



delivering a sustainable 5G ecosystem

The 5G Huddle 2015 , Copenhagen
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a new industrial revolution

Digital Single Market

re-defined value chains

**Connectivity
IoT**

5G

Cloud

traditional value chains



specificities of EU landscape wrt 5G

Strengths

- **Great R&D track records!**
- **Largest global telco suppliers (40% global market share)**
- **Advanced fixed broadband infrastructure**
- **Security-minded**

Weaknesses

- **EU operators are fragmented**
- **Cloud industry also fragmented**
- **Weak in OTT domain**
- **No smartphone player**

Opportunities

- **The EU hosts leading companies in key "verticals"**
- **Strong societal demands backed by governments (e.g. health)**
- **No vested interest in OTT/platforms**
- **Operators open to virtualisation / new business models**

Threats

- **Many many ...**
- **See opportunities! ...**

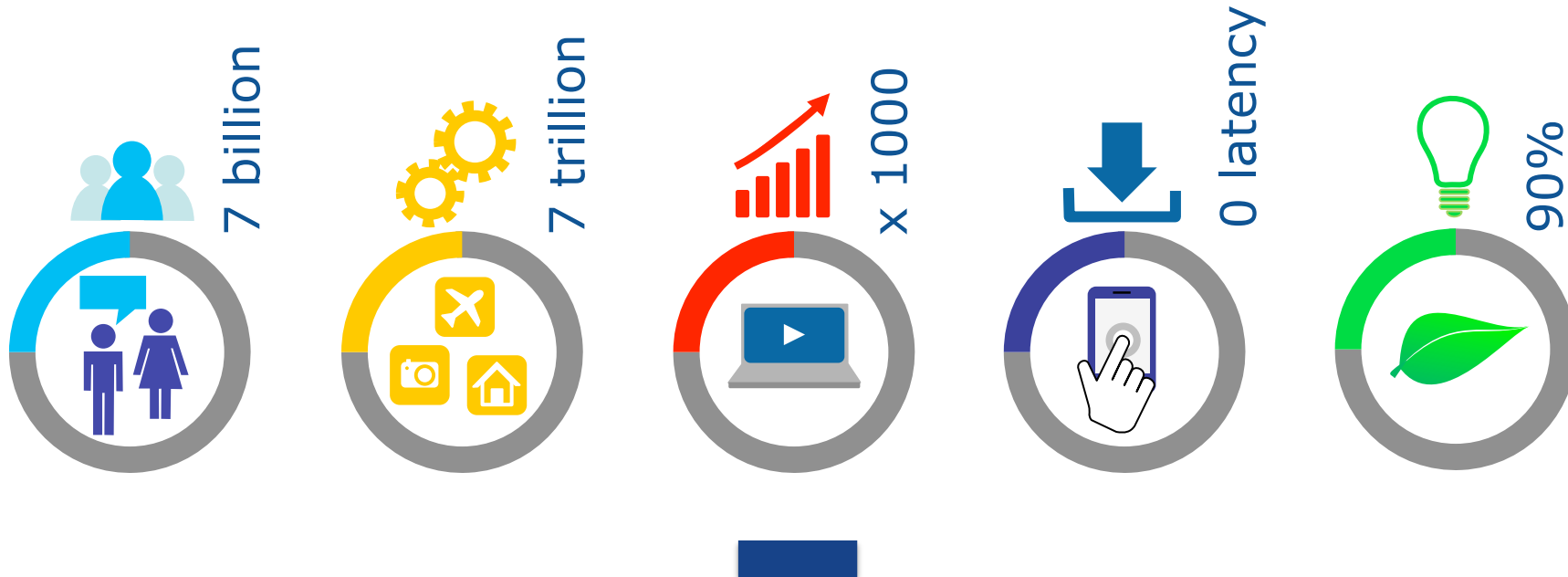
growing EU opportunities





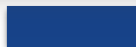
research & innovation

- **5G Public Private Partnership launched in Dec. 2013**
 - Objective-driven (technical, economic, social) ⇒ contractual KPIs / 700 M€ public funding 2014-2020 / 3500 M€ private investment





research & innovation





launching the first 5G PPP projects

research and innovation actions

- radio network architecture & technologies

95M€

- convergence beyond last mile
- network management

Innovation actions

network virtualisation & software networks

25M€

advanced 5G network infrastructure

Support Actions

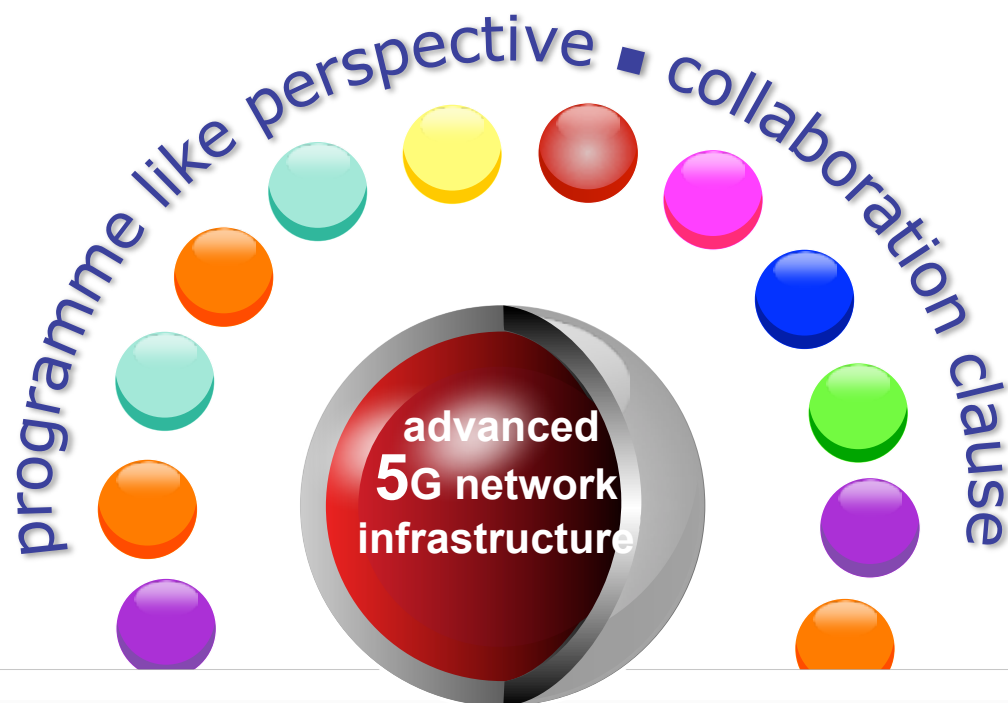
programme integration, monitoring

2M€





19 high quality projects



+ working groups (architecture, spectrum, pre-standardisation, sw, security,..)

use cases - trailblazing verticals

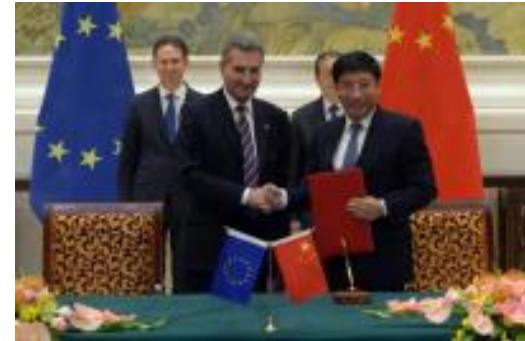


- **5G Vision Paper
MWC 2015**
- **EC Study on Socio-economic impact of 5G**
- **White papers on key verticals for MWC 2016**
- **Further announcements soon**



innovative approaches to 5G policy challenges

- **EU "diplomatic offensive" to build international consensus**
 - South Korea (June 2014)
 - Japan (May 2015)
 - China (28 September 2015)
 - US (developing)
- **Pro-active EU spectrum policy actions**
 - Active preparation WRC-15 A.I. 10 on WRC-19
 - First multi-lateral workshop on spectrum and standards with all regional initiatives (Lisbon, 20 October 2015)
- **More agile standardisation approach**





smart ecosystem for 5G

- **Network virtualisation triggers new level of innovation**
- **New "Verticals" enter the game**
- **New roles for governments**
- **Investment dynamics "upside down" ?**
- **Are EU Regulations "fit for purpose" ?**





The 3 "burning" issues today

- **Initiate standards that match the ambitious Vision**
 - How to involve new players (the verticals) strategically in order to create lasting business opportunities in the EU?
- **Agree on the right timeline for 5G deployment**
 - How to ensure that 5G will effectively bring the structural breakthrough needed for the digital society of the next decade (avoid rushed "pre-5G" versions...) ?
- **Ensure spectrum constraints are not "in the way"**
 - How to take advantage of WRC-15 to kick-start fundamental technical and regulatory advances to bring "spectrum efficiency" to the next level?



enjoy "The 5G Huddle" in Copenhagen!

What 5G is about

