



Migrating from HSPA to HSPA+ and LTE

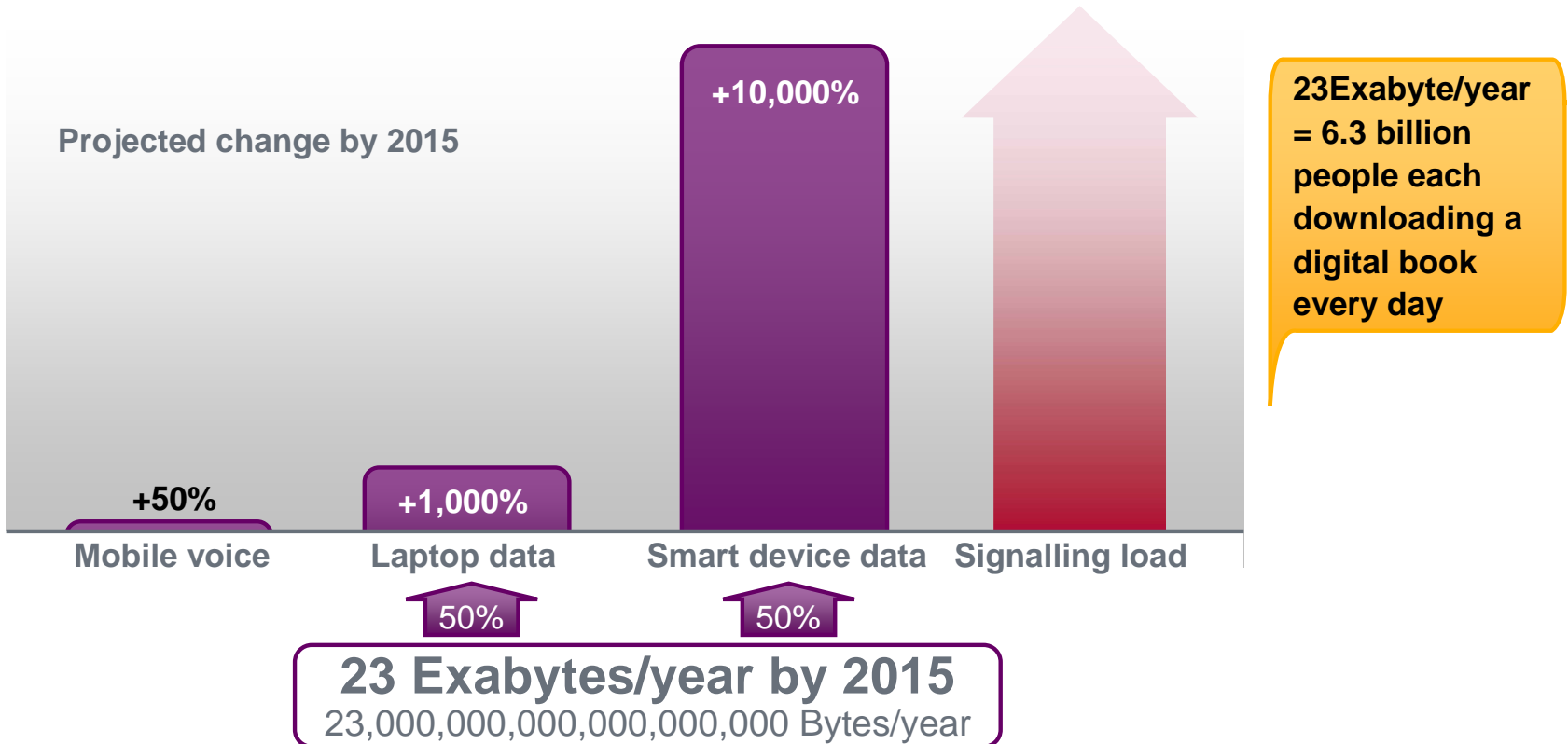
PANEL: DEPLOYMENT OF MOBILE BROADBAND

Mikko Viitanen

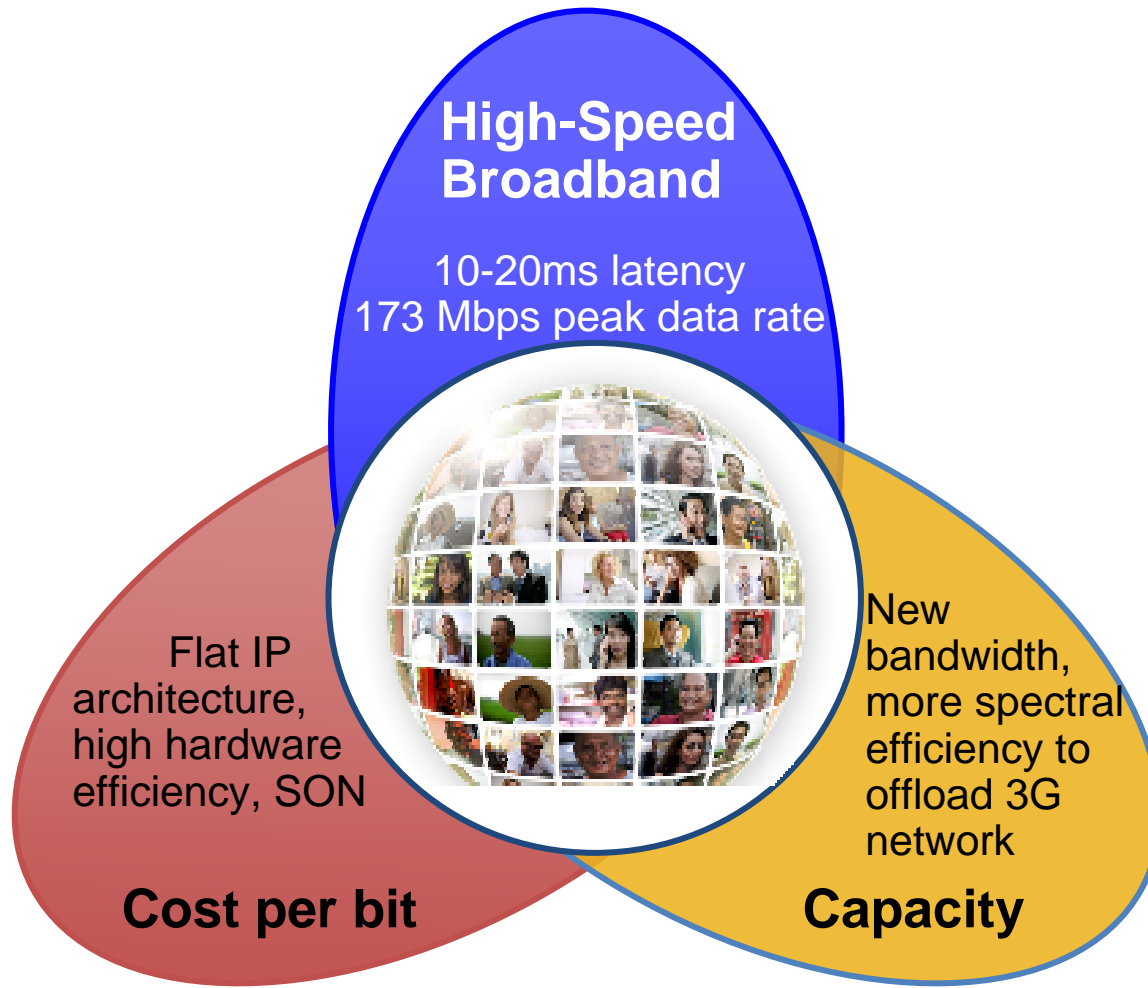
Head of Latin America GSM & Mobile Broad Band Sales

Nokia Siemens Networks

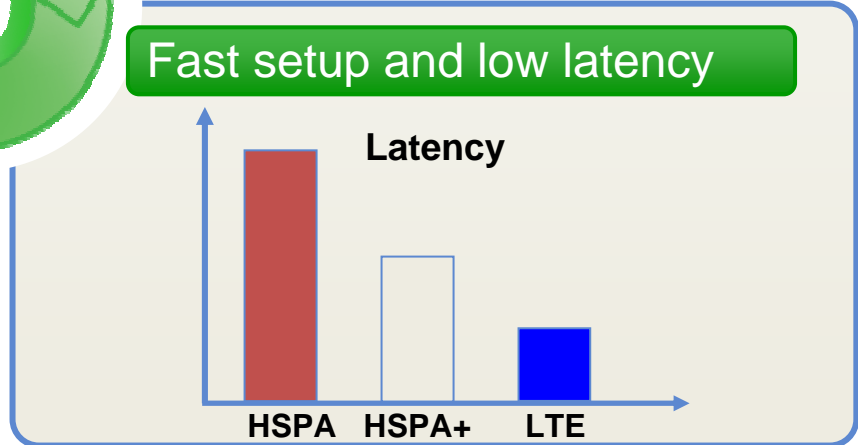
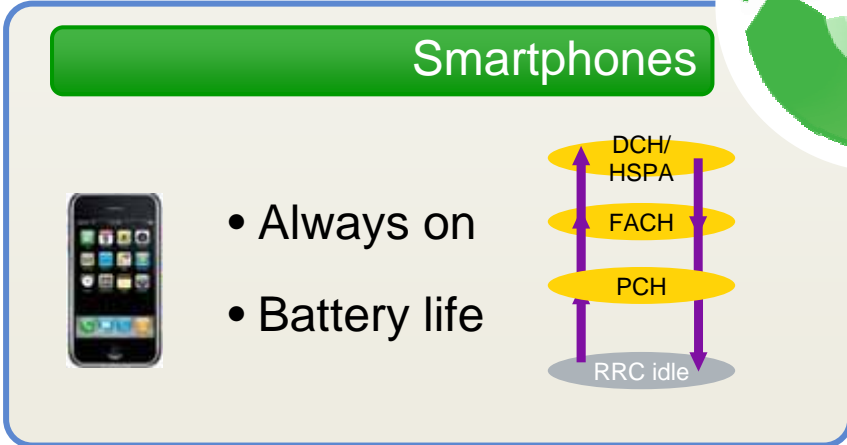
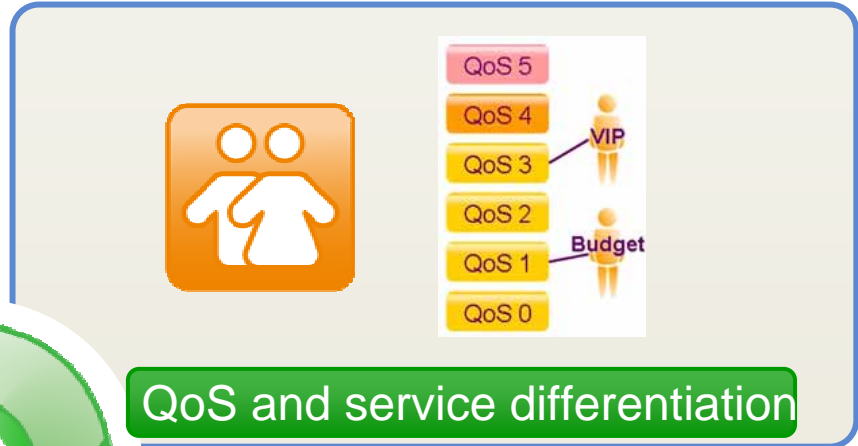
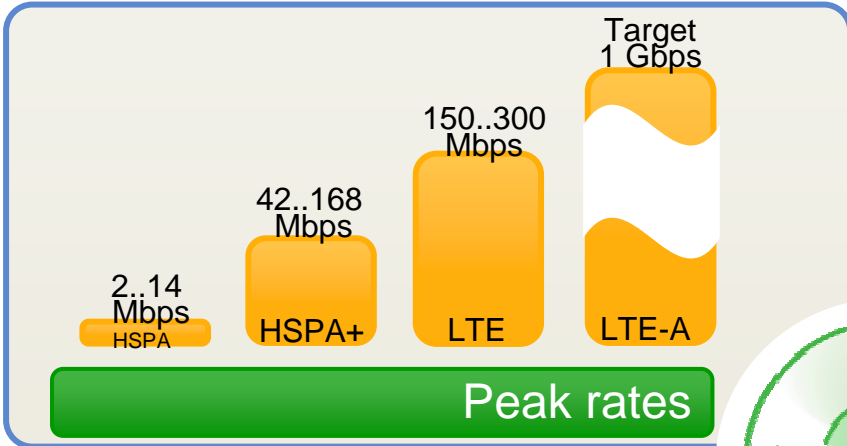
Global mobile broadband traffic



Motivation for LTE deployment

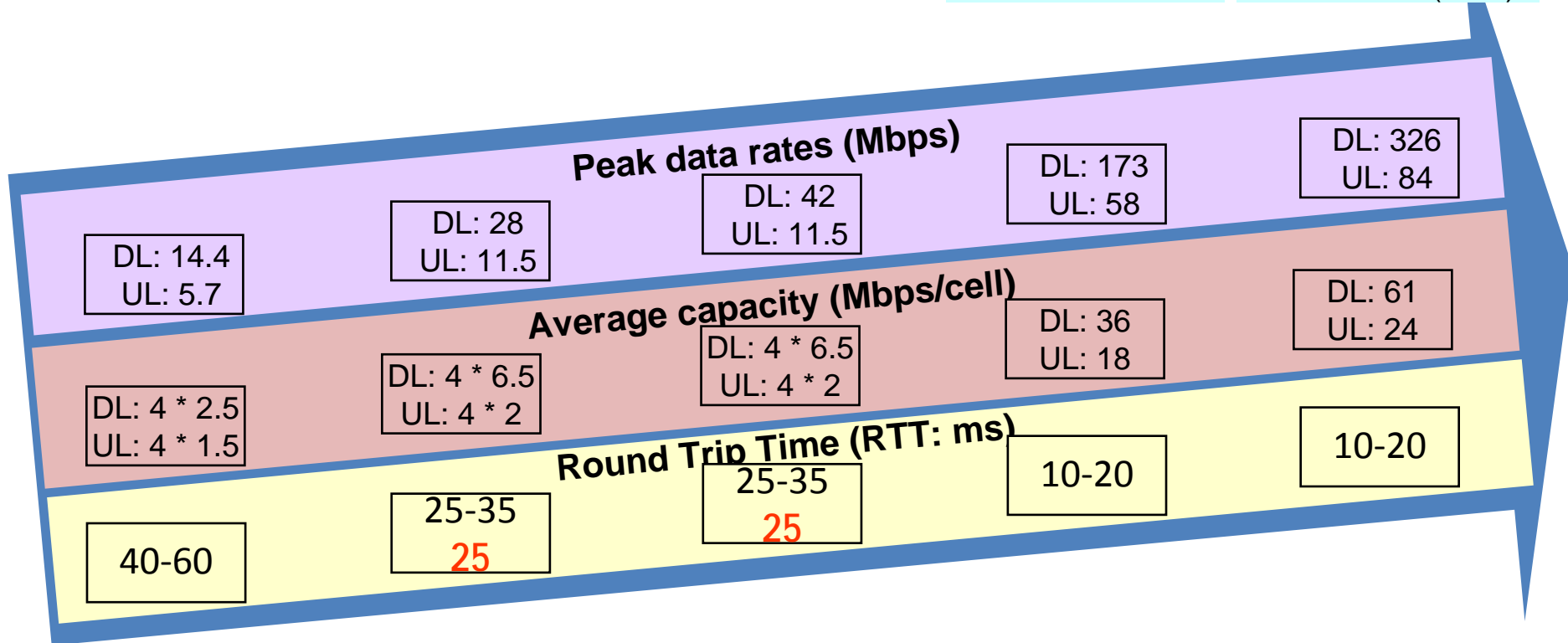


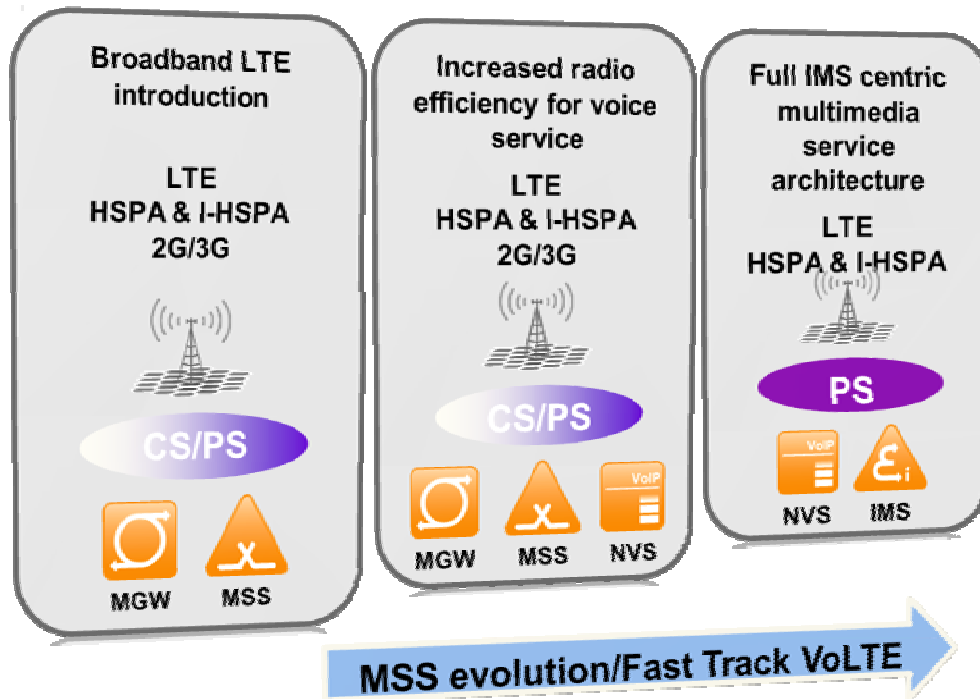
End user experience



HSPA and LTE peak rate evolution

3GPP Rel. 6	3GPP Rel. 7	3GPP Rel. 8		3GPP Rel. 9
HSDPA/HSUPA	HSPA Evo (step1)	HSPA Evo (step2)	LTE/SAE 2x2 MIMO UL:16 QAM	LTE/SAE 4x4 MIMO (Rel8) UL:16 QAM (Rel8)
	Internet-HSPA			



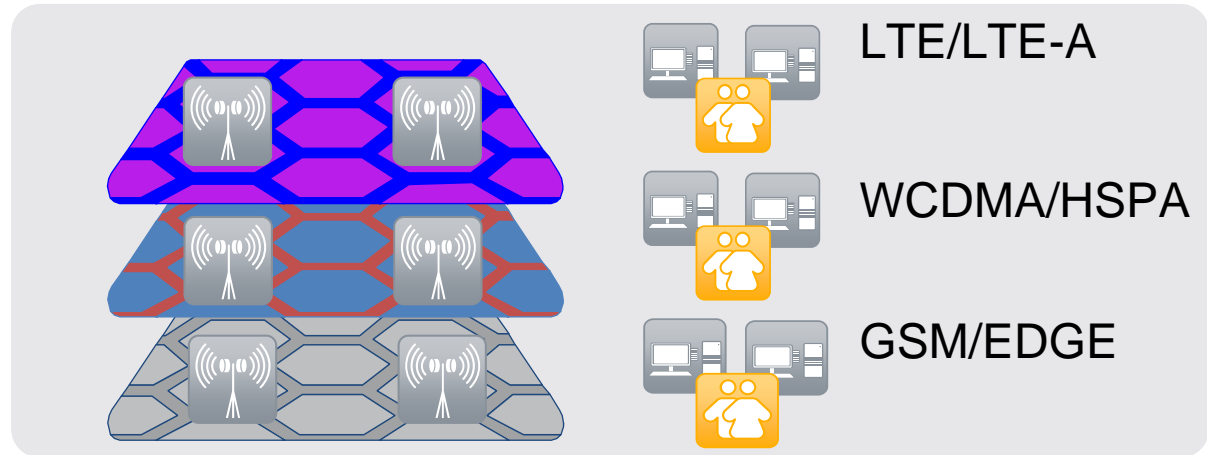


- Existing Rel4 core network can be used
 - 3G: CS Voice over HSPA with no changes in core network
 - LTE: Fast Track to VoLTE utilising existing installed CS core
- Evolution to a full IMS centric architecture

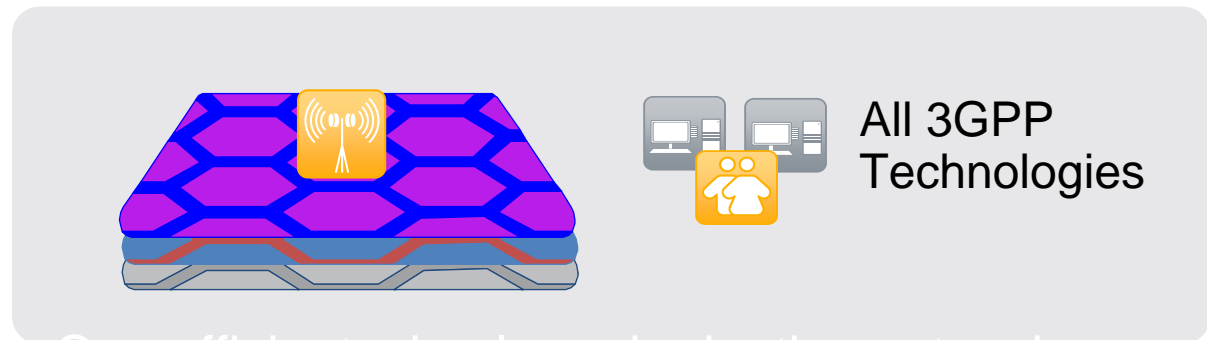
Evolution towards Single RAN

Current model

- Increasing costs
- Difficult to manage
- Hard to maintain
- Complexity



Single RAN makes it simpler



Site solutions



Compact, high performance site

Network management

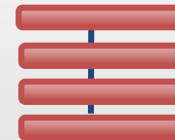


NetAct

SON for 2G,
3G and LTE

Network architecture

GSM/EDGE & HSPA



I-HSPA & LTE



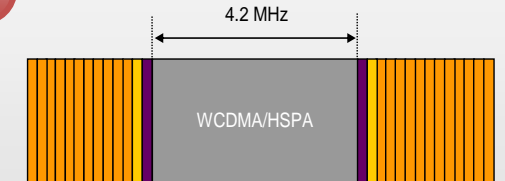
&

GSM

3G

LTE

Single RAN

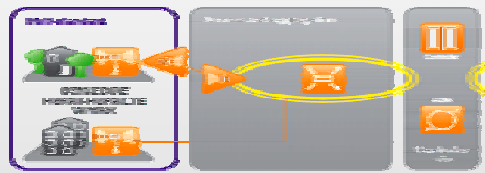


**Efficient Spectrum
Re-farming**

CPC **DC-HSDPA**
CS Voice over HSPA **QoS**
Short Latency **Battery Life**

Features enhancing end-user quality and efficiency

IP backhaul





Nokia Siemens Networks Track record in commercializing LTE



World's 1st

2009 LTE call on commercial standards baseline, commercial HW and SW

2006 LTE demo with 160Mb/s

+25 LTE trials with leading CSPs



End-to-end with leading device vendors



LTE Centers of Competence in all lead markets

11 commercial LTE deals



Japan



Denmark



Bahrain



Sweden



USA



Norway

confidential

confidential

confidential

confidential

confidential



中国移动通信
CHINA MOBILE

World's 1st

TD-LTE femtocell demonstration



LTE live network



World's fastest LTE:
100 Mbps live with LG device

Most LTE essential patents



LTE-ready Flexi Multiradio BTS shipped to close to all of our 3G customers

- Evolution to LTE and HSPA+ is mandatory to meet the needed capacity and end user demand
- Single RAN offers flexible and efficient platform for multiradio, multiband deployments for 2G, 3G, LTE
- Peak rates, QoS, latency, setup times and battery lifetime improvements drive the end user experience



Thank You!