THIS PRESENTATION CONTAINS FORWARD LOOKING STATEMENTS. SUCH STATEMENTS ARE BASED ON OUR CURRENT EXPECTATIONS AND ARE SUBJECT TO CERTAIN RISKS AND UNCERTAINTIES THAT COULD NEGATIVELY AFFECT OUR BUSINESS. PLEASE READ OUR EARNINGS REPORTS AND OUR MOST RECENT ANNUAL REPORT FOR A BETTER UNDERSTANDING OF THESE RISKS AND UNCERTAINTIES.
Hetnet

Where everything and everyone is connected

› X10 subscriptions (50B)
› X100 subscription types
› X1000 traffic
ONE NETWORK – MANY PIPES

Personalized services in an Always Best Connected environment
END USER EXPERIENCE CHALLENGES

1. Increase overall cellsite performance
2. Increase cell edge data rates
3. Increase indoor data rates
1. "Super Macro" – advanced antennas, spectrum aggregation, advanced Rx
2. More Cells – Site densification, Small cells – main remote, relays, pico
3. Dedicated indoor/enterprise solutions – as part of mobile operator offering
Adding uncoordinated small cells…

Loss in macro layer by splitting spectrum

Adding a large amount of small cells, can only partially overcome the loss in the macro layer

Don’t split the spectrum!
Adding Coordinated Small Cells...

Coordinated cells increase data volume and throughput

- Up to 3 times more data per subscriber, no loss of data speed
- Up to 12 times better data speeds on cell edges
ADDING COORDINATED SMALL CELLS

› Improved data throughput with reuse of frequencies
› Reduced interference with small cell interaction
  – Soft handover in WCDMA and Inter-Cell Interference Coordination (ICIC) in LTE
› Capacity off-load of macro network
SMALLCELL DEPLOYMENT ASPECTS

Pico
› Maximizes the value of site
› Full seamless mobility
› Licensed spectrum to manage potential interference

WiFi
› Limited coverage need
› Indoor, low-interfered locations
› Site and backhaul not a cost

Femto
› No datarate benefit over WiFi
› Interference and hand-over issues
› No capacity off-load

Uncontrolled environments – controlled spectrum
Controlled environments – uncontrolled spectrum
HETNET ENSURES HIGHER PERFORMANCE

Combined – 'HetNet'

User Throughput [Mbps]

Coverage Probability [%]

Smaller cells

Standard Macro

Source: Ericsson
RBS EVOLUTION

MODULARITY

Radio

Antenna

Baseband

Macro

Main-Remote

AIR - Antenna-Integrated Radio
TIME FOR ADDING NEW CELLS – FROM WEEKS TO MINUTES

Self Organizing Networks – smart simplicity
› Out of the box operation
› Continuous optimization
› Multi-standard operation
› Load adaptive, energy efficient
TRANSPORT FOR HETNET

› ALL-IP over packet backhaul
› One IP pipe from cell site
› MW and Opto integrated transport modules

› MW capacities beyond 1Gbit
› Advanced Quality of Service for MBB end user management policy control
WIFI MOBILE INTEGRATION TODAY
PERSONAL, MOBILITY, INTEROPERABLE, DEVICE & COST/BIT OPTIMIZED

- Keep Mobile terminals personalized when using WiFi
- Common User management & Policy infrastructure
- Mobile service integration Mobility anchor
- Local Breakout

MOBILE NETWORK
BNG
PGW
PCRF
UM

FIXED NETWORK

Keep Mobile terminals personalized when using WiFi

Common User management & Policy infrastructure

Mobile service integration Mobility anchor

Local Breakout
WIFI MOBILE INTEGRATION NEXT STEP
PERSONAL, MOBILITY, INTEROPERABLE, DEVICE & COST/BIT OPTIMIZED

Keep Mobile terminals personalized when using WiFi

WiFi integrated in RAN & Traffic management

Common User management & Policy infrastructure

Mobile service integration Mobility anchor

Mobile Network

PCRF
UM

PGW

Fixed Network

Local Breakout

MOBILE NETWORK

BNG

WiFi integrated in RAN & Traffic management

Common User management & Policy infrastructure

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MOBILE NETWORK

BNG
IN SUMMARY
HETEROGENEOUS NETWORKS (HETNET)

› Modular Multistandard Radio
› Seamless WiFi Experience
› Advanced Traffic Management
› Self Organizing Networks
› Backhaul for any need

Ensuring high performance in all areas of the network
HETNET ENSURES HIGHER PERFORMANCE

User Throughput [Mbps]

- Combined – 'HetNet'
- Improved Macro (20->40 MHz BW, etc...)
- Smaller cells
- Standard Macro

Coverage Probability [%]

- MACRO
- RELAY
- Remote Radio
- Small RBS

Source: Ericsson
WIFI KEY USE CASES
- ERICSSON EPC SOLUTION FOR OPERATOR MANAGED WIFI

@ home
Users using the WiFi fixed broadband access from home

Guests @ home
Visiting your neighbors and utilize their WiFi

@ HOTSPOT
Visiting café’s, airports, hotels, …

Automatic and Simplified login procedures
Compatible with a large number of existing phones and laptops
No extra device clients needed