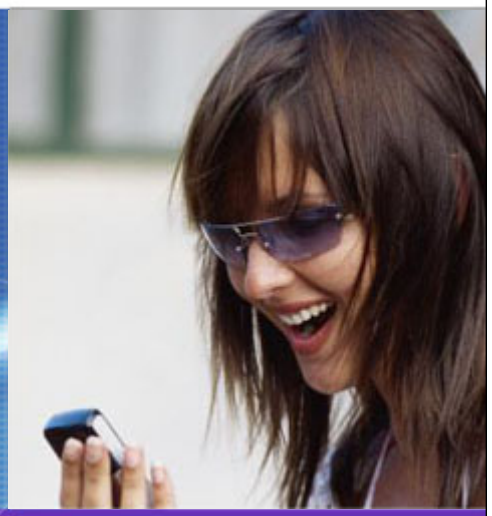
Evolving the Mobile Network to Address Broadband Services Growth



Jean Jones, Director of Strategic Marketing Wireline Business Group

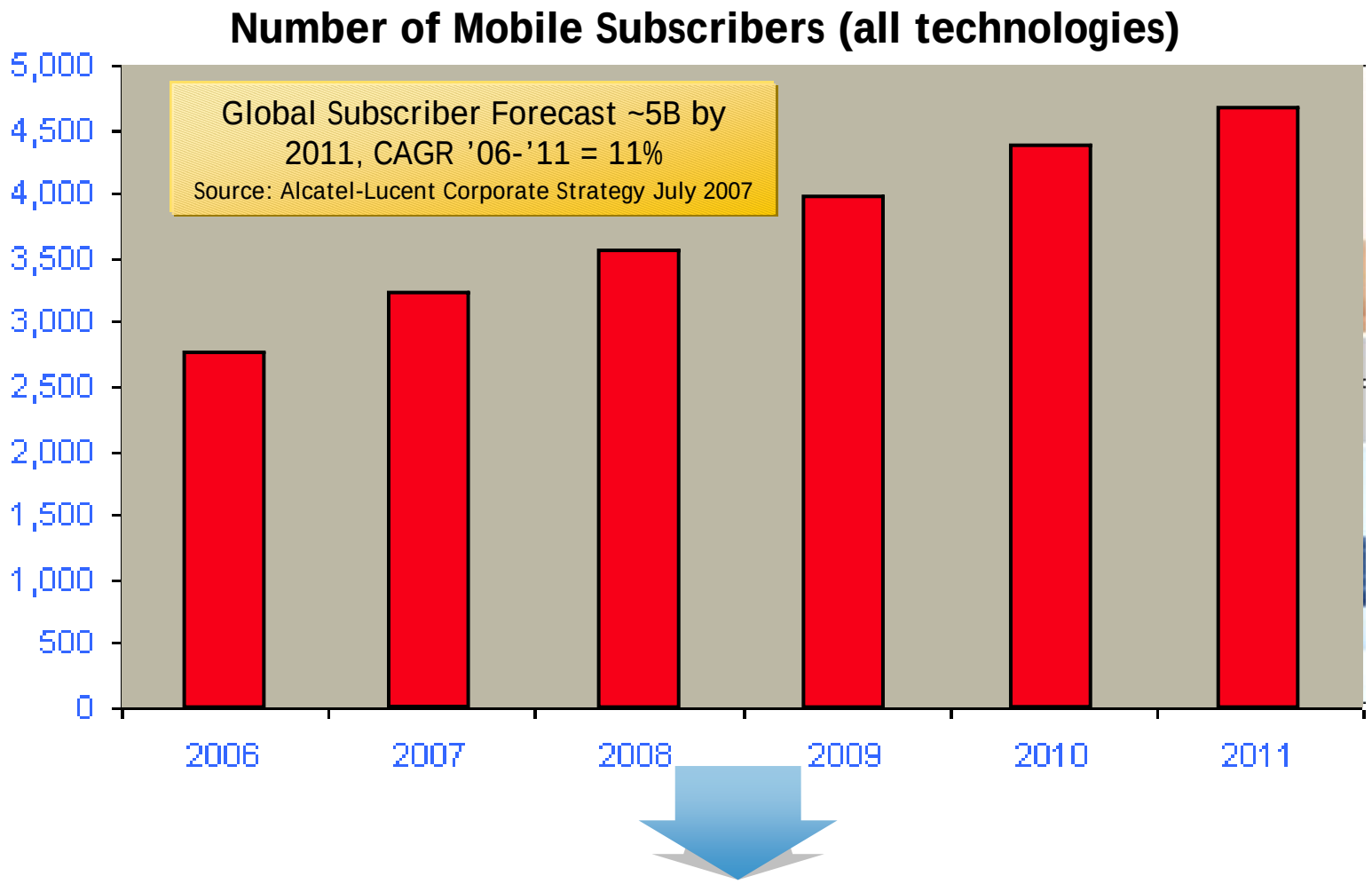
Phil Tilley, Vice President of Marketing Europe, IP Division

Agenda

1. Mobile Broadband Network Transformation Drivers
2. Operator Network Challenges
3. Alcatel-Lucent value proposition
4. Alcatel Lucent Mobile Network Transformation Experience

1 Market Drivers

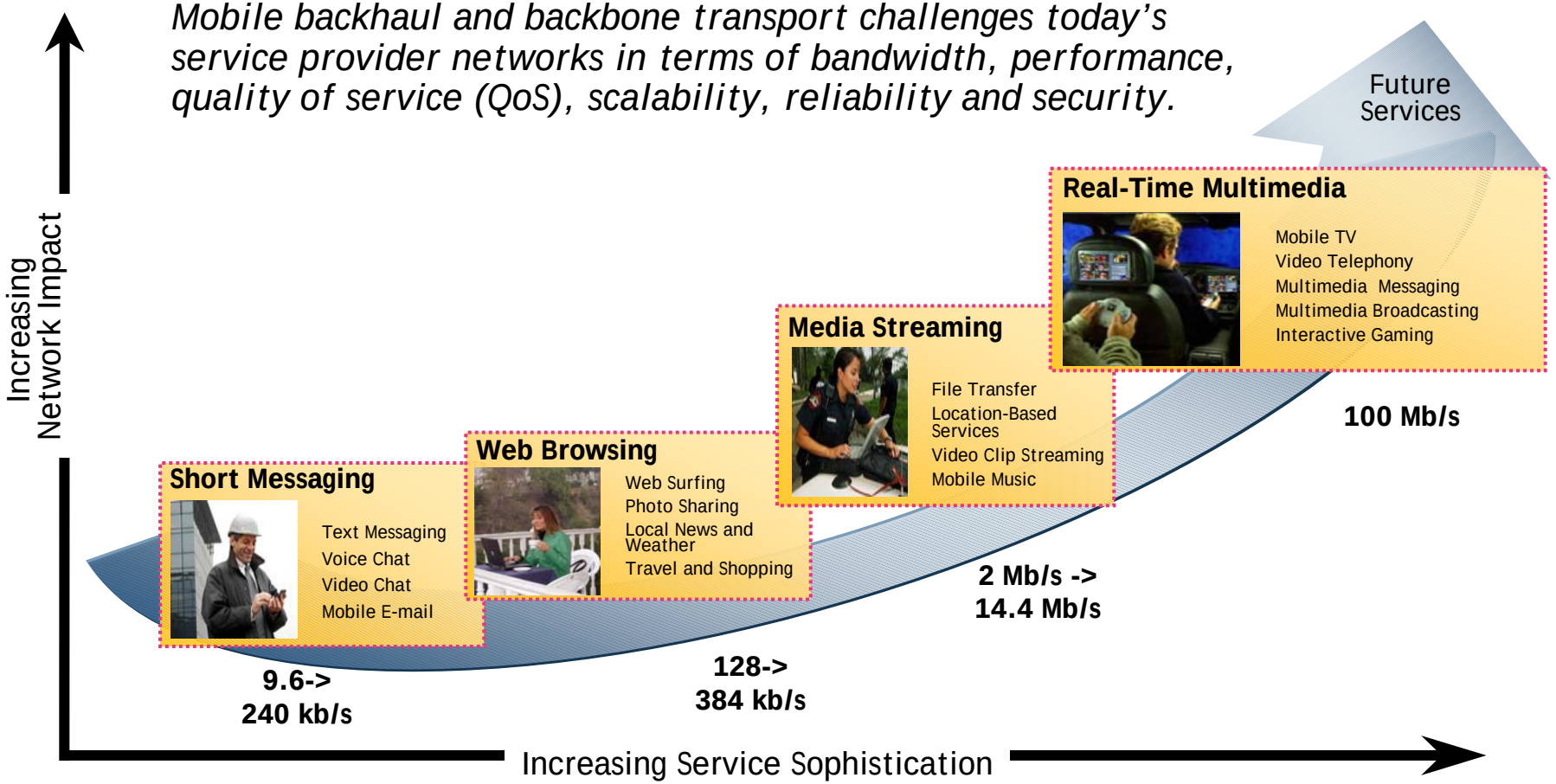
Lure of Portability, Simplicity, and Enhanced Services Yield More Subscriber Additions



Mobile transport networks must be able to scale cost-effectively and deliver optimal consumer experience

New Services Require More from the Network

Mobile backhaul and backbone transport challenges today's service provider networks in terms of bandwidth, performance, quality of service (QoS), scalability, reliability and security.

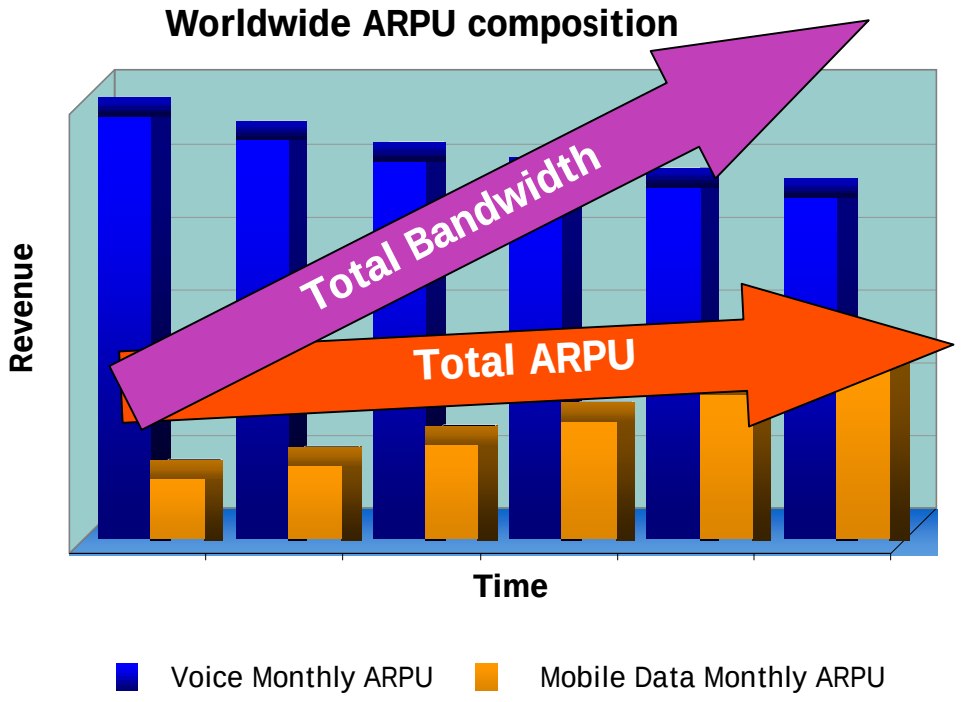


The challenge is to implement new services while optimizing the network total cost of ownership

2 Operator Challenges

Cost Pressures from Broadband Mobile Traffic Mandate Evolution to All-IP

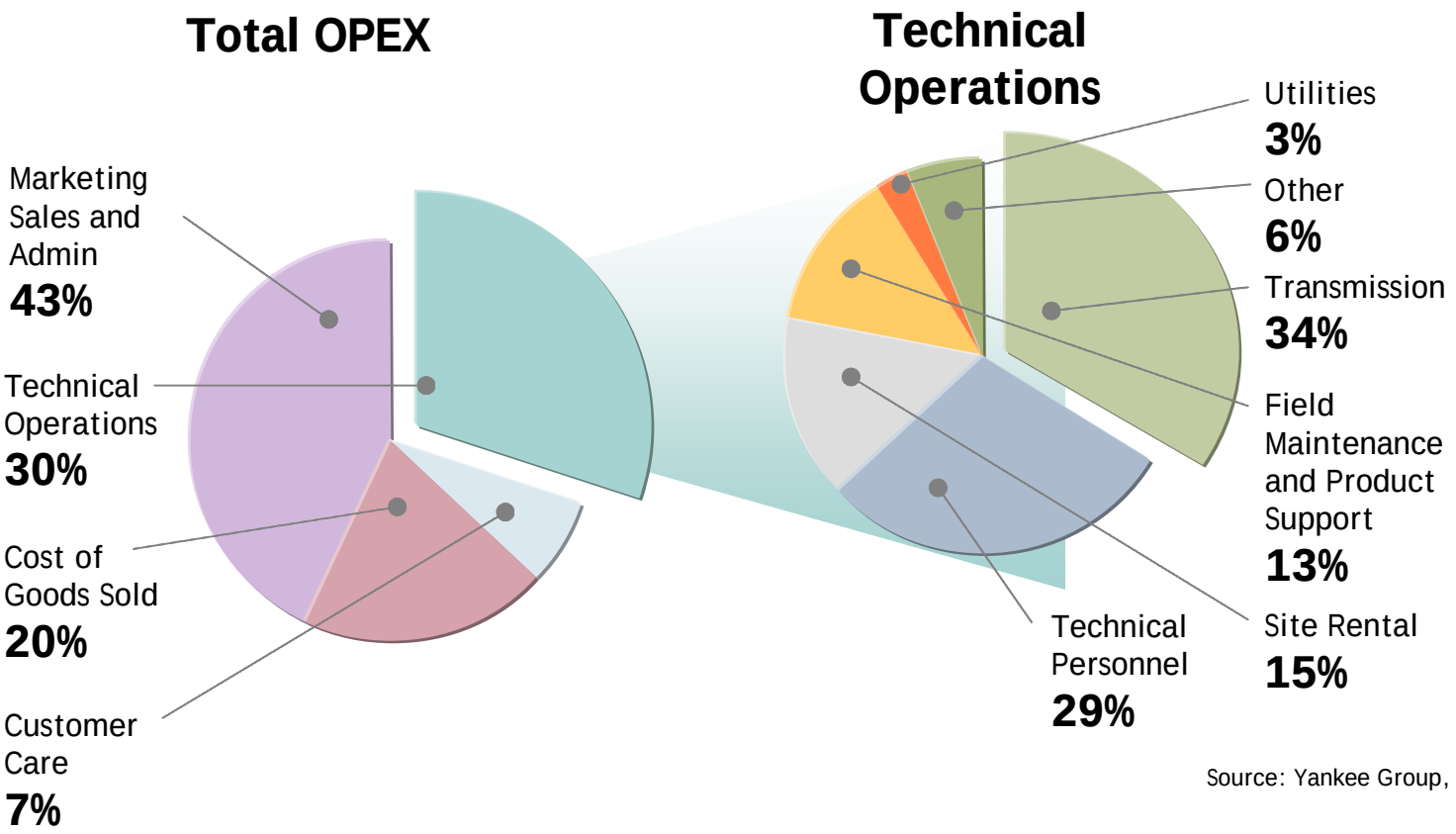
- Dramatic increase of bandwidth requirements is not proportional with revenue increase, especially in highly competitive markets
- ARPU trending flat to negative as bandwidth demands increase
- Mobile Service providers must evolve to realize the reduced costs, efficiencies and quality of an all-IP network



Source: Alcatel-Lucent Corporate Strategy

Data services are driving new revenue streams and the need for IP capabilities in otherwise voice-centric networks

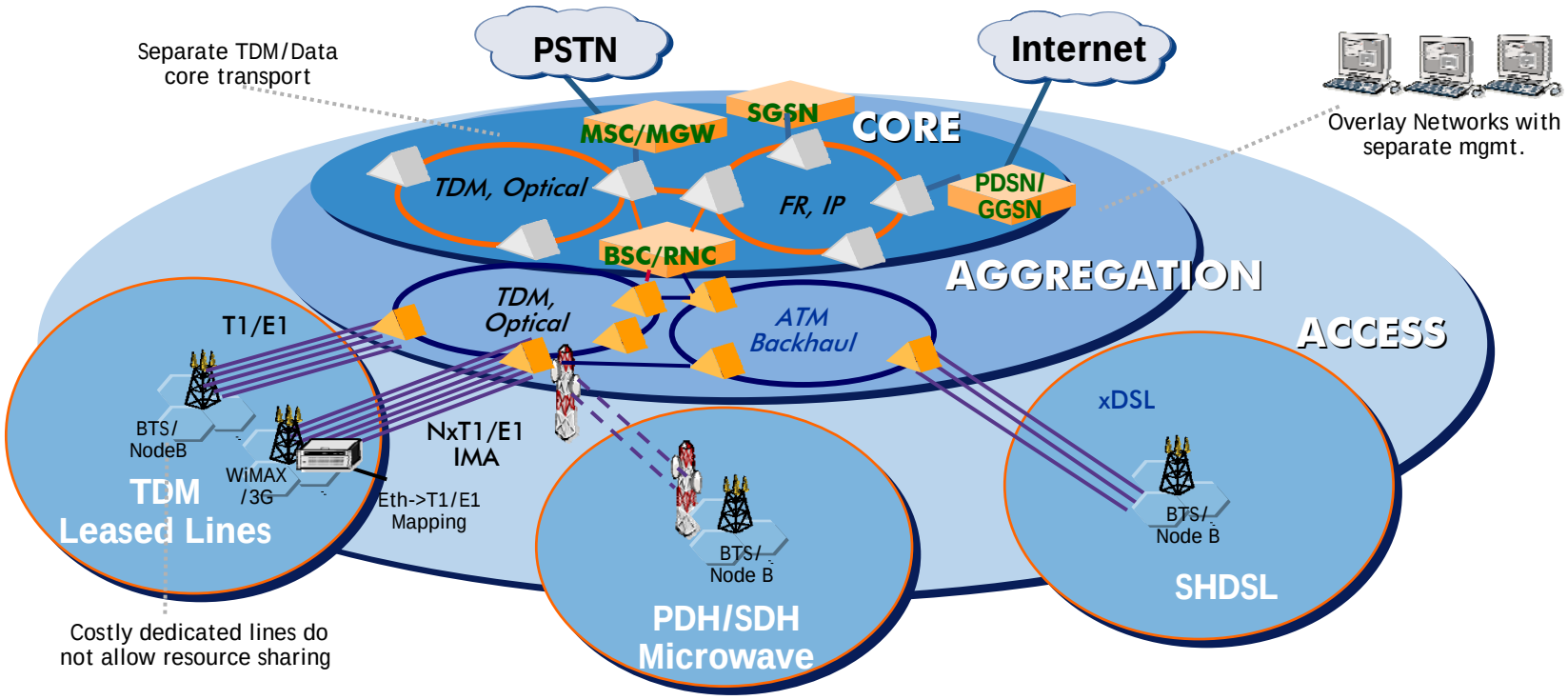
Technical Operations Drives Nearly One-Third of OpEx



Source: Yankee Group, March 2005

A unified managed network simplifies operations and directly benefits the P&L bottom line

Overlay Networks for 2G/3G are too Costly, Complex and Don't Scale



- Limited Scalability of Overlay networks
- Inefficient TDM network utilization
- Complex operational integration of varied backhaul technologies

Mobile transport network must evolve to support more bandwidth at lower cost and increasingly demanding services

Mobile Transport Diversity

Diverse Needs

- High / Low end users?
- Data / Voice focus?
- Vertical / Integrated Operations?

Diverse Assets

- 2G/3G deployed?
- Level of Copper/Fiber penetration?
- Ethernet at cell site available?
- Current backhaul technologies?

One technology cannot fit all.

3 ALU Solution and Value Proposition

META Leads Mobile Evolution to all-IP

META enables the profitable evolution from TDM to all-IP transport

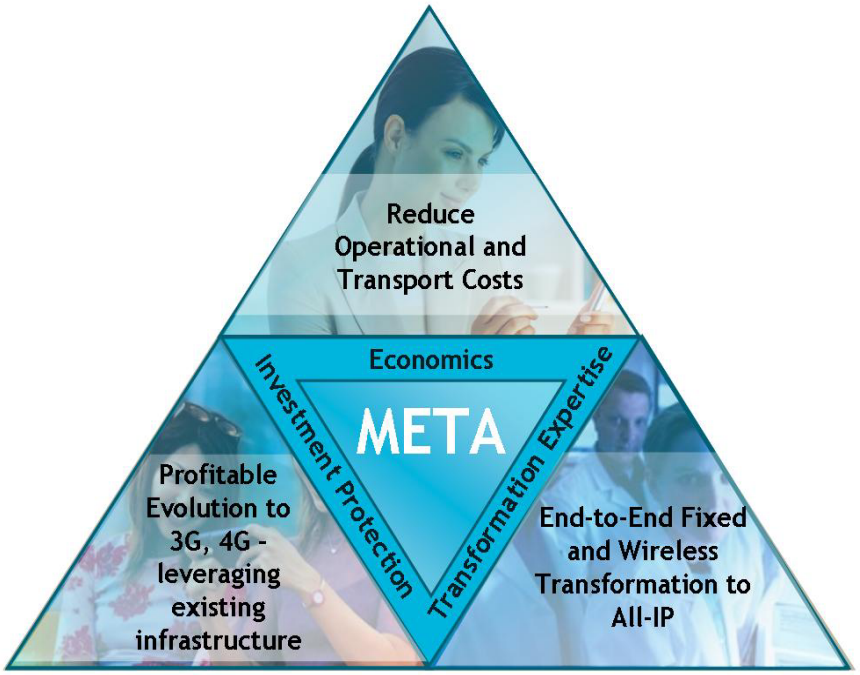
Benefits:

Comprehensive, end-to-end architecture for Mobile Transport evolution across the globe—CDMA/UMTS, over any media--copper fiber wireless

Dramatic network simplification, 44% cost savings over traditional TDM networks

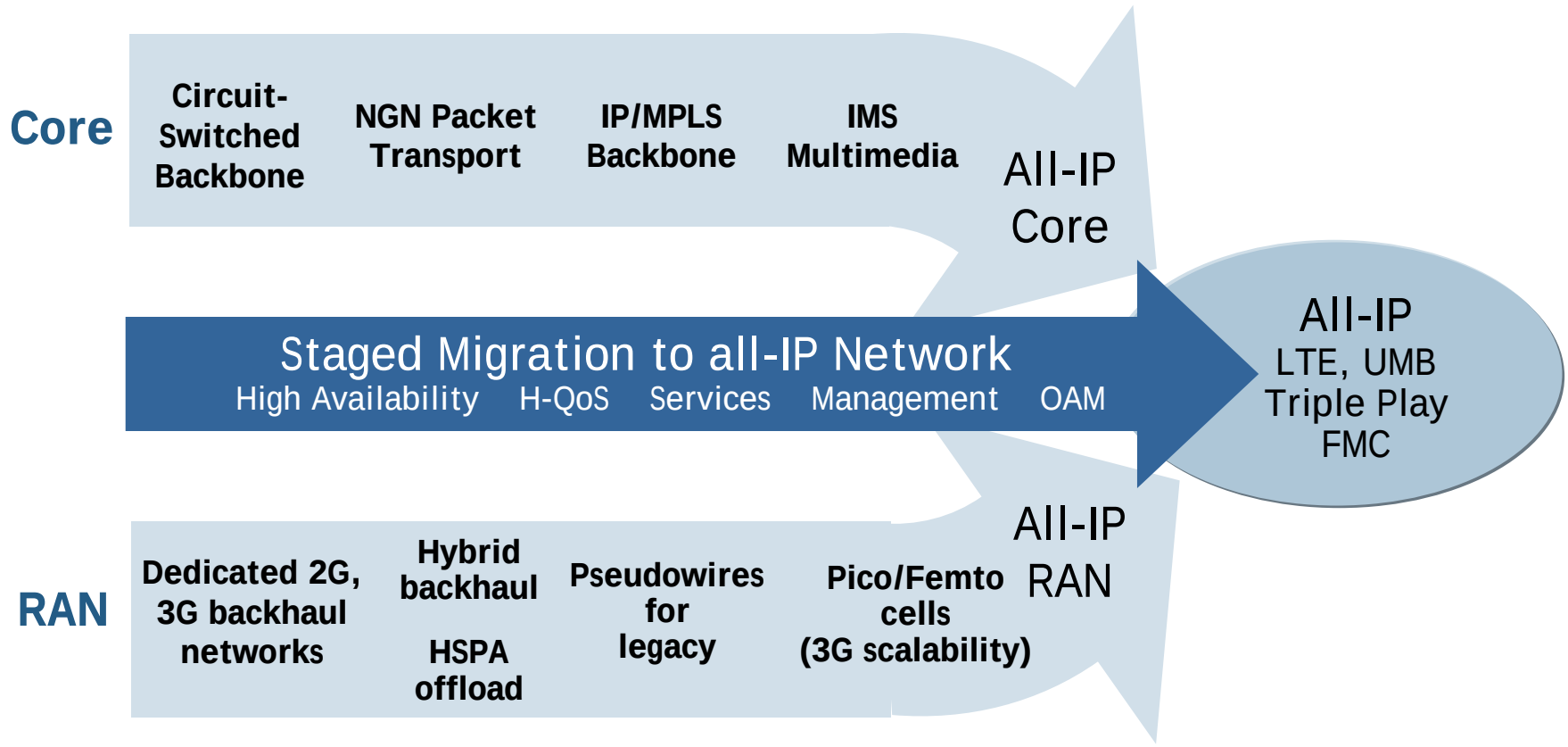
Ethernet, MPLS enabled architecture for highly available, real-time mobile services

End-to-end highly integrated management — dramatically reducing OPEX



Staged Progression to an All-Packet Network…

Not Aggressive Technology Replacement



Transformation Leverages Existing Investments

META Evolves the Network to All-IP
Leverages Existing Investments, Ethernet & MPLS

META supports evolution at the pace of capacity demands

- Optimize existing RAN (MLPPP/IMA ATM) to drive out leased line costs
- Hybrid off-load approach (non-real-time data services off-loaded onto Ethernet RAN while voice services are kept on existing RAN).
- Building new carrier grade IP RAN supporting both circuit and packet traffic

Successful migration to packet-- support existing infrastructure, Ethernet and MPLS

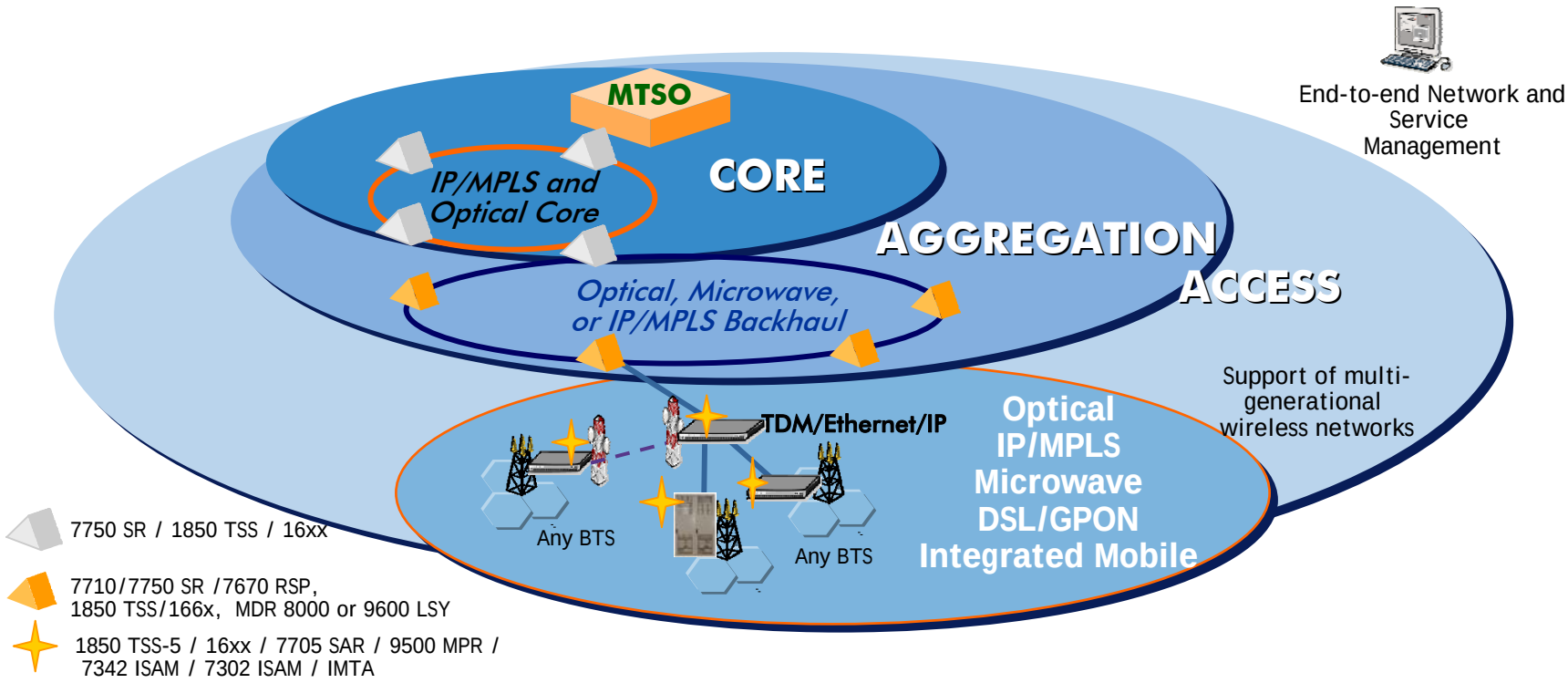
- Extend proven Ethernet/MPLS aggregation capabilities of triple play networks for Mobile Transport
- Ethernet for cost reduction, MPLS for service-awareness and scalability
- OAM, high availability and QoS – all critical for evolution to IP transport

Richard Burns, AT&T's President of Network Services discounts those who have a "*Greenfield mentality.*"

"The reality is…there aren't that many greenfield starts…in any given year."

Telecommunications April 2007

Efficient Evolution to all-IP with Alcatel-Lucent's Mobile Evolution Transport Architecture (META)



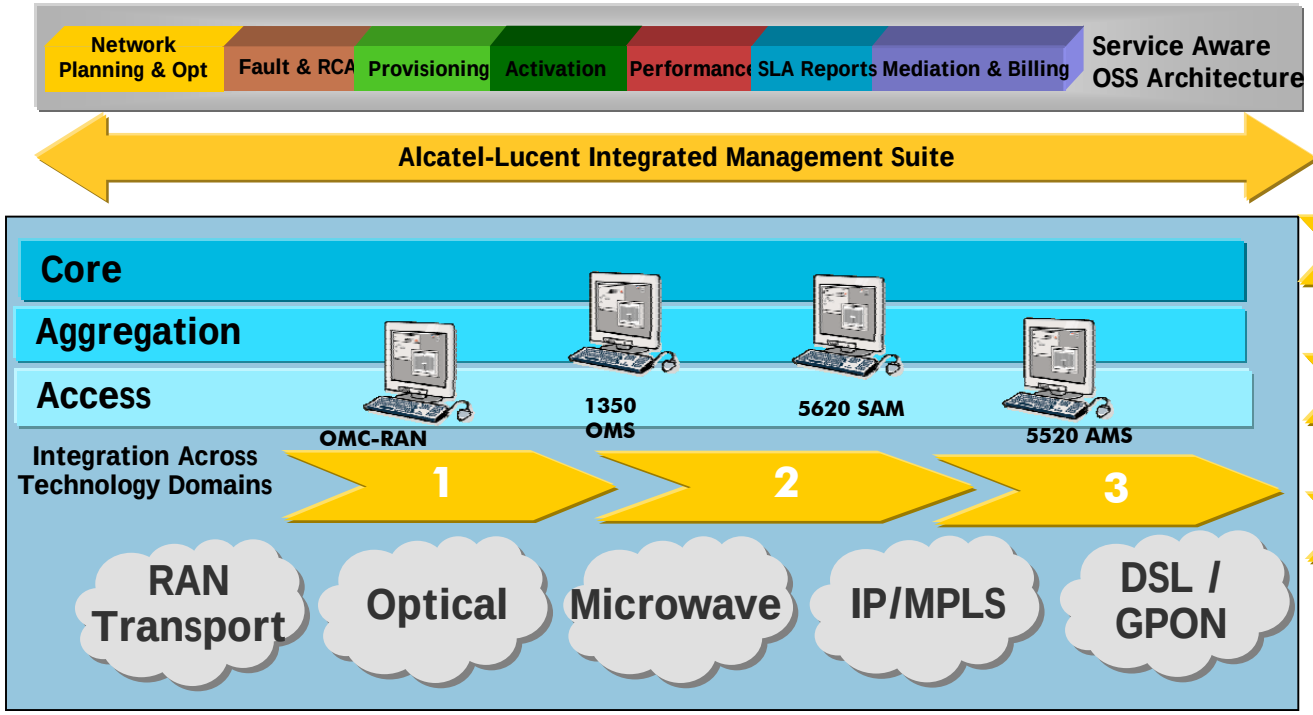
- Leverages existing infrastructure across the globe for evolution to all-IP
- Integrated operations, reducing complexity across diverse technologies
- Ethernet and MPLS enabled for OAM, QoS, high availability

44% Cost Reduction over 5 years*

***Based on Bell Labs Modeling comparing Evolved Backhaul vs. Leased Lines**

META Managed by Industry leading Alcatel-Lucent Integrated Management Suite

- Industry leader, #1 Market Share for EMS/NMS portfolio
- Seamless management integration allows operators to manage across multi-technology networks—wireless, wireline
- Integrated to industry leading OSS products, standards based NBI



1. Integration of CDMA RAN transport with Optical **completed** (OMC-RAN/OMS)
2. Integration of Microwave and IP/MPLS transport (OMC-RAN/1350 OMS/5620 SAM)
3. End-to-end integrated management across all technologies via Alcatel-Lucent Integrated Mgmt Suite

New Best-in-Class Cell Site Aggregation Products

Extends Alcatel-Lucent Mobile Transport from Core, Aggregation to Cell Site

META

Alcatel-Lucent 1850 TSS-5

Migration over Hybrid Transport

- ✓ TDM migration to Ethernet
- ✓ Support for TDM (Native & PWE3), Ethernet
- ✓ Layer 1 and Layer 2 focus

Alcatel-Lucent 7705 Service Aggregation Router

Convergence over IP/MPLS

- ✓ Service Aware IP / MPLS
- ✓ Support for ATM, TDM, & Ethernet PWE3 IP/MPLS
- ✓ Layer 2 and Layer 3 focus

Alcatel-Lucent 9500 MPR

Evolution to Packet Radio

- ✓ Microwave migration from TDM to Packet
- ✓ Service driven packet adaptive modulation
- ✓ Layer 1 and Layer 2 focus

Alcatel·Lucent

META Supported by Unparalleled Service Credentials and Expertise

#1 in Services

20,000+ service experts, 130+ countries

Deployment Expertise for Mobile Network Transformation to all-IP for 100 Mobile Switching Centers (MSCs)

Transformation Experience

The world's largest, most comprehensive Network Transformations

More than 150 Customers Worldwide

18 million homes by 2008

30 million lines by 2010

5 million homes by 2010

Alcatel-Lucent's broadband Mobile transport portfolio enabled by our leadership in Services Transformation

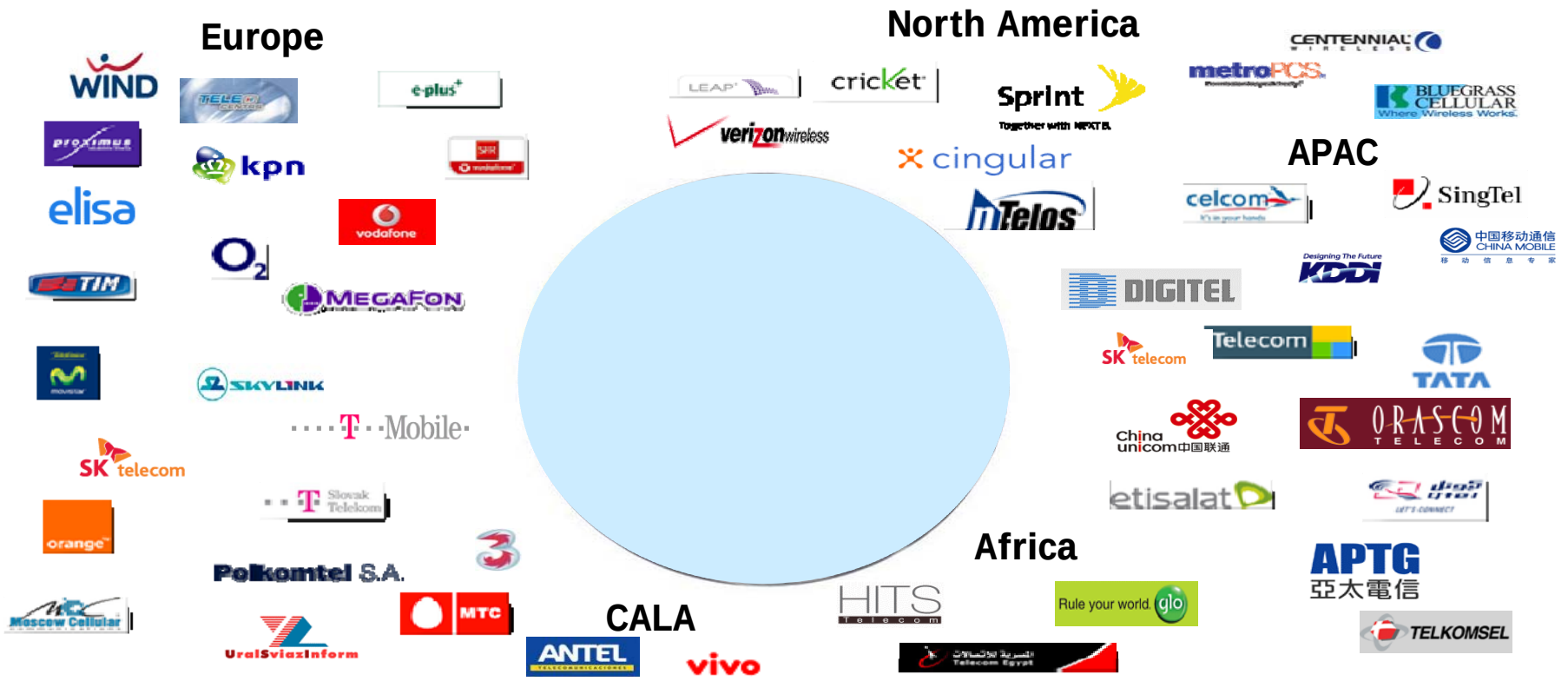
Alcatel·Lucent

4 ALU Mobile Network Transformation Experience

Mobile Transport Deployments Worldwide

Across Wireless, Wireline Infrastructure

Enabling Our Customers to Gracefully from TDM to all-IP Mobile Transport



Over Eighty Announced Customers Worldwide

Alcatel·Lucent

Field Proven Mobile Transport Solutions and Expertise

Supplier of **Optical transmission** products that enhanced the delivery of mobile and broadband services nationwide

Elisa Broadband

Supplier of the Converged **IP/MPLS** Packet Core Network for mobile and fixed line services

Exclusive provider of operative **services**, such as network extension and the technical support and operation of the entire Orange Switzerland network

Note: Effective Jan '08

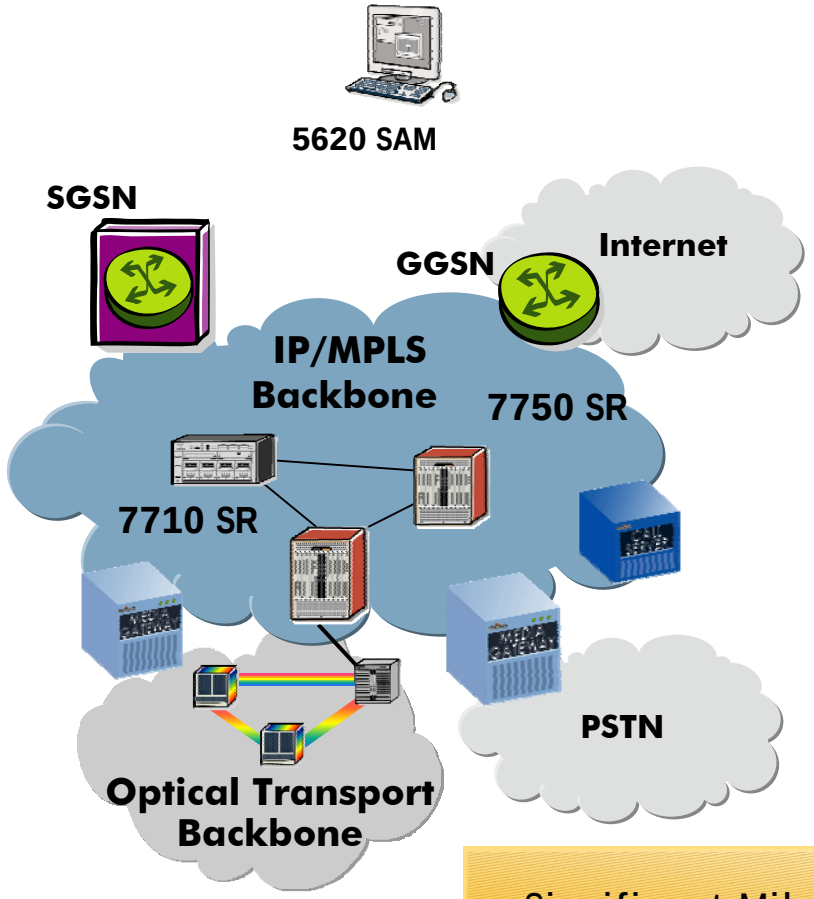
1st supplier for **transmission** (50% of Microwave & 100% of SDH network)

Sole supplier for **IP/MPLS** nationwide backbone (voice & data)

Vodafone IP/MPLS Backbone

Global Frame Agreement with former Alcatel: Oct 2006

Member Company Press Release: Vodafone Spain: Feb 2007



Key Attributes:

IP/MPLS-based Scalable VPN support
High Availability Operation
Collapsed P/PE Node Solution
Quality of Service
Performance Management Tools
Converged, multi-service network

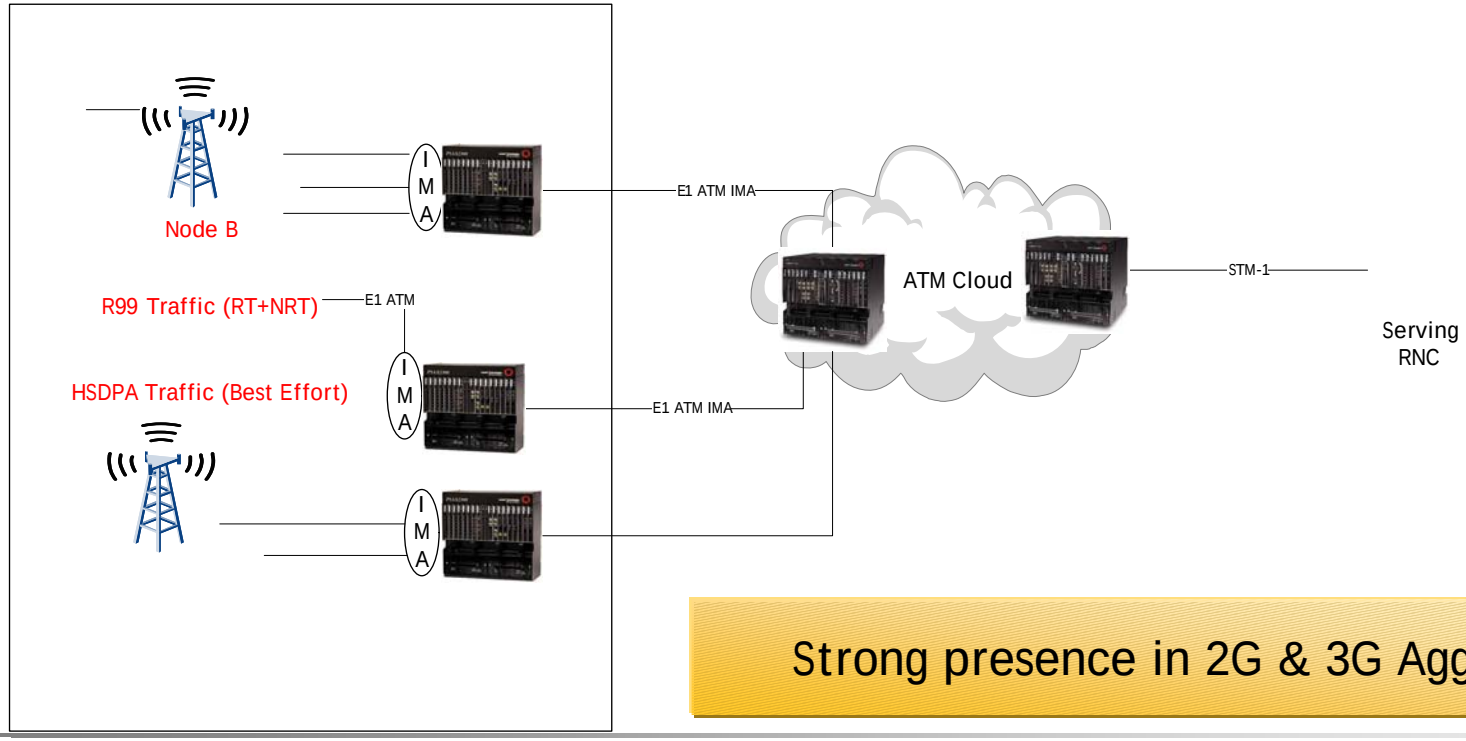
Applications:

Broadband Data (GPRS and UMTS)
Corporate IT (e.g. Signaling and Billing) Traffic
3G Voice Evolving to Multimedia

Significant Milestone in Global Network Transformation to IP

Alcatel-Lucent RAN deployment
O2 Germany

- Supply and support agreement with former Lucent
- 750 PSAXs deployed; mix of PSAX 4500 and PSAX 2300
- 12 million subscribers
- Combination of Nokia and Nortel UMTS equipment in RAN



Strong presence in 2G & 3G Aggregation

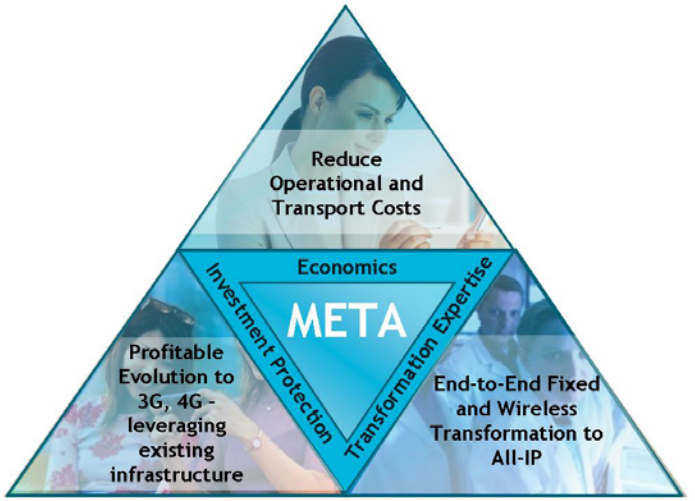
META Leverages Industry Leadership, Expertise for Mobile Network Transformation to all-IP

Fixed and wireless market leadership for IP transformation deployments worldwide

- Leader in CDMA, 2G/3G wireless, and Microwave network transformation, IP/MPLS, DSL/GPON, SONET/SDH

META leads evolution path to all-IP from Core to cell site

- New cell site aggregation products enable simplified mobile broadband aggregation for any access globally



Seamless Management Integration Across Multiple Domains

- Enables operator to manage across multi-technology networks-wireless, wireline

End-to-end fixed and wireless network transformation expertise

- Delivered world's biggest network transformation projects, expertise in mobile transformation includes transformation for up to 100 MSCs

www.alcatel-lucent.com

Acronyms

ADM Add Drop Multiplexer
ATM Asynchronous Transfer Mode
ARPU Average Revenue per User
BSC Base Station Controller
BTS Base Transceiver Station
CAGR Cumulative Aggregate Growth Rate
CDMA Code Division Multiple Access
DSL Digital Subscriber Line
EMS Element Management System
FMC Fixed Mobile Convergence
FR Frame Relay
GGSN Gateway GPRS Support Node
GPON Gigabit Passive Optical Network
GPRS General Packet Radio Service
HSPA High Speed Packet Access
LTE Long Term Evolution
IMS IP Multimedia Subsystem
IP Internet Protocol
IMA Inverse Multiplexing over ATM
META Mobile Evolution Transport Architecture
MGW Media Gateway
MLPPP Multi-link Point-to-Point protocol
MPLS Multi-Protocol Label Switching
MSC Mobile Switching Center
NBI Northbound Interface
NMS Network Management System
OAM Operations, Administration and Management
OPEX Operational Expenditure
OSS Operational Support Systems
PDSN Packet Data Serving Node
QoS Quality of Service
RAN Radio Access Network
RNC Radio Network Control
SGSN Serving GPRS Support Node
TDM Time Division Multiplexing
UMB Ultra Mobile Broadband
UMTS Universal Mobile Telecommunication System
VDSL Very high bit-rate DSL