

Rapid Evolution of Cellular Networks

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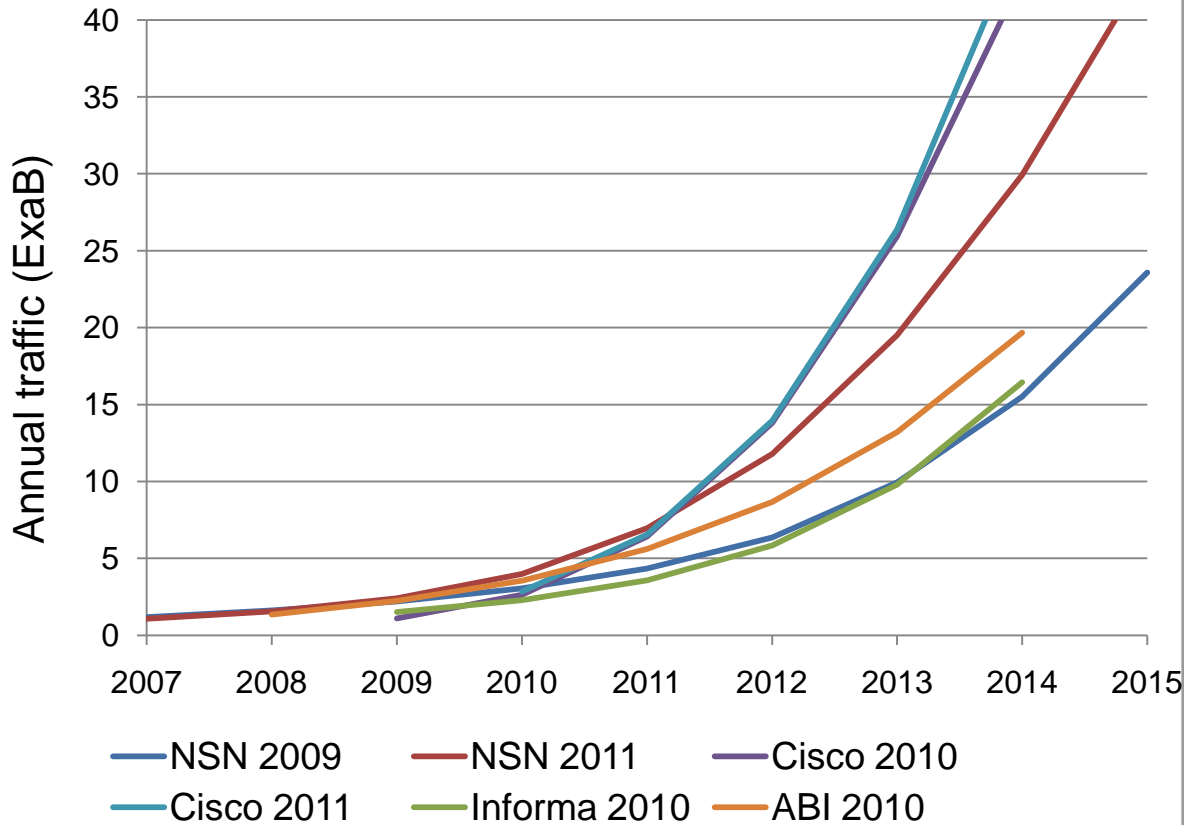
Nokia Siemens Networks



Nokia Siemens
Networks

Broadband is the fastest growing utility service

Global Mobile Traffic Forecast



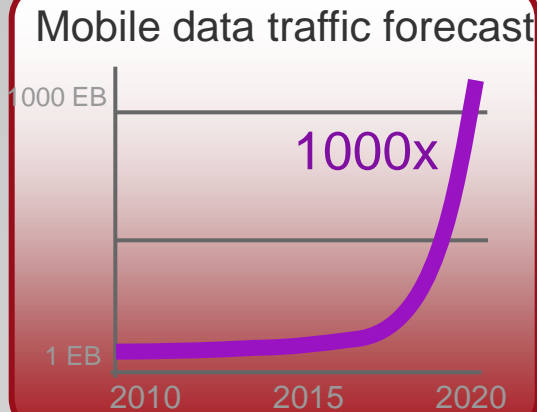
**By 2020
Networks needs
to be ready for
1000 fold traffic
increase of
mobile data
traffic**

**550% more
mobile
broadband phone
subscriptions:
2015: 2.3B***

*Total mobile subscriptions
over 9B

What will the world want from wireless beyond 2020?

Support up to 1000 times more traffic

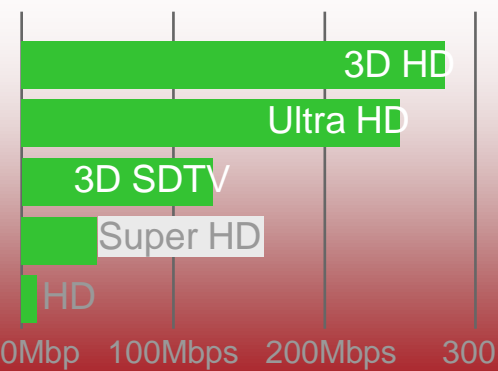


Rock solid, ubiquitous connectivity



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Apps bandwidth demand



Gbps peak speeds



Millisecond latency for true "local feel"

Up to 1000 times more capacity by means of

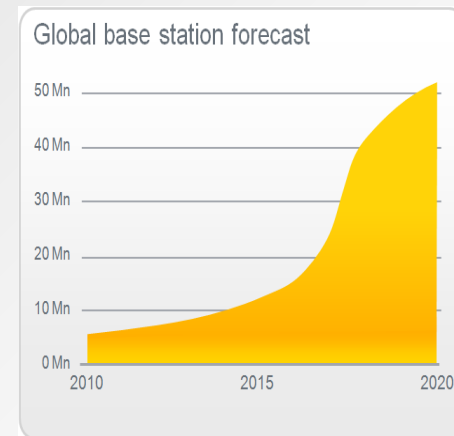
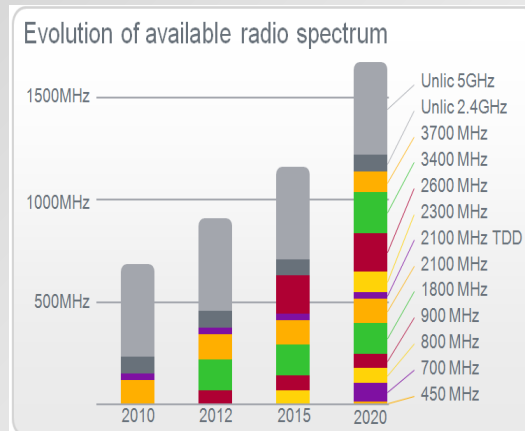
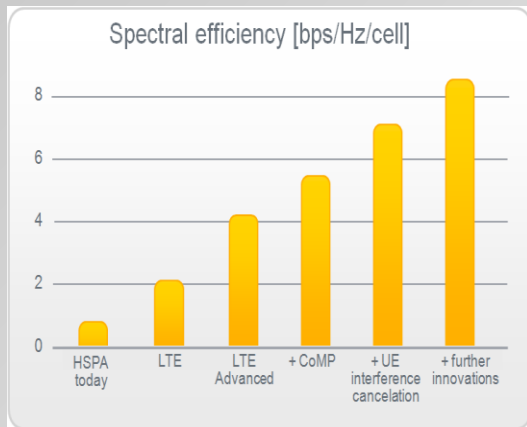
10x
Performance

10x
Spectrum

10x
Base
stations

=

1000x
capacity



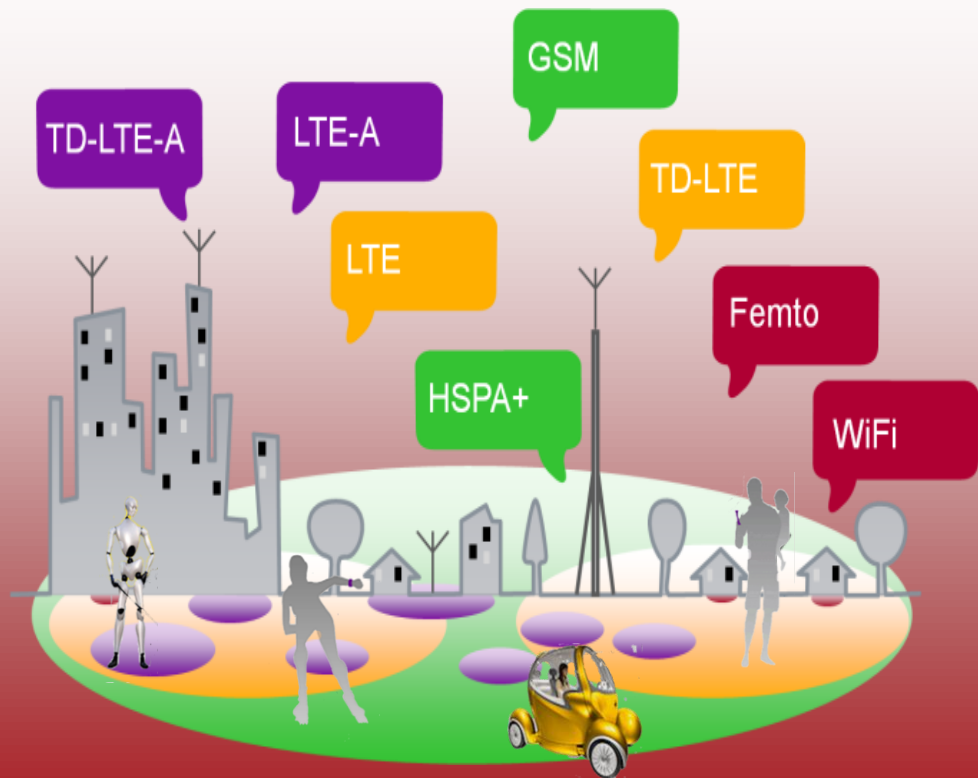
How can we deploy, commission and maintain all the radios, frequency bands and layers?

All cells and frequency layers automatically managed by advanced SON

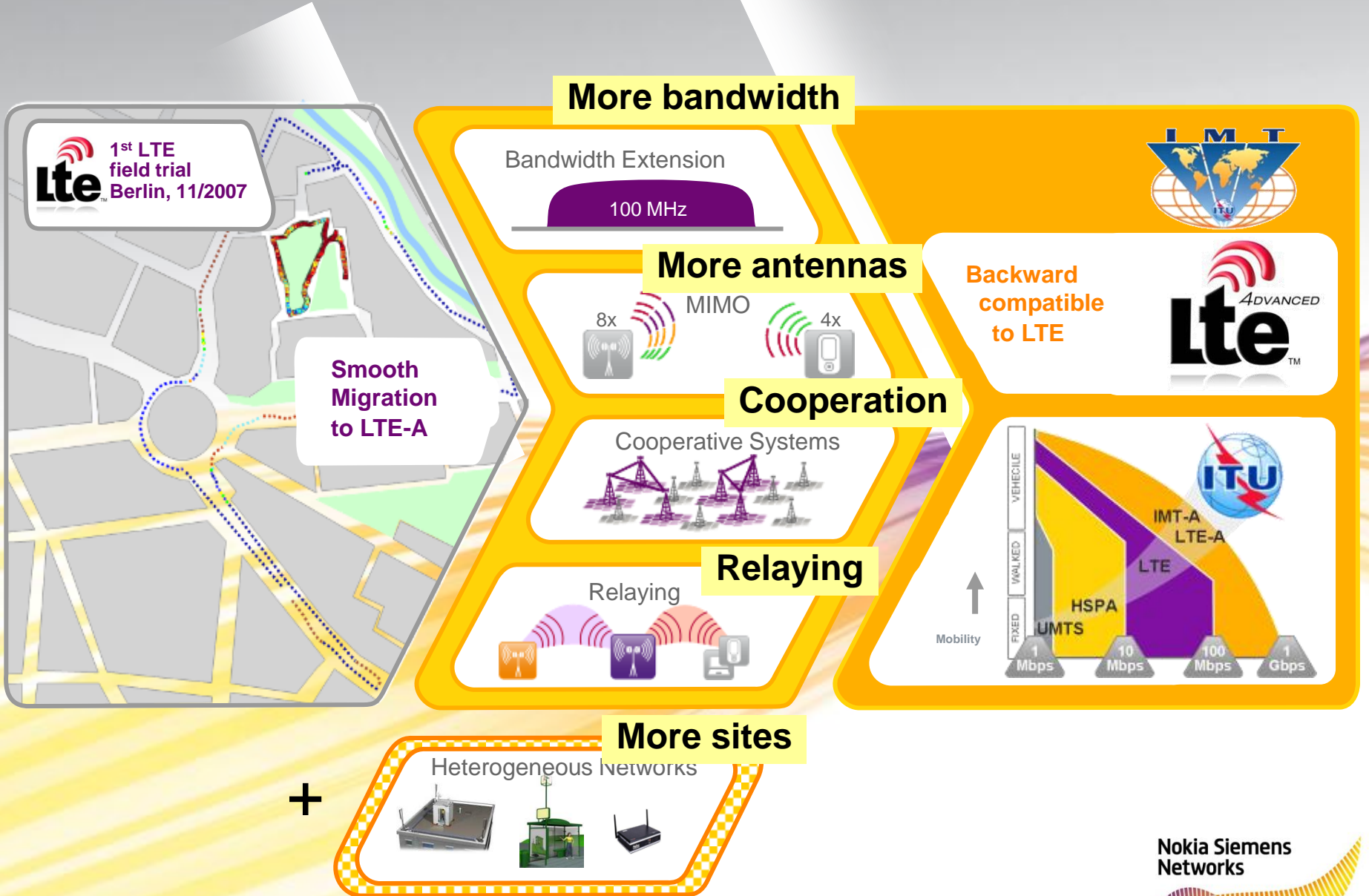
All spectrum under unified RRM for instant capacity and coverage optimization

Cognitive networks will reduce errors, improve quality and lower operation and energy costs

Virtually one ubiquitous connectivity



Current Technology : LTE and LTE-Advanced



Gigabit Experience

Reliable, Efficient and Personal



Ubiquitous
Connectivity

Unified Radio
Resource
Management

Cognitive
Networks

Active
Antennas

Wideband
Multiradio

Liquid
Radio

Multi-
Carrier

Multi-
Standard

Heterogen
ous
Networks

Self
Organized
Networks