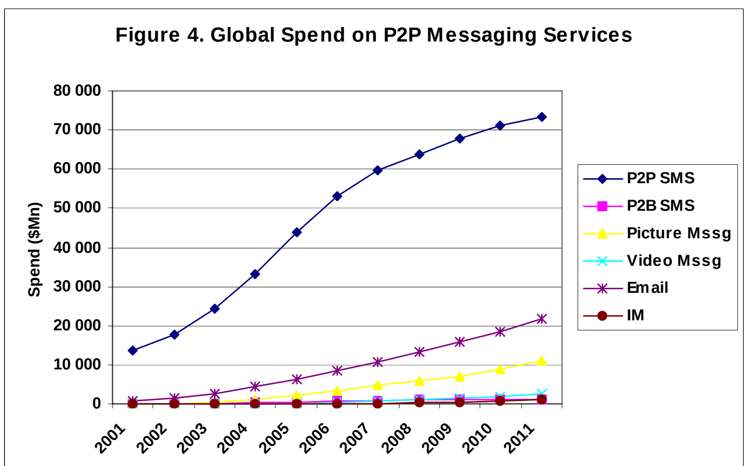
MMS

Mobile email

Mobile IM

Information-centric ⟷ **Emotion-centric**

Messaging accounts for 11% of Mobile Carrier revenue



Source: Strategy Analytics, Inc., 2007.

- **Towards unified Messaging with (web, wireline, IPTV)**
- **Next-Gen Messaging growing with double-digit CAGR:**
  - **Mobile IM**
  - **Mobile Email**
  - **Video Mail**

verizon wireless

Mobile IM: Launched April 04

61Msubs VZ IMs to 240 Msubs MSN, 75m subs Yahoo and 60Msubs on AOM

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Multi-screen Entertainment

Key trends in entertainment / content delivery market

Unicast + Multicast + Broadcast Personal & Interactive TV	→	Interactive services over TV VOD Unlimited TV
Content proliferation User-generated Content	→	Search Tools Network(ed) storage Virtual Storefront
Any Access, Any location, Any device	→	Multi Screen
New business models	→	Interactive & targeted ad Sponsored content

Wide adoption of digital multimedia devices & broadband driving entertainment & content proliferation

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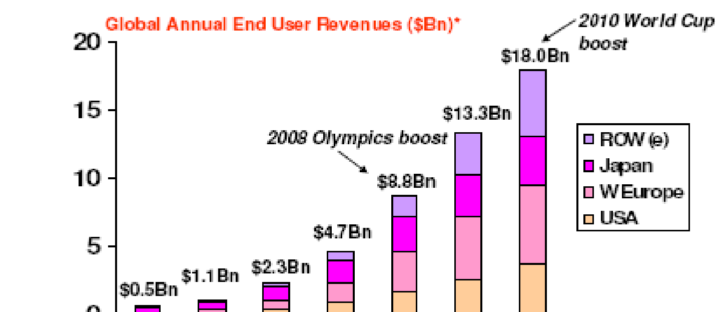
Mobile TV and Music

Market figures

- Over 220 operators have already launched mobile video services
- Among them, around 120 operators have launched Live TV
- Consumers showing willingness to pay incrementally for quality ‘TV on mobile’ services

Total Mobile Video* Global Revenue Development (Cellular and Broadcast)

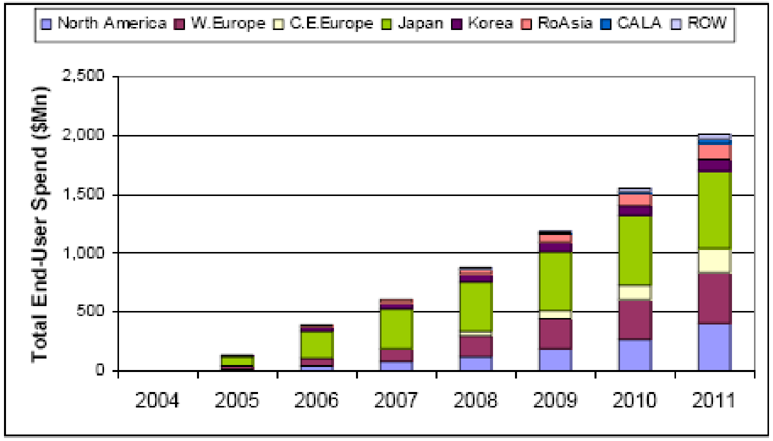


	2004	2005	2006	2007	2008	2009	2010
ROW (e)	0.05	0.1	0.3	0.6	1.6	3.1	4.8
Japan	0.4	0.6	1	1.7	2.5	3.1	3.6
WEurope	0.07	0.2	0.6	1.4	3	4.6	5.8
USA	0.03	0.1	0.4	0.9	1.6	2.5	3.7

*Advertising, Sponsorship and Interactive (comps, voting etc) additional, includes Mobile TV and Mobile VoD

Chart 14

Figure 15 Global Spend On Mobile Music 2004 - 2011



Source: Strategy Analytics, Feb 2007.

- Strong momentum in APAC
- Initially driven by personalization (Ringtones, Ringback tones)
- Evolving towards full track music OTA download but trends for:
  - Convergent / multi-platform
  - Off-portal access to catalogs
  - Attractive pricing / bundling

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3 Seizing 3G Opportunities with Alcatel-Lucent

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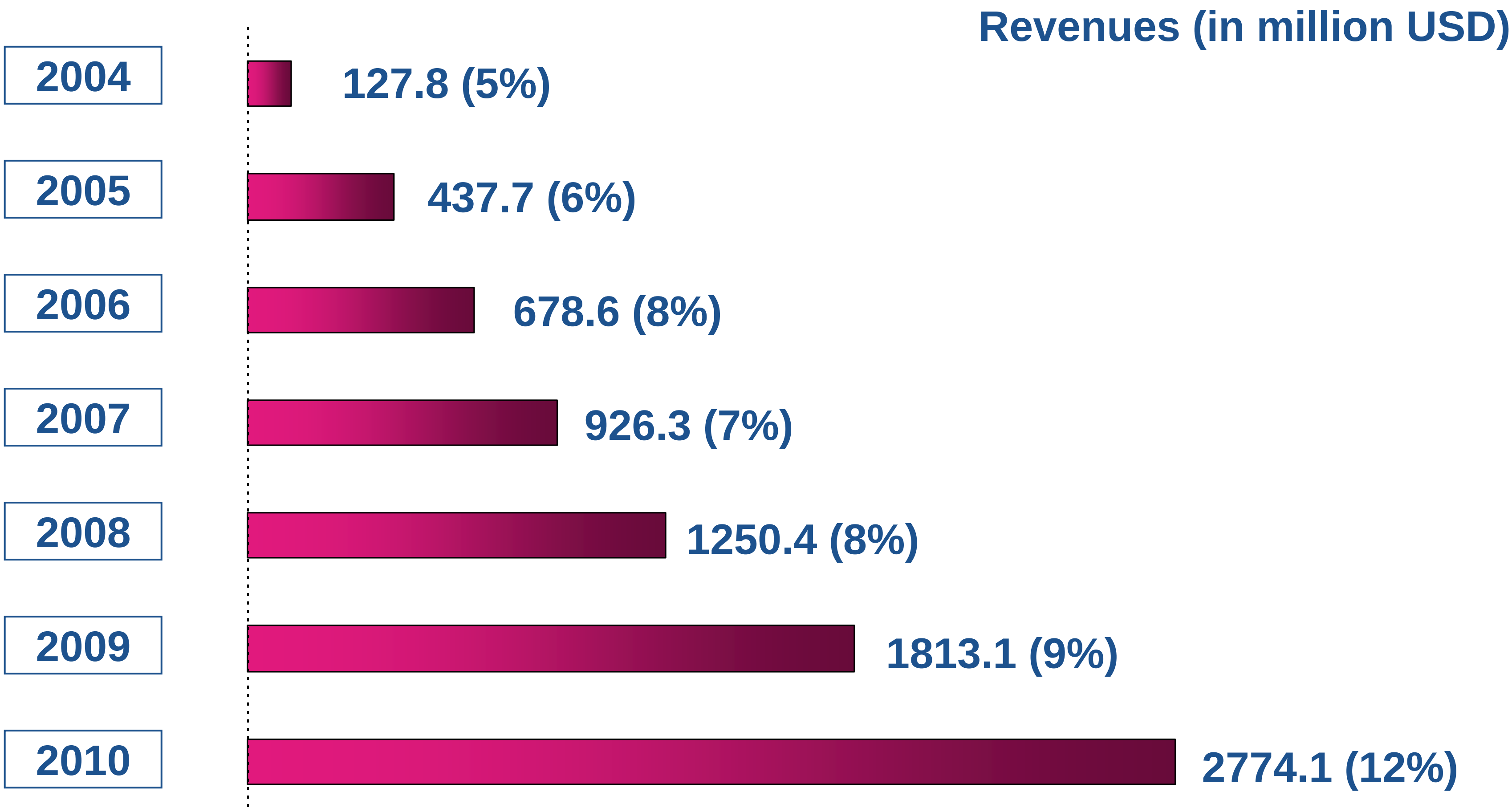
Applications Market in India

VAS Business Overview



Source: TOI

Major areas of investment in Alcatel-Lucent…
…supported by major customer references

IMS
20+ full deployments
50+ IMS services deployments

Communication

IPTV & MultiPlay
#1 Triple Play
120+ F&M customers

Entertainment

Payment
#1 Real Time Payment
220+ fixed and mobile customers
40+ convergent projects

Charging

IP/NGN
Unmatched Field Experience
250+ fixed & mobile customers
Leverage #1 in Classic switching

Network Evolution

Subs Data Management
1/5 of the world mobile subscribers
170+ Customers
70+ next gen. deployments

Users Management

Enabling competitive transformation

www.alcatel-lucent.com