



中华人民共和国工业和信息化部

Ministry of Industry and Information Technology of the People's Republic of China



5G Progress in China

May, 2017

5G Development Plan in China

- **LI Keqiang, Premier of China's State Council:**
Held an executive meeting of China's State Council and adopted "The 13th Five-Year Plan for National Informatization".
- **Ma Kai, Vice Premier of China's State Council:**
China strives to start the commercialization of 5G network in 2020.
- **MIIT :** Constructing the 5G Development Guidance document of China.



National Major Projects in 5G



2015

Overall

- Network Architecture
- Standard Evaluation Platform
- Analysis and Evaluation on Candidate Bands

Technology

- mmWave Key Technologies
- Low-Latency High-Reliability Solution
- Next Generation WLAN

2016

Overall & Component

- 5G Standardization
- AD/DA for Base Station
- High-Freq PA for Base Station
- High-Freq Filter for Base Station

Wireless Technology

- Wide-Area Coverage
- Low-Power Massive-Connections
- High-Freq. Comm.
- UDN
- Novel Multiple Access

Network & Service

- RAN Architecture
- 5G Indoor Positioning
- Key Technology for Self-Driving Cars

2017

Wireless Technology

- 5G wireless system prototype
- Terminal chip
- Wireless networking technology
- ...

Network & Service

- Network slicing
- Mobility management
- Virtualization technology
- Security
- ...

Key device , Component & Platform

- Channel simulator
- Terminal emulator
- Terminal amplifier
- Test instrument
- ...

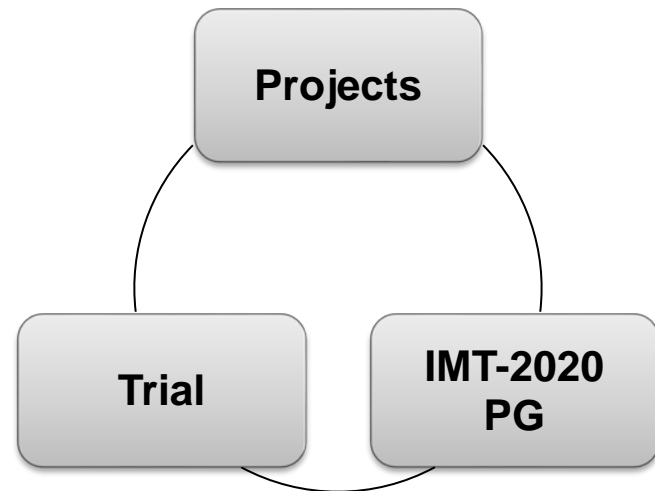
Many international companies have deeply participated in the Major Projects.



Opening to International Industry

Support both domestic and international companies to join 5G R&D activities in China

- 5G Research Projects
- IMT-2020(5G) Promotion Group
- 5G Technology R&D Trials of China



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ERICSSON

QUALCOMM

SAMSUNG



Strengthening Global Collaboration

- Promote global cooperation to build unified 5G standards actively.
- Support industry to jointly hold the Global 5G Event in Beijing, Rome and Tokyo.
- Support Telebrasil – Projeto “5G Brasil” to join the Multilateral MOU



5G Standards and Spectrum

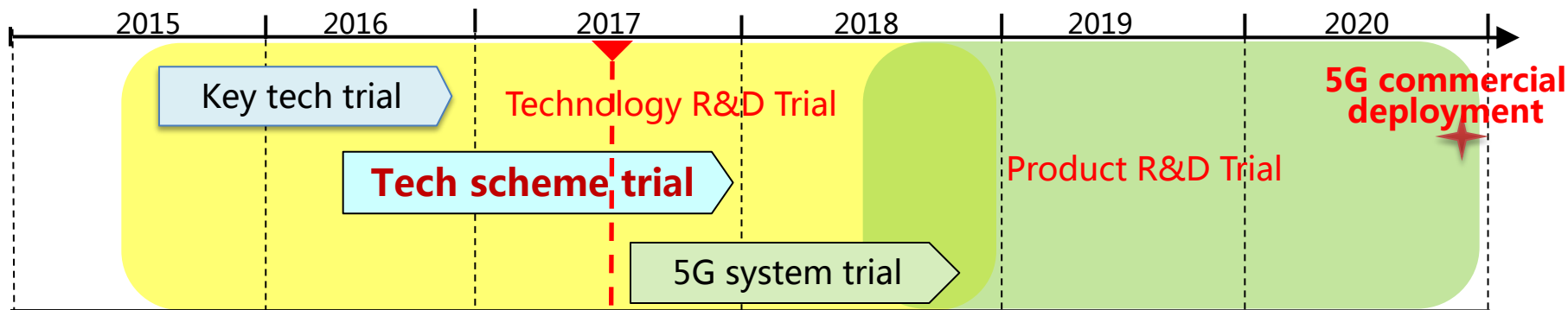
Globally Unified 5G Standard

- Designed for both eMBB and IoT, with same priority in 3GPP.
- Technology innovation should be the key focus to improve 5G network performance.

Harmonized 5G spectrum

- Promoting global/regional coordination for both low-band and high-band.
- Identify harmonized spectrum for IMT to enable economies of scale of 5G.

5G Technology R&D Trial of China



Launch Step-2 Trial in the end of 2016
Planning the World' s Largest 5G Field Trial



Main domestic and international participants



V2X: One of the core scenario in 5G

Working on 5G and V2X technologies together, the new opportunities and challenges, to construct a cooperative environment



Cooperation Mechanism

Joint working mechanism

Cooperative platform



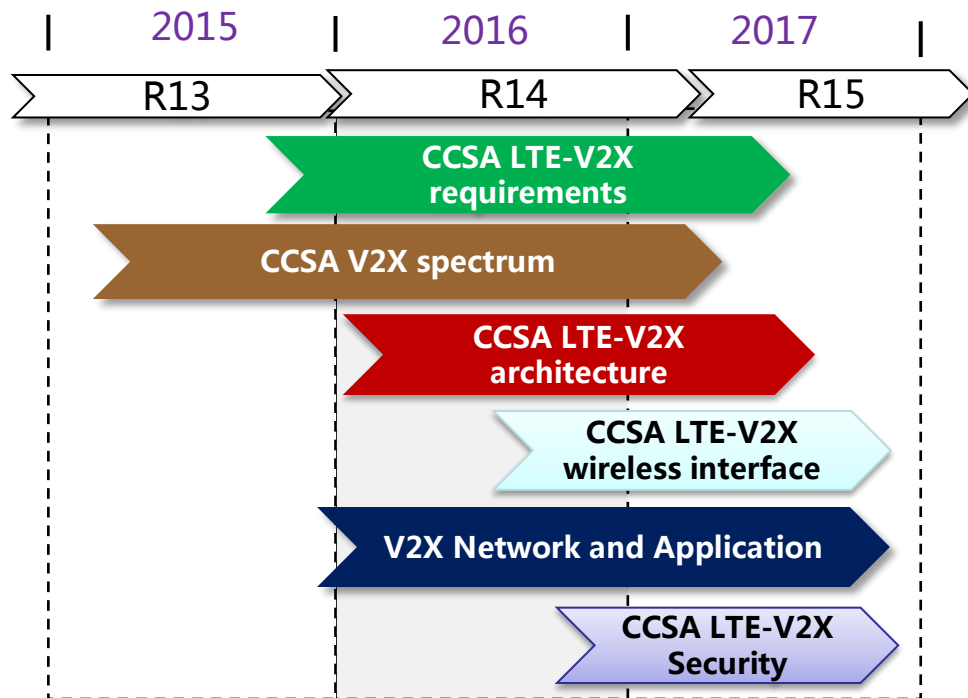
LTE-V2X Standardization and Projects in China

Standardization

- Synchronizing with 3GPP standardization, promote LTE-V2X standards in China

Research Projects

- LTE-V2X wireless transmission technology international standardization and prototype development and validation
- Automated driving oriented 5G key technology research and demonstration



Demonstrations of V2X technology in China

- **5.905-5.925 GHz** Frequency for V2X Research and Demonstration
- **Shanghai, Zhejiang, Beijing - Hebei, Chongqing, Jilin, Hubei, Jiangsu** the demonstration areas in china



A NICE City, Shanghai 2016.06



i-VISTA, Chongqing 2016.11

Summary and Outlook

- Strengthen the multilateral cooperation to promote the global unified 5G standards and industry.
- Support synchronous development of eMBB and IoT(especially the V2X) through technical innovations.
- Promote global and regional coordination to achieve the harmonized 5G spectrum on both low-band and high-band
- Enhance 5G trial cooperation to facilitate 5G industrialization and commercialization.





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Thanks for your attention

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