



ERICSSON

# THE DAWN OF 5G

PANEL - VTC 2013 FALL - LAS VEGAS

Jan Färjh

Vice President

Head of Standardization and Industry

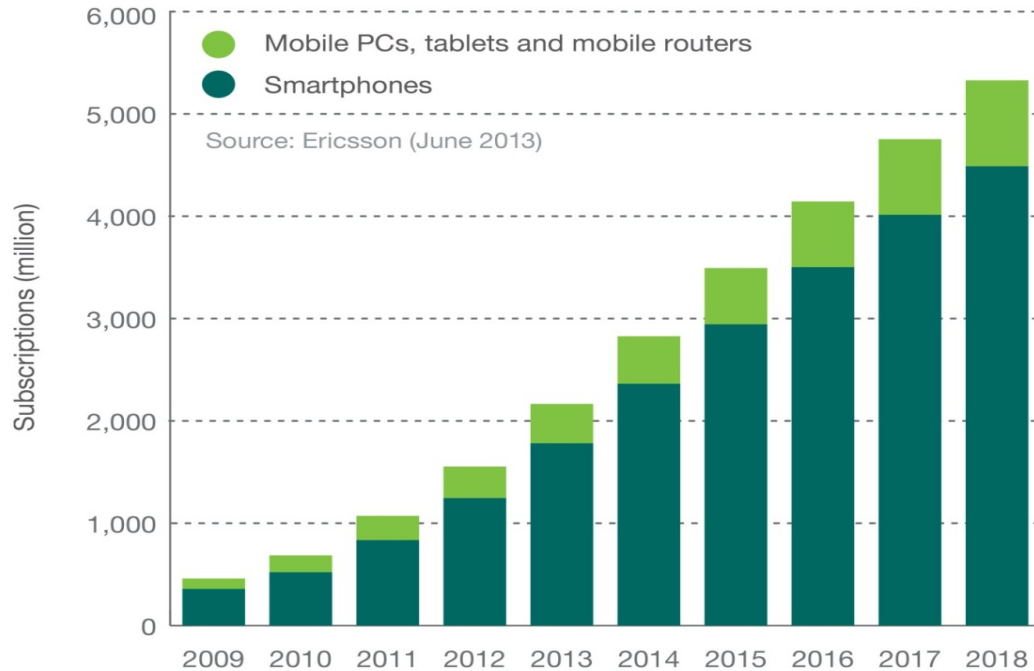
Ericsson

# TRENDS – MOBILE BROADBAND



85%  
WCDMA/HSPA  
POPULATION  
COVERAGE IN 2017

50%  
LTE  
POPULATION  
COVERAGE IN 2017

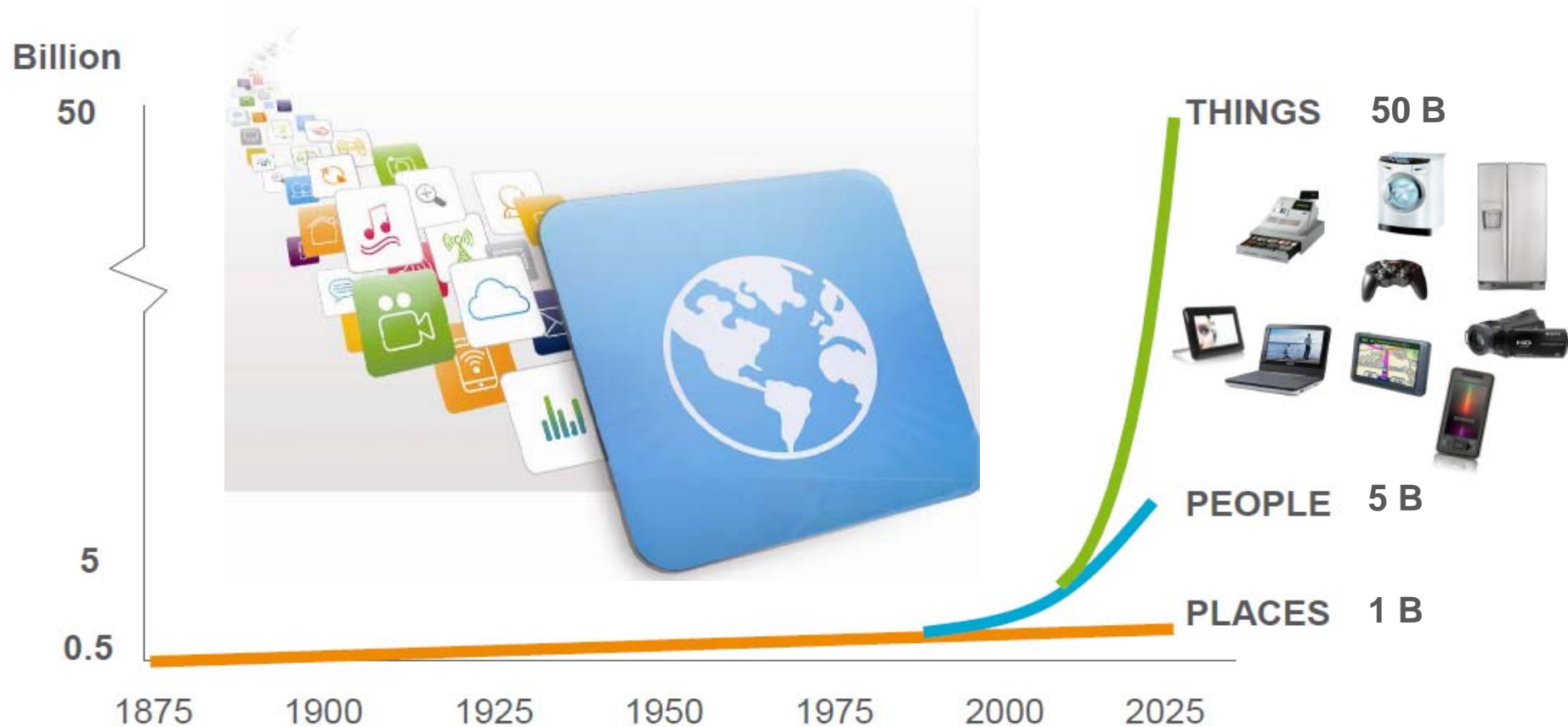


>9  
BILLION  
MOBILE  
SUBSCRIPTIONS  
BY THE END OF 2018

4.5 Billion Smartphones by 2018

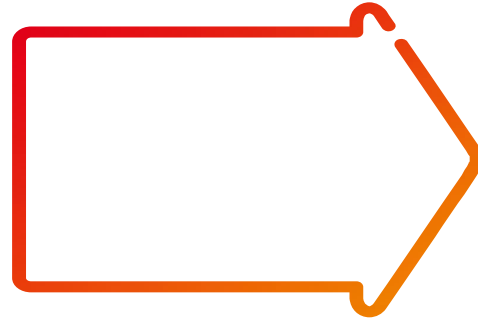
12X  
MOBILE DATA TRAFFIC  
WILL GROW BY ~12 TIMES  
BETWEEN 2012 AND 2018

# TRENDS – INCREASING THE PACE



Source: Ericsson

# TRENDS – COMM. EVOLUTION

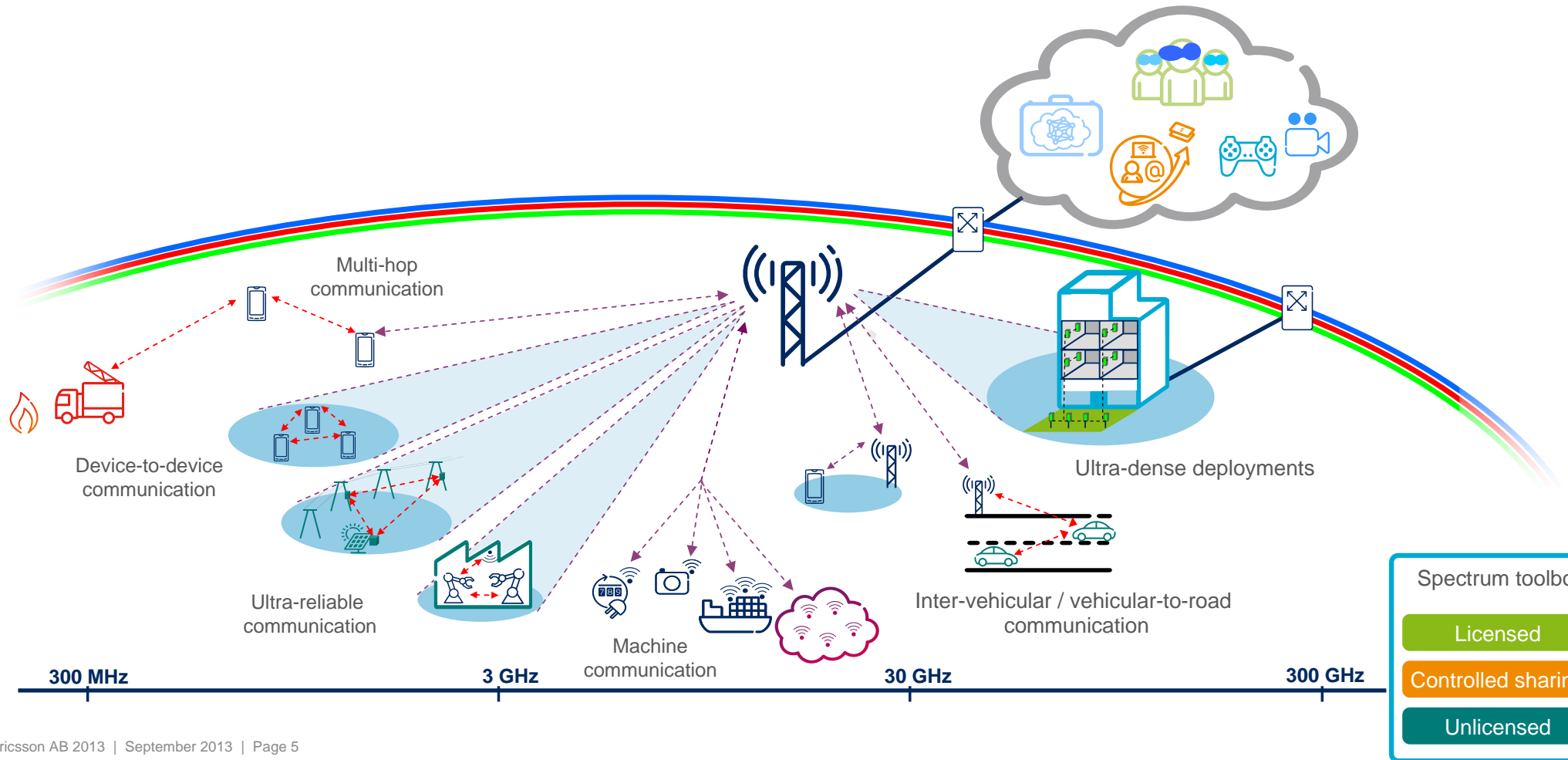


Voice to places → Fixed networks  
Voice to people → Mobile networks

“Voice” to applications

Communication – from a service to an embedded feature

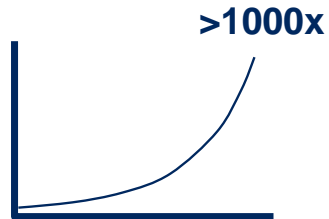
# 5G – WIRELESS ACCESS



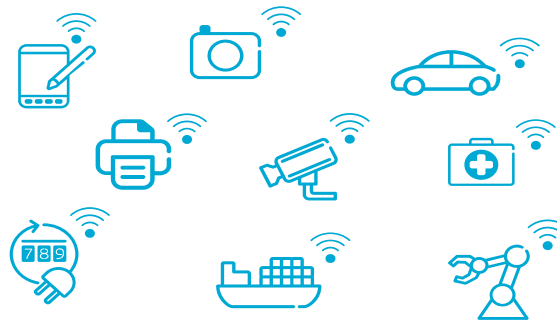
# 5G – KEY CHALLENGES



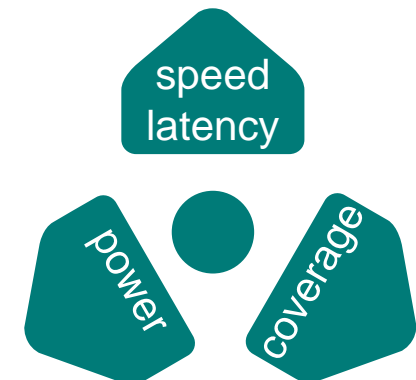
Massive growth in  
**Traffic Volume**



Massive growth in  
**Connected Devices**



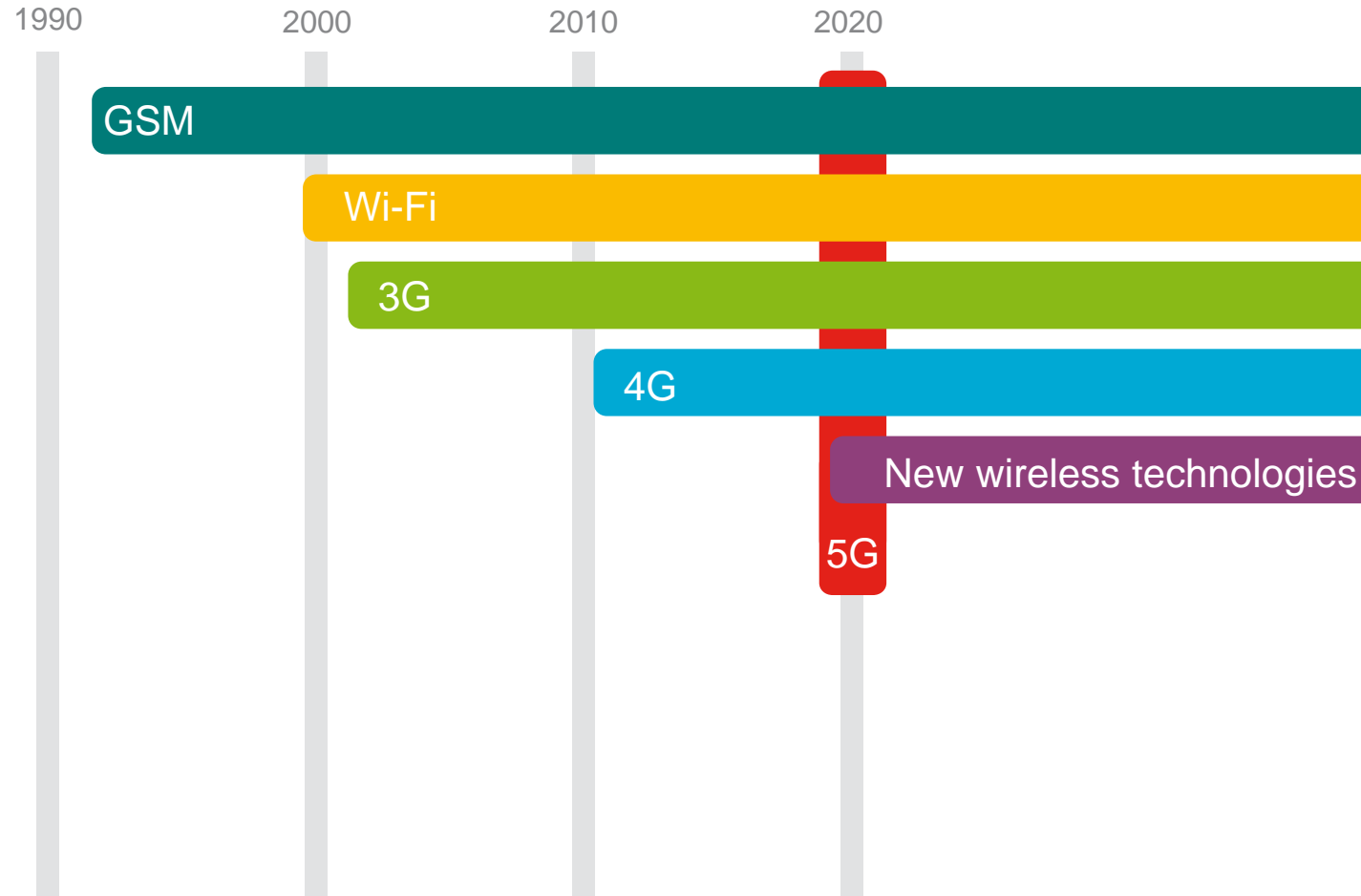
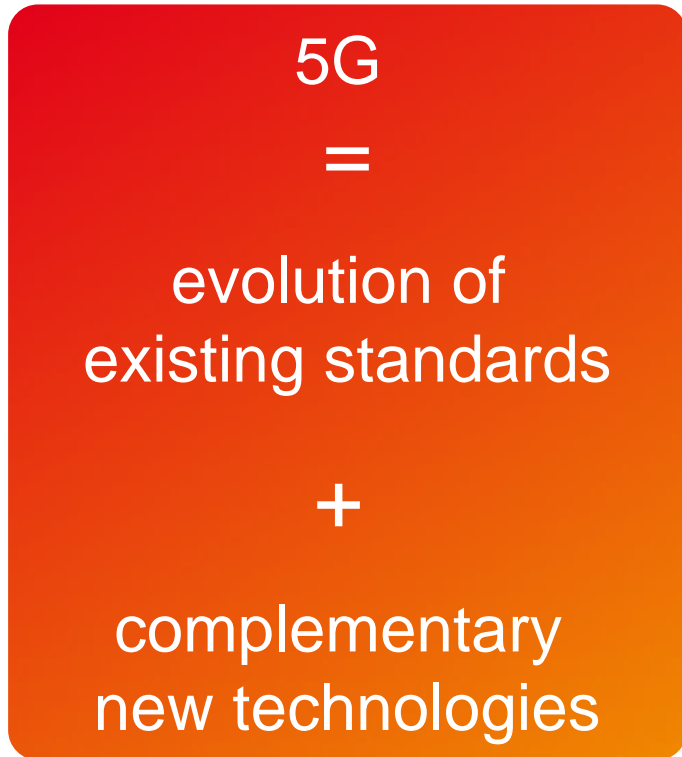
Wide range of  
**Requirements & Characteristics**



**Affordable and sustainable**

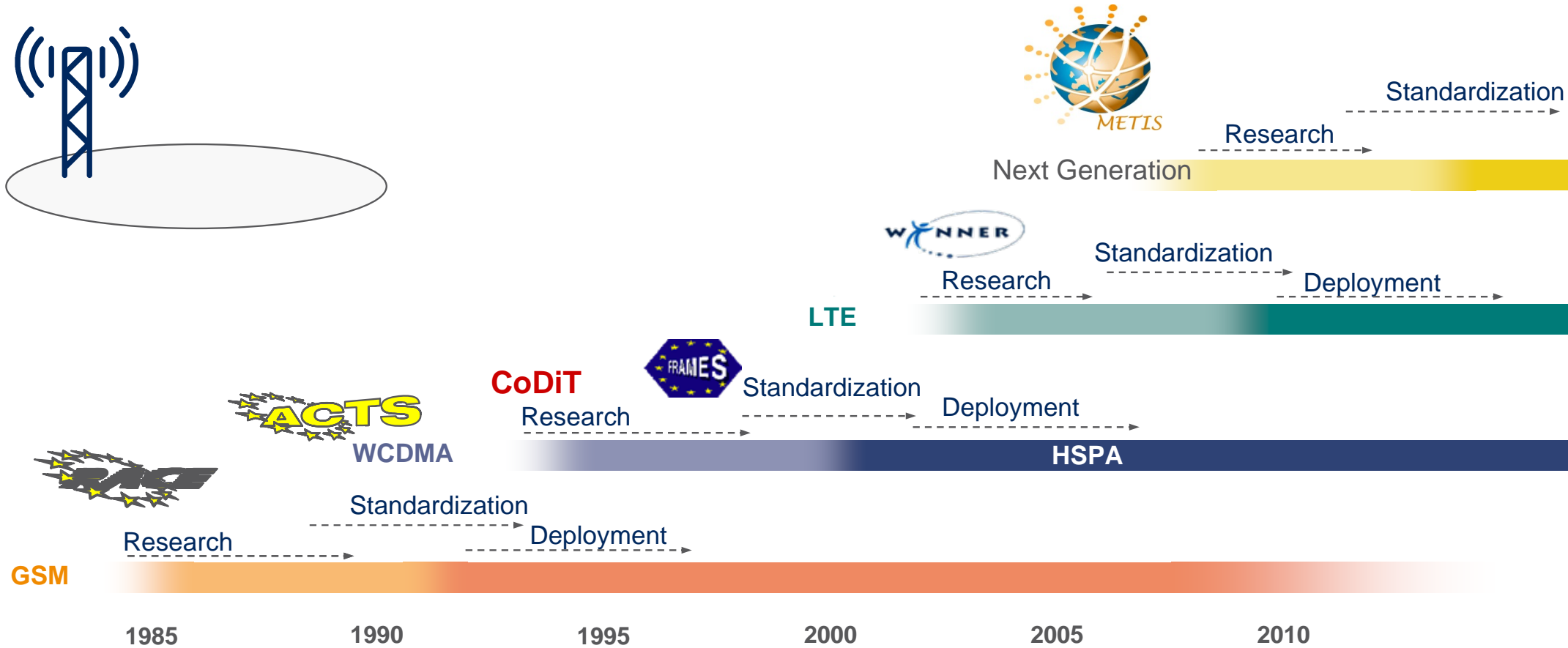
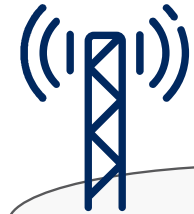


# 5G – WIRELESS ACCESS



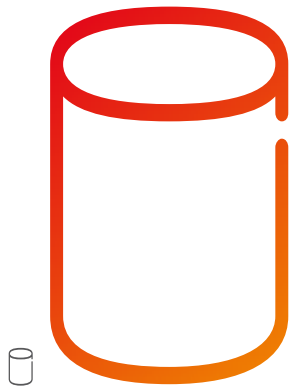


# THE CELLULAR GENERATIONS

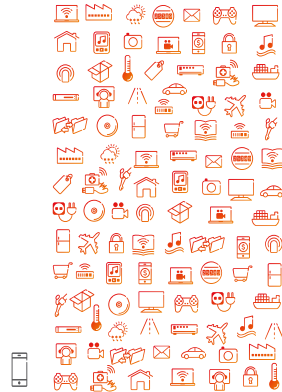




# 5G – METIS PROJECT OBJECTIVES



1000x  
higher mobile  
data volumes



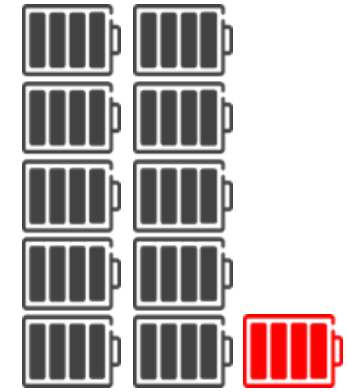
10-100x  
higher number of  
connected devices



10-100x  
typical end-user  
data rates



5x  
lower latency



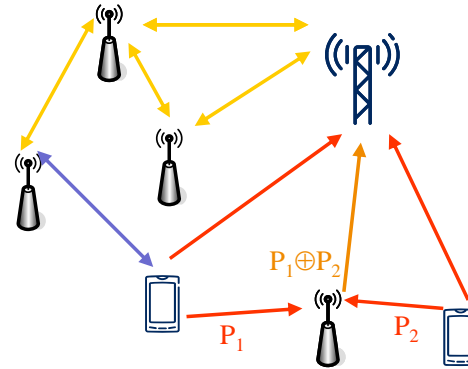
10x  
longer battery life  
for low-power devices

Develop a concept for future mobile and wireless communications system that supports the connected information society

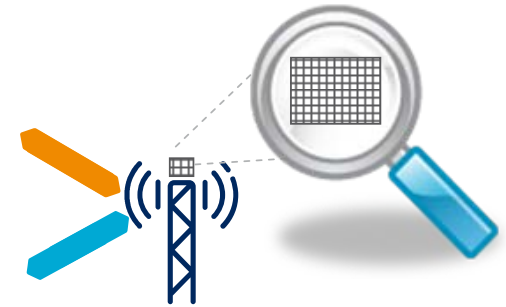
# 5G – COMPONENTS AND ASPECTS



Small cell technologies & Ultra Dense Networks



Multi-hop and Network Coding



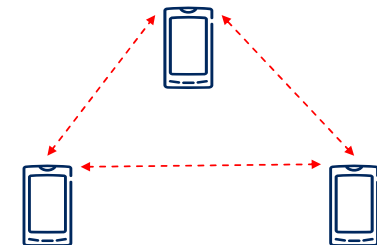
Massive MIMO



Resilience, security and privacy



Network, Mobility & Interference Management



Device-to-device communications

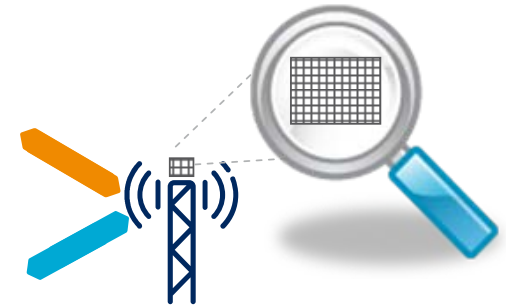
# 5G – COMPONENTS AND ASPECTS



Small cell technologies & Ultra Dense Networks



Power consumption & sustainability



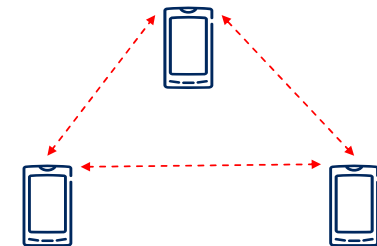
Massive MIMO



Resilience, security and privacy

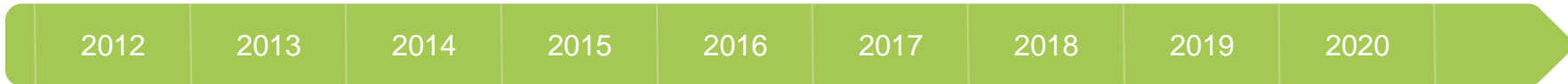


Spectrum



Device –to- device communications

# 5G – TIME PLAN



WRC'12

WRC'15

WRC'18/19

# NETWORKS CONTINUE TO EVOLVE



Smart



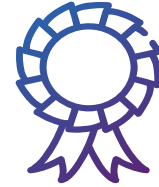
Scalable



Simple

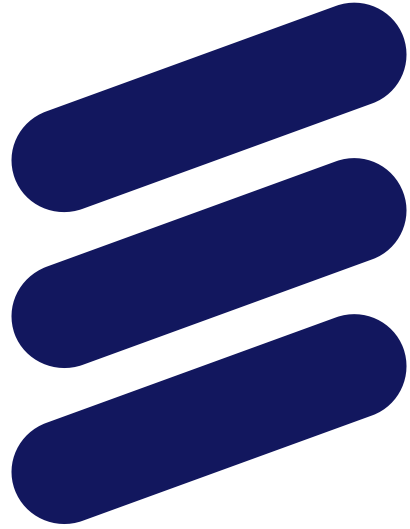


Trusted



Superior  
Performance





**ERICSSON**