



# Mobile and wireless communications Enablers for the 2020 Information Society

*EU FP7 ICT-317669-METIS*




[www.metis2020.com](http://www.metis2020.com)



# Fact Sheet



› An Integrated Project under EU Framework Programme 7 Call 8

› Budget: 27 M€ 

› Project Length: 30 months (from 2012-11-01 to 2015-04-30)



› Resource: ~ 80 persons working full time

› Contact & Information:

[www.metis2020.com](http://www.metis2020.com)

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# Rationale



## Avalanche of **traffic**



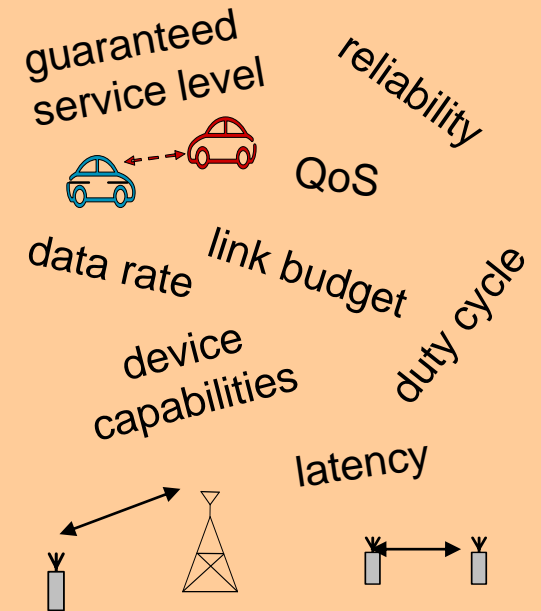
**X 1000**

## Explosion of the number of **connected devices**



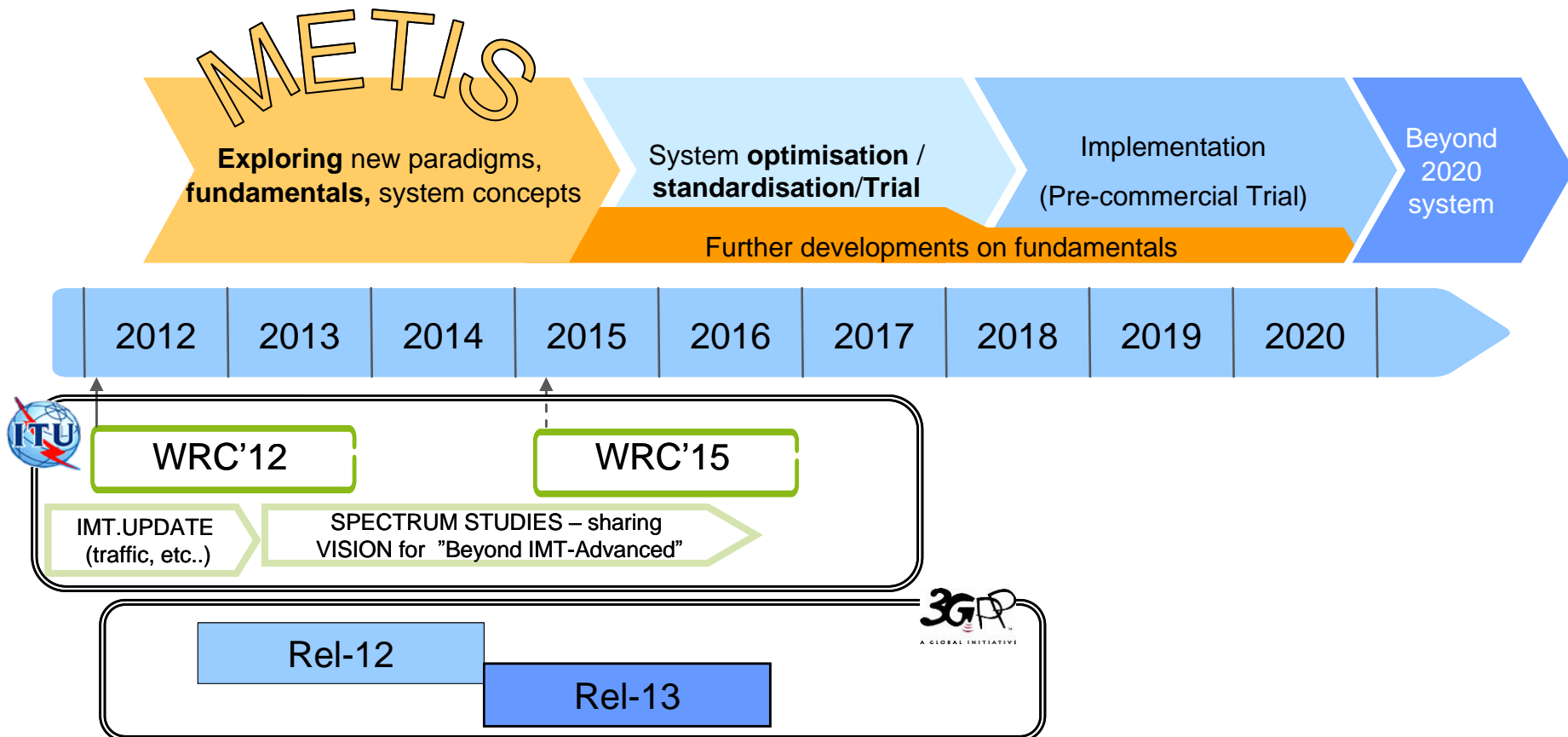
**5 billion** (2010) → **50 billion** (2020)

## Large **diversity** of use cases and requirements



# Objectives: Overall

**Lay** the foundation & **Ensure** a global forum & **Build** an early global consensus for beyond 2020 “5G” mobile & wireless communications



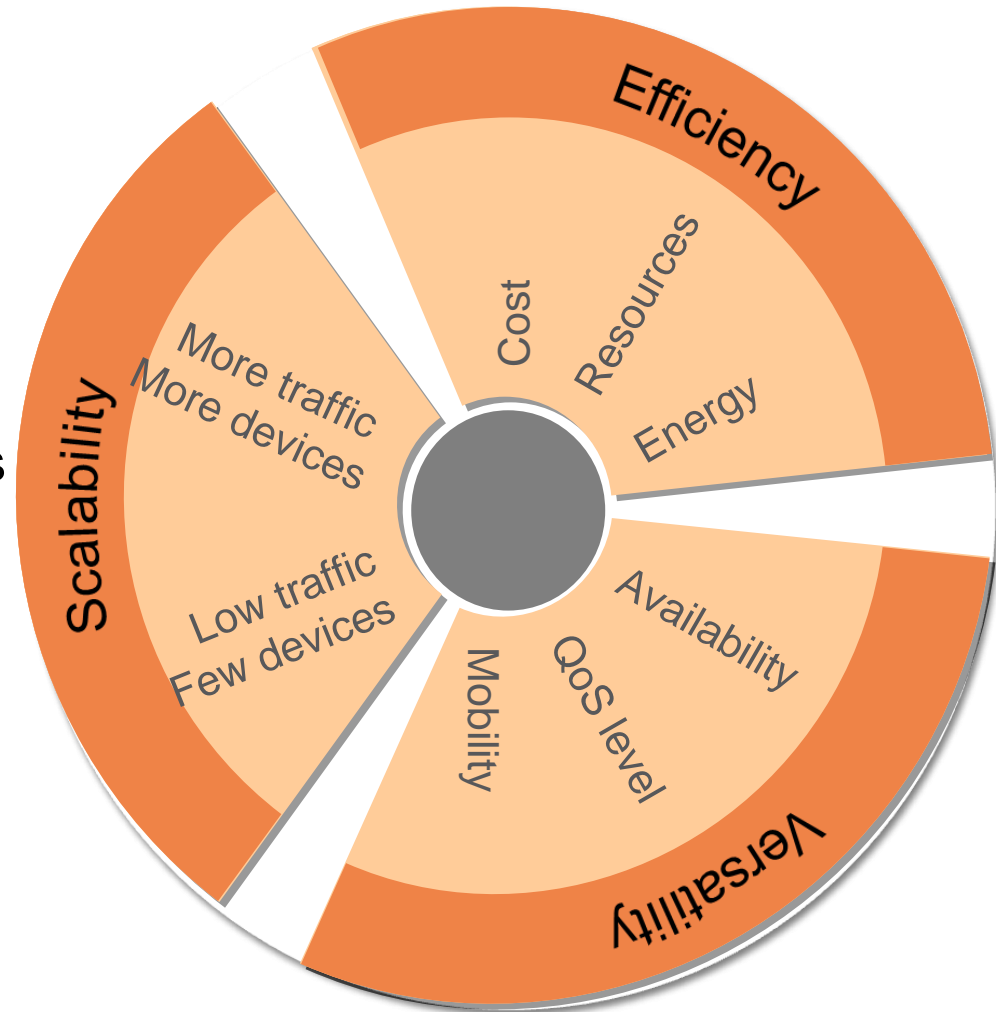
# Objectives: Science & Technology



- › To provide a system concept that supports
  - 1000 times higher mobile data volume per area
  - 10 times to 100 times higher number of connected devices
  - 10 times to 100 times higher typical user data rate
  - 10 times longer battery life for low power MMC
  - 5 times reduced End-to-End latency

# Objectives (Cont.): Technical

- › Efficiency to allow for a constant growth in capacity at acceptable overall cost and energy dissipation
- › Scalability to respond to a wide range of requirements regardless of the traffic amount (low or high)
- › Versatility to support a significant diverse requirements (e.g. Availability, Mobility, Quality-of-Service) and use cases



# Structure: Consortium



## › Vendors:

Alcatel-Lucent, Ericsson, Huawei, Nokia, NSN

## › Five operators:

Deutsche Telekom, Orange, Telecom Italia, Telefonica, DOCOMO

## › Thirteen academic org.:

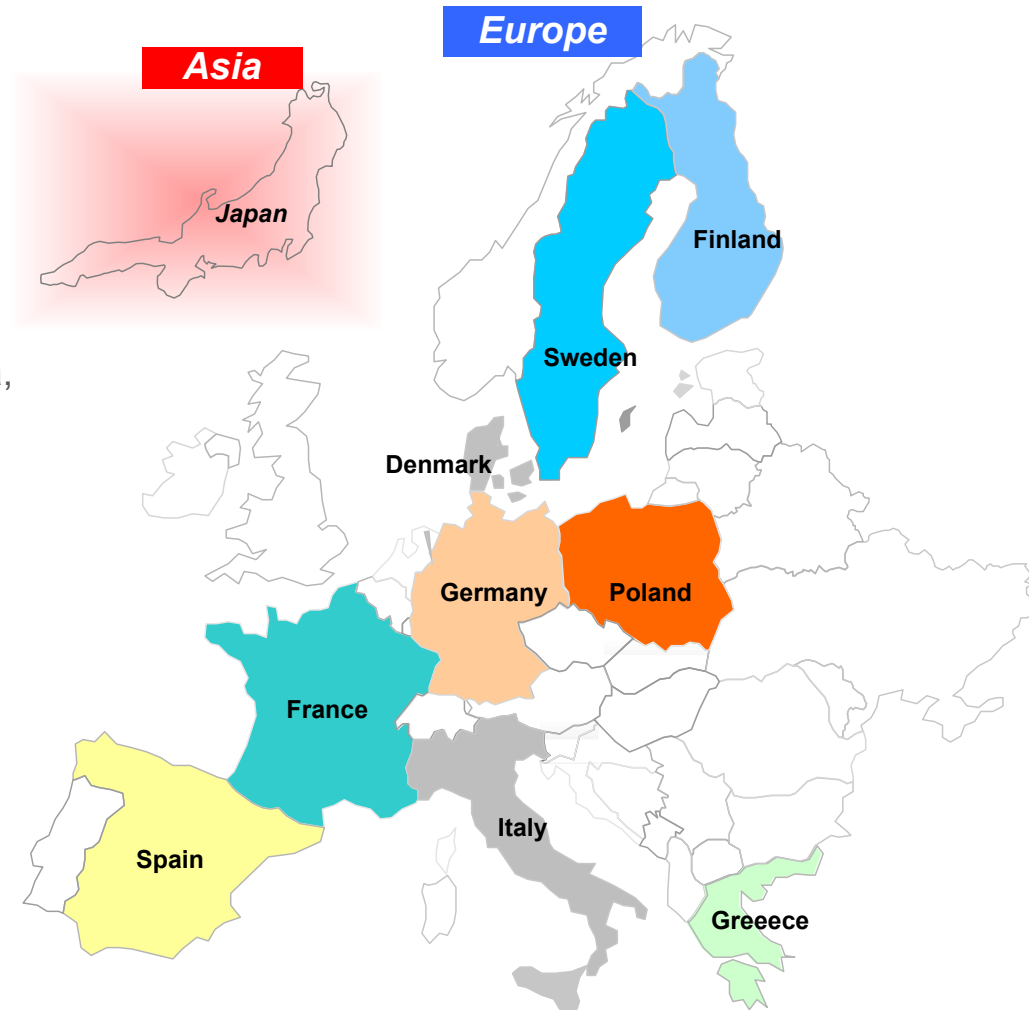
AAU, Aalto, CTH, HHI, TB, KTH, NKUA, Oulu, PUT, RWTH, UB, UKL, UPV

## › Automotive Industry:

BMW

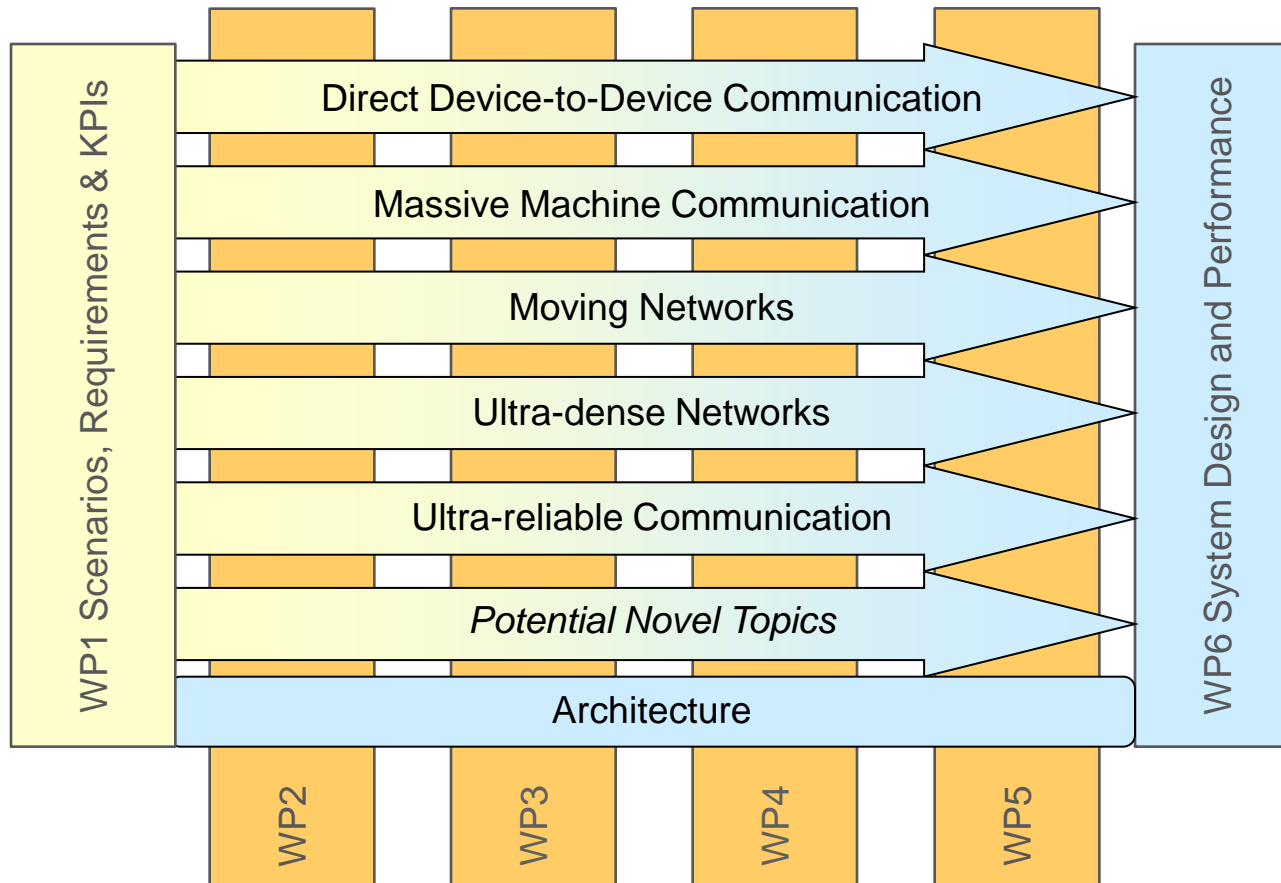
## › T&M vendor:

Anite



# Structure: Matrix Approach

The integration is conducted in the horizontal and vertical dimensions:  
Horizontal Topics (e.g., D2D Comm., Moving Networks, etc.) & Technology Components (vertical dimension)

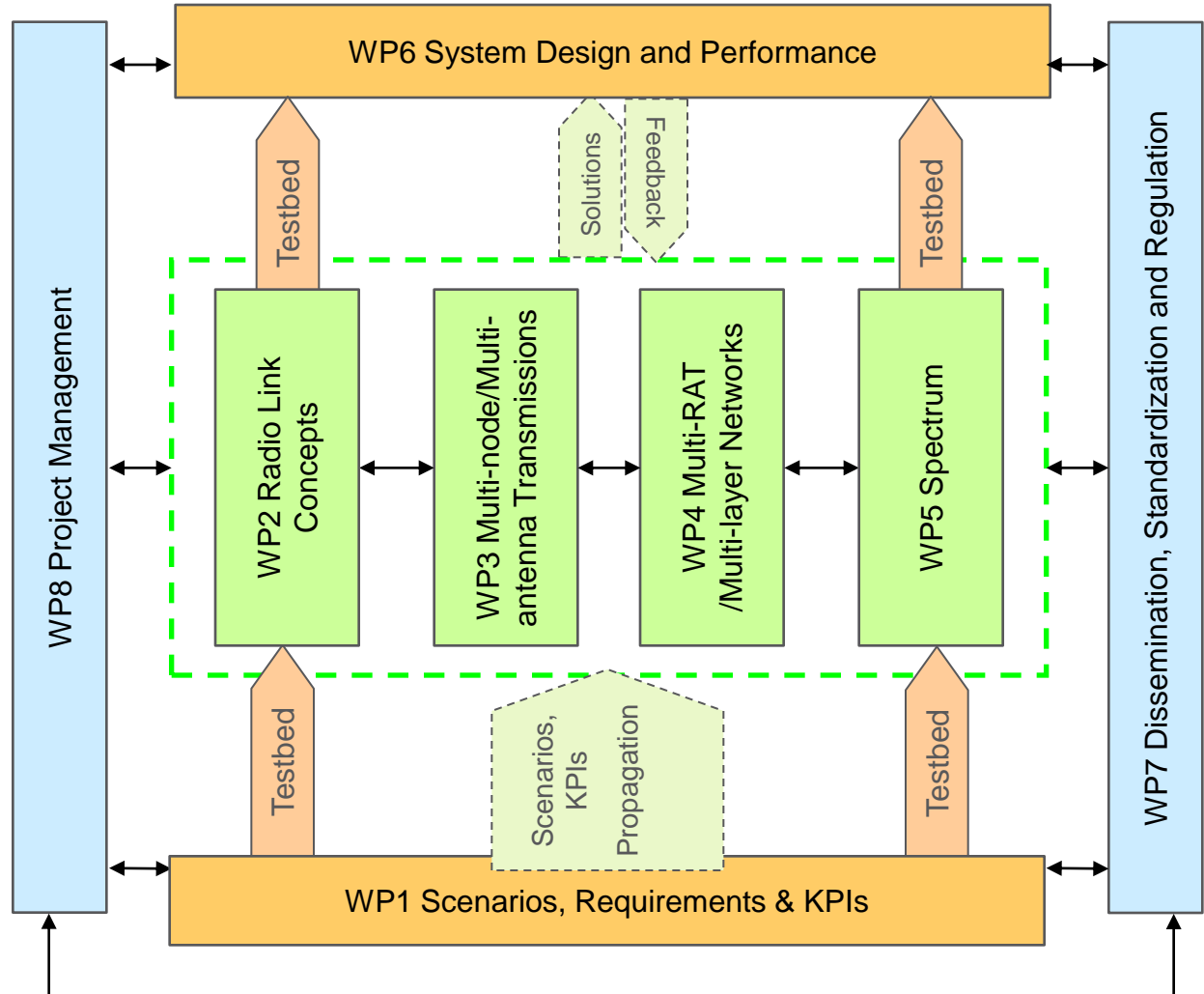




# Structure: Work-package (WP)

## > Eight WPs:

- WP1 (DOCOMO)
- WP2 (Huawei)
- WP3 (Alcatel-Lucent)
- WP4 (NSN)
- WP5 (Nokia)
- WP6 (Ericsson)
- WP7 (Ericsson)
- WP8 (Ericsson)



# Expected Output



- › **Concepts & Technology solutions for “5G” to**
  - Meet diverse requirements of future services
  - Connect diverse devices
  - Support 1000 X traffic increase
  
- › **Consensus & Global strategy to**
  - Ensure leadership in future communications system
  - Ensure early global consensus
  
- › **Unique Expertise allowing to**
  - Conduct fundamental research at early point
  - Identify where a revolution or evolution from LTE-A is needed

# Contact



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## ***Project Info***

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# Project partners

