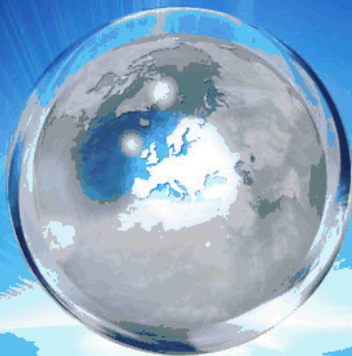




Towards 5G: a European Perspective

***Taiwan workshop
21 October 2015***



HORIZON 2020
Head of Unit, Network Technologies

***Thibaut Kleiner
European Commission***

Framework



- **5G Public Private Partnership (PPP) under EU Horizon 2020 R&I programme dedicated to 5G system**
- **Budget for 2014 – 2020 time frame**
 - **Up to 700 million € public funding**
 - **Matched by private side including leveraging factor 5 results in private value of about 3.5 billion €**
- **Covers downstream policy sectors**
 - **Pre standardisation**
 - **Spectrum**
 - **International cooperation**
- **Implementation through an Industrial Association, 5G-I-A**
- **3 Phases until 2020**



5G-PPP Vision

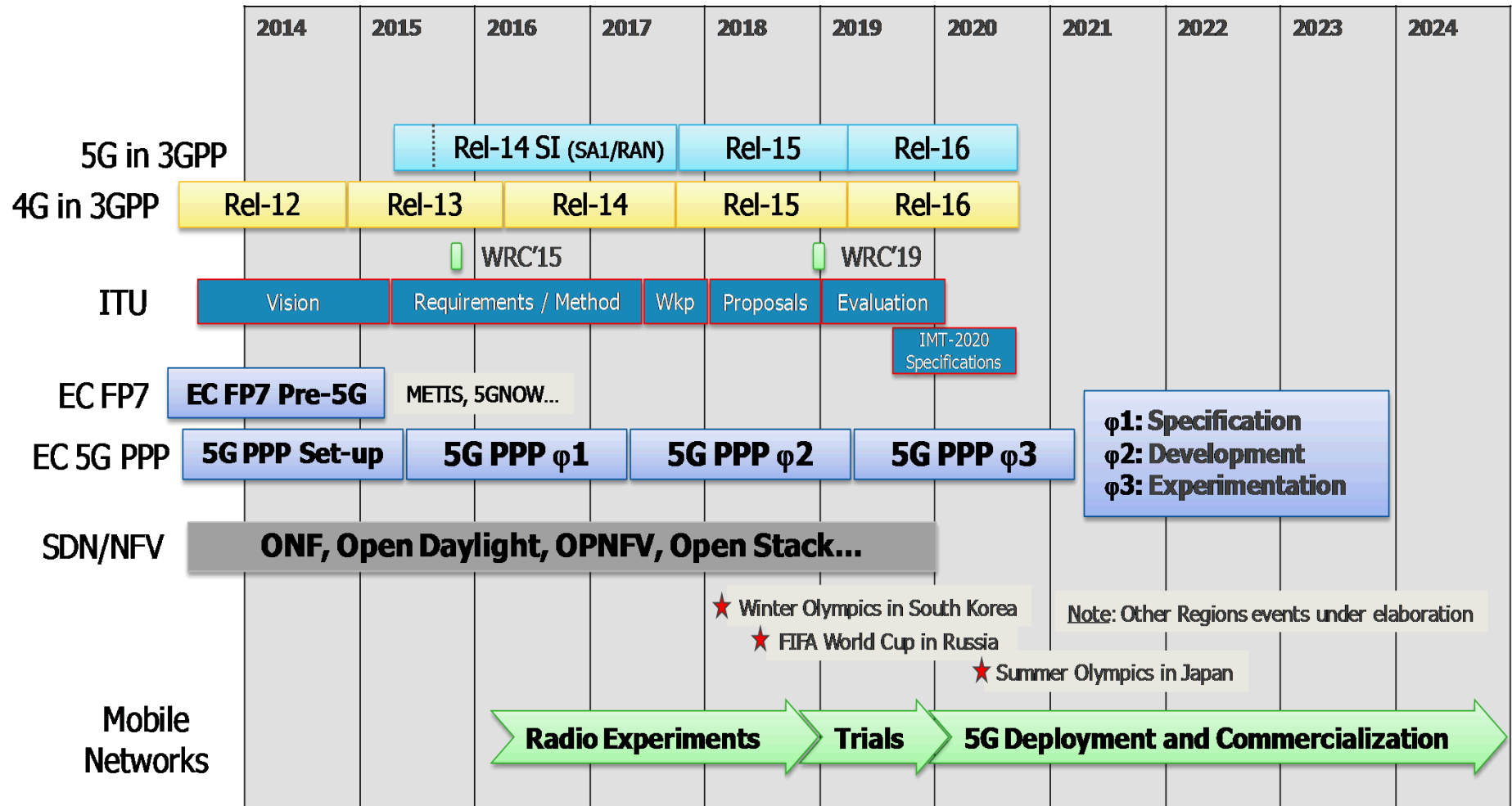


- An **ecosystem for sustainable technical and business innovation**
- Value-added **services**
 - Immersive user experience
 - Expanded Internet of Things
 - New mission critical services (low latency, high reliability)
- **Unified and programmable infrastructure**
- Support of **multi tenancy and network resource slicing models**
- Design to be a **sustainable and scalable technology**
- **Commercial deployment of 5G systems in years 2020+**
 - Field trials planned from year 2018 onwards, not yet based on commercial products
 - First commercial roll-outs expected to start in year 2020



<http://5g-ppp.eu/wp-content/uploads/2015/02/5G-Vision-Brochure-v1.pdf>

5G-PPP Context



International Cooperation



5G Joint Declarations signed with:

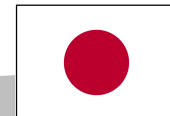
- ✓ South Korea
- ✓ Japan
- ✓ China

Mirrored by MoU at 5G-I-A level with

- ✓ 5G Forum
- ✓ 5G MF
- ✓ IMT 2020 (5G) Promotion Group

Other

- ✓ MoU US 4G Americas + *FCC discussions*
- Taiwan, Joint Research agreement in H2020



5G R&I phase 2



Work Programme 2016-17, 5G PPP Support lines

- **154 M€ for 5G R&I and Innovation projects**
- **More focus on proof of concepts, experiments**
- **Close links to standards/spectrum expected**
- **International cooperation**
 - *EU-Japan joint call, radio access and virtualisation (€3M)*
 - *EU-Korea joint call, interop framework (€3M)*
 - **EU-Taiwan targeted opening, access testbeds (€5M)**
- **Submission November 2016 for EU-TW proposals**





In Conclusion

- 5G-PPP established as the European Strategic framework to develop 5G
- International cooperation is at the heart of the European 5G strategy
- Leveraging R&I actions to support global policy consensus
- EU-Taiwan cooperation, a bold opportunity to support global 5G developments

