



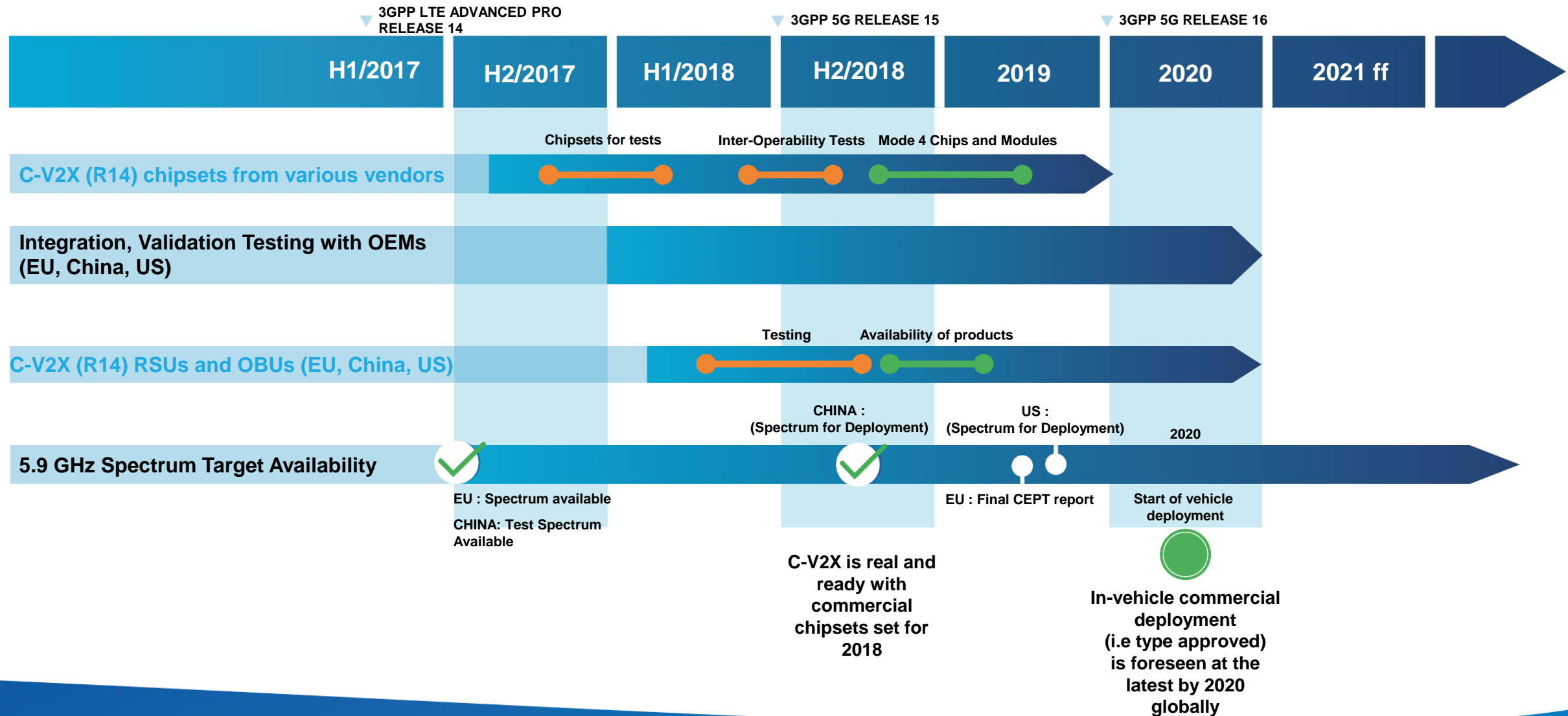
# UPDATE ON C-V2X DEPLOYMENT IN CHINA

**Dr Dang Xiang**

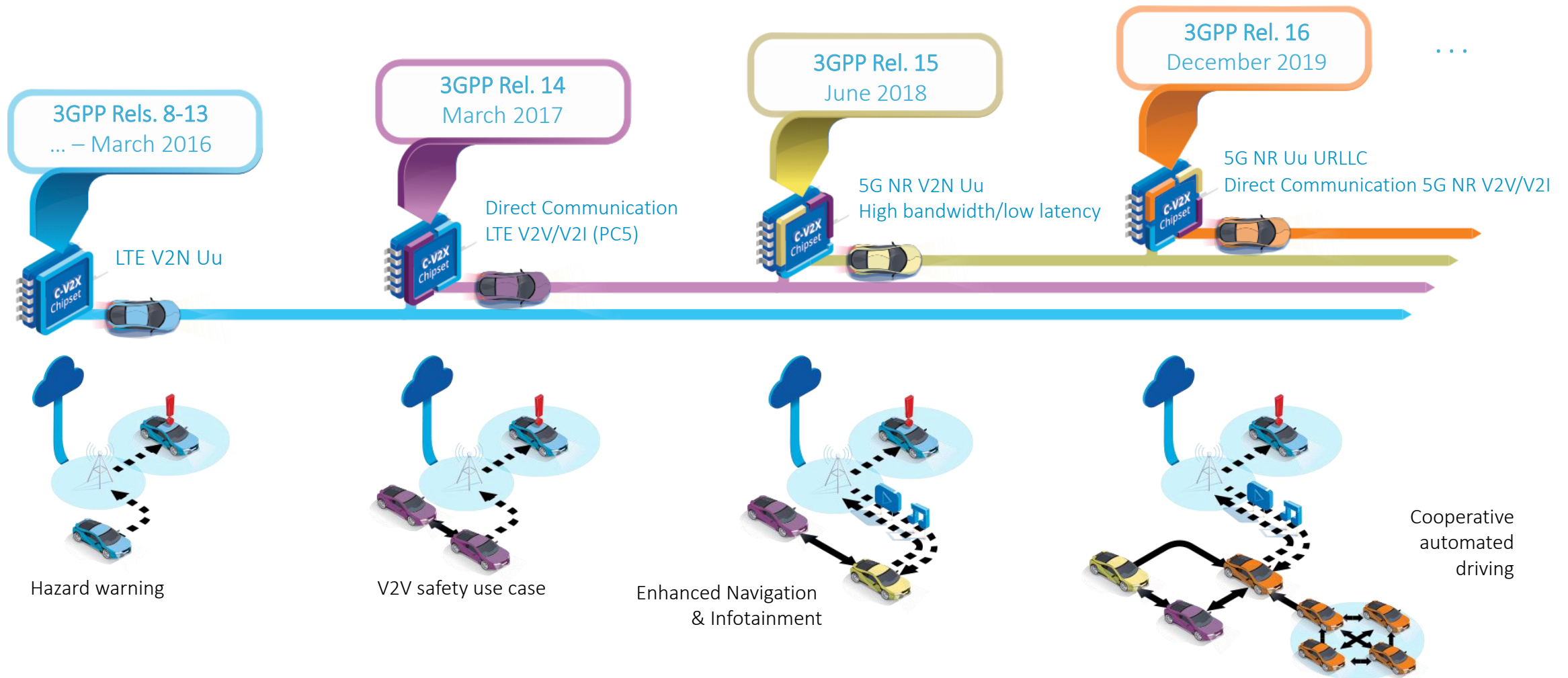
Deputy General Manager of Research and Advanced Technology  
SAIC Motor

- 1 **C-V2X Development Progress in China**
- 2 On-going deployment activities across China region
- 3 Global EU-China cooperation in connectivity

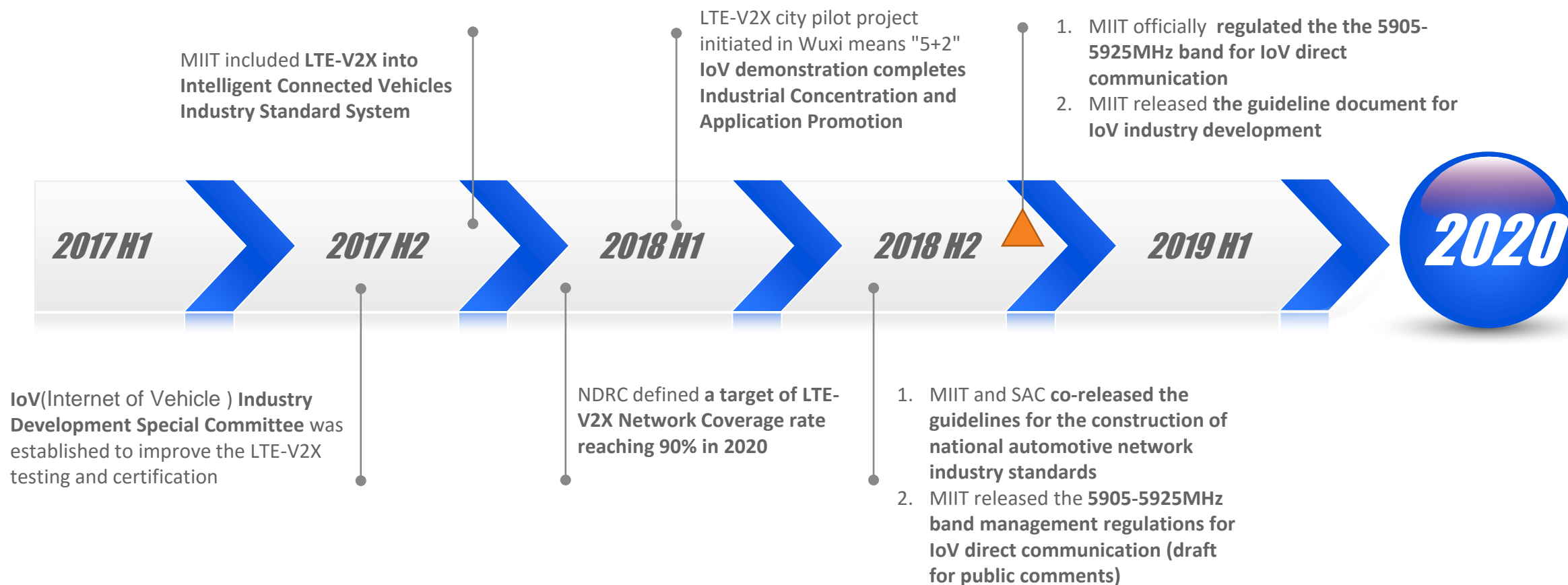
# Timeline for Deployment of C-V2X



# C-V2X: Evolution to 5G maintains backward compatibility



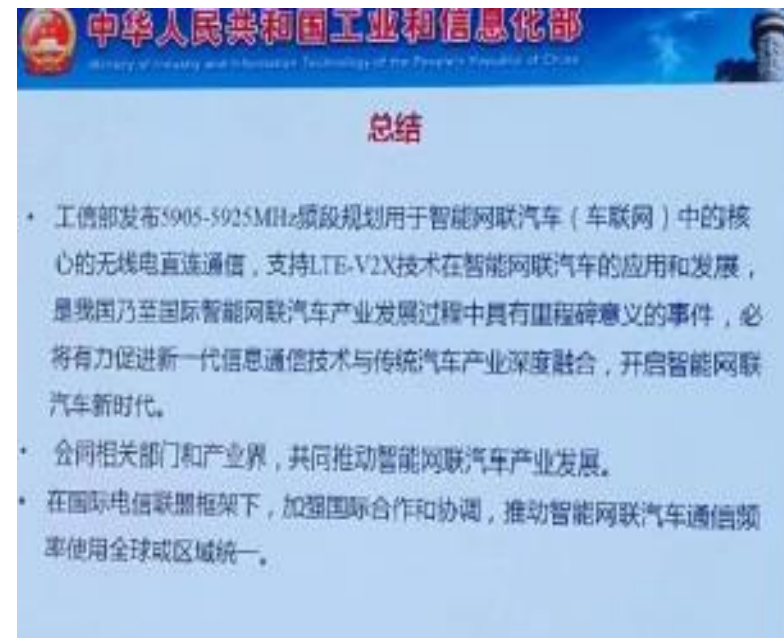
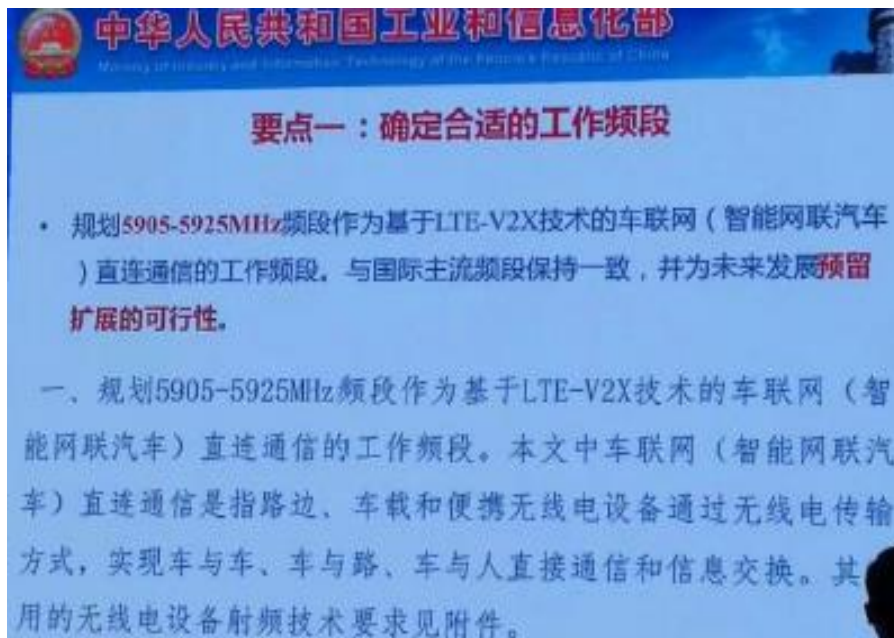
# Policy Environment for C-V2X in China



**Note:** **MIIT** Ministry of Industry and Information Technology  
**NDRC** National Development and Reform Commission  
**SAC** Standardization Administration of the People's Republic of China

# Policy Environment for C-V2X in China

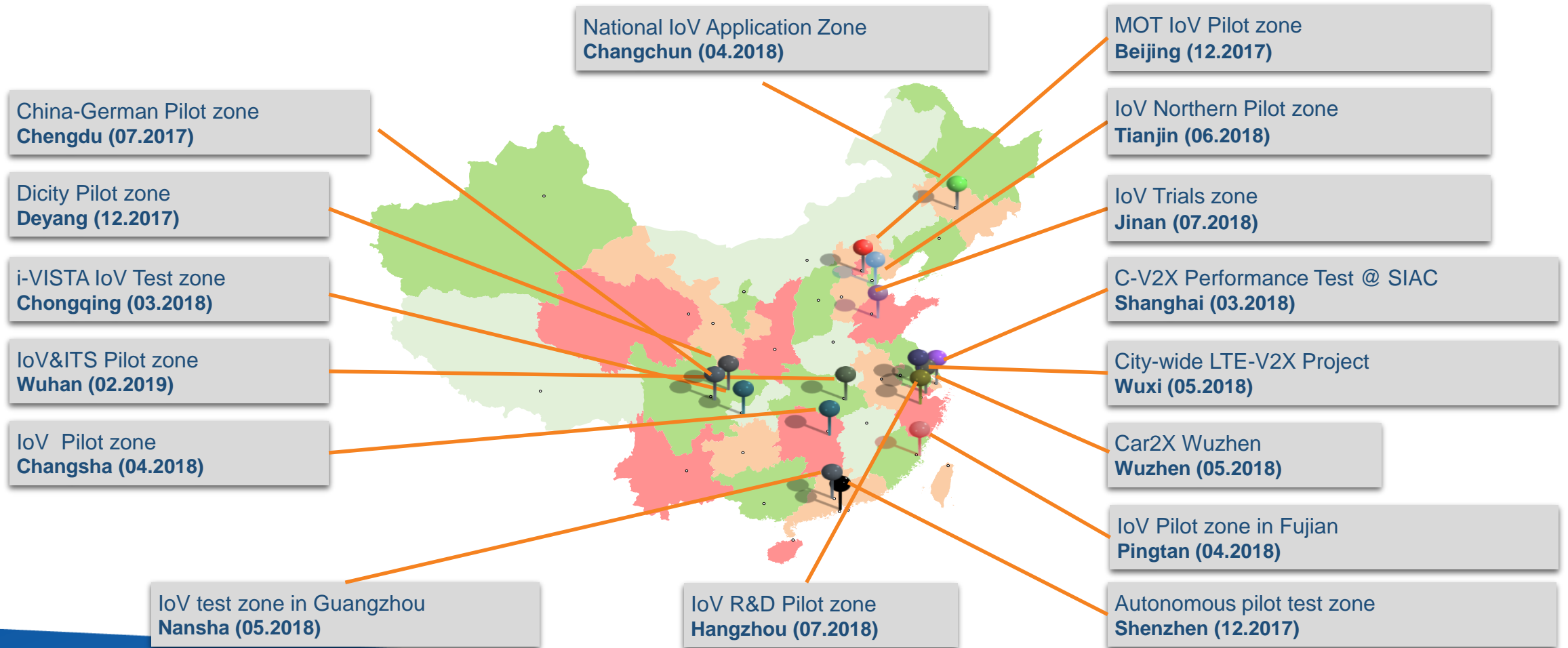
MIIT officially allocated the LTE-V2X Spectrum for IoV direct communication.



- 5905-5925MHz spectrum can be used for IoV based on LTE-V2X and its bandwidth can also be expanded in the future.
- The Usage regulation for 5905-5925MHz
  - Organizations or companies of IoV should apply the licenses from MIIT in the first.
  - The provincial radio-control regulator must approve the spectrum usage for IoV.
  - The portable V2X device or Vehicle Onboard electronics do not need spectrum permission and radio station license.

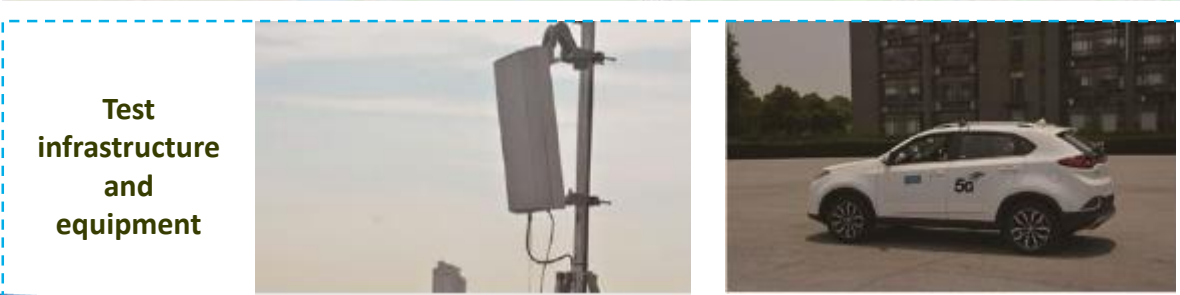
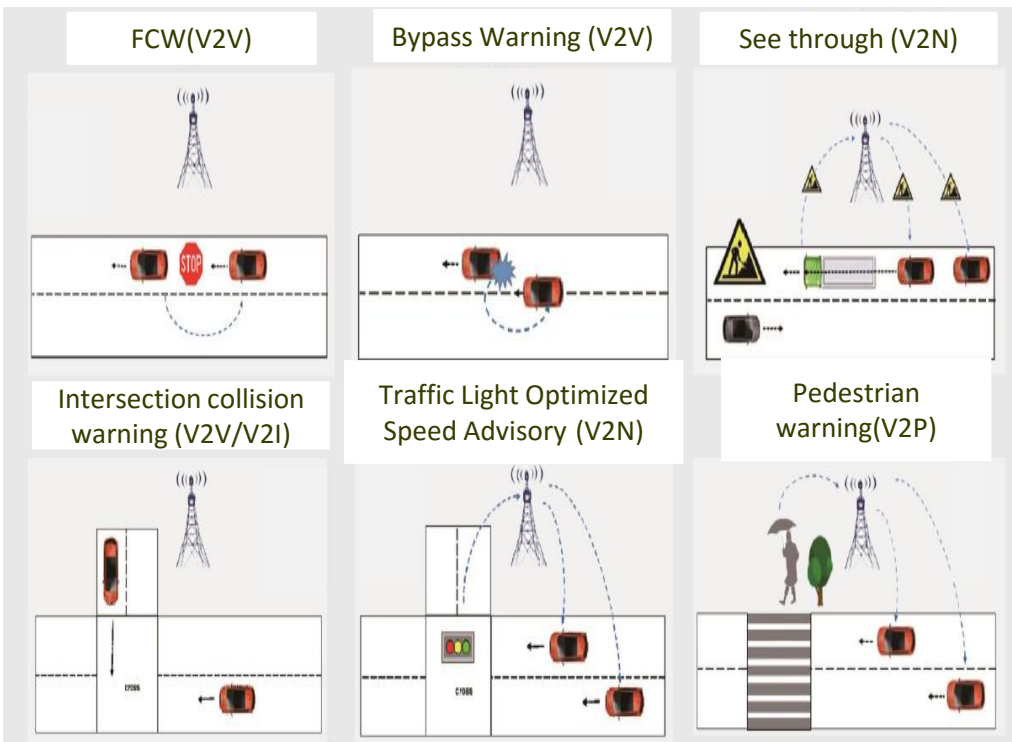
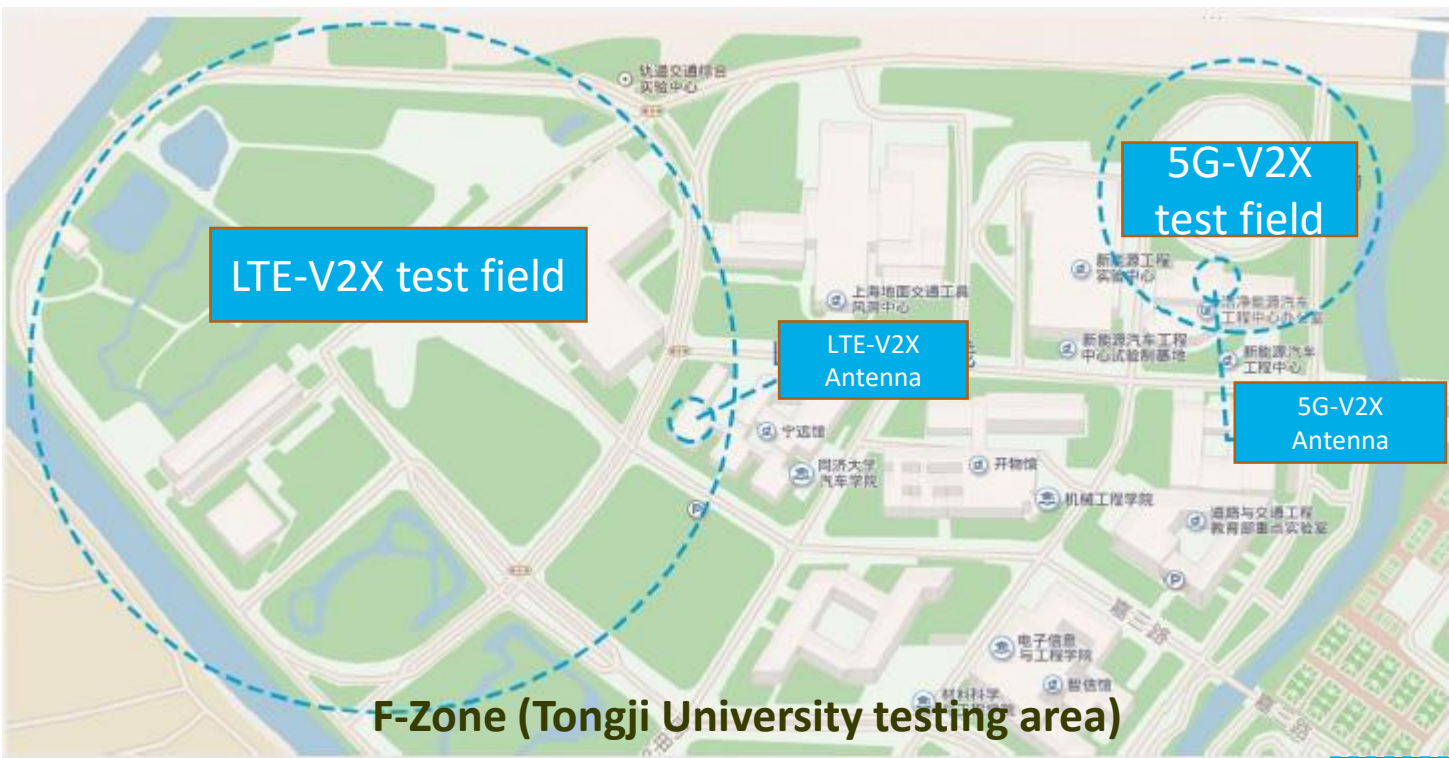
# C-V2X Trials and Areas in China

Currently there are 16 IoV test demonstration zones all over China, and for the purpose of accelerating the launch of IoV, the MIIT collaborates with other organizations or local governments to promote the establishment of test zones by capital cooperation and other ways.



## C-V2X Trials and Areas in China

The Tongji University area(F-Zone) was co-built by SAIC and Tongji university in 2016, which has high-quality test environment and supports various LTE-V2X/5G V2X test scenarios including V2V/V2P/V2N, etc.



## C-V2X Trials and Areas in China

LTE-V2X has been put in future plan of transport network building and national smart highways.

Highways for trial	Areas	Length(Km)
Yanchong Highway	Hebei-Beijing	123
Beijing-Hongkong-Macao Highway G4	Hebei-Beijing	480
New Airport Highway	Beijing	35
Jingjingtang Highway	Beijing	142
Huantaihu Highway	Jiangsu	19.3
Hangzhou-Shaoxing-Ningbo Highway G92	ZheJiang	161
Guangfo Highway S15	Guangdong	15.7
Huiwu Highway G12	Jilin	889
Rongwu Highway G18(Baoding-Tianjing part)	Hebei	105
Airport West Highway	Henan	107
G107(Xinxiang-Zhengzhou part)	Henan	-
Changjiu Highway G70	Jiangxi	138

◆ MOT(Ministry of Transport the People's Republic of China) initiates more than 10 smart highways or transport network building including 10 areas .

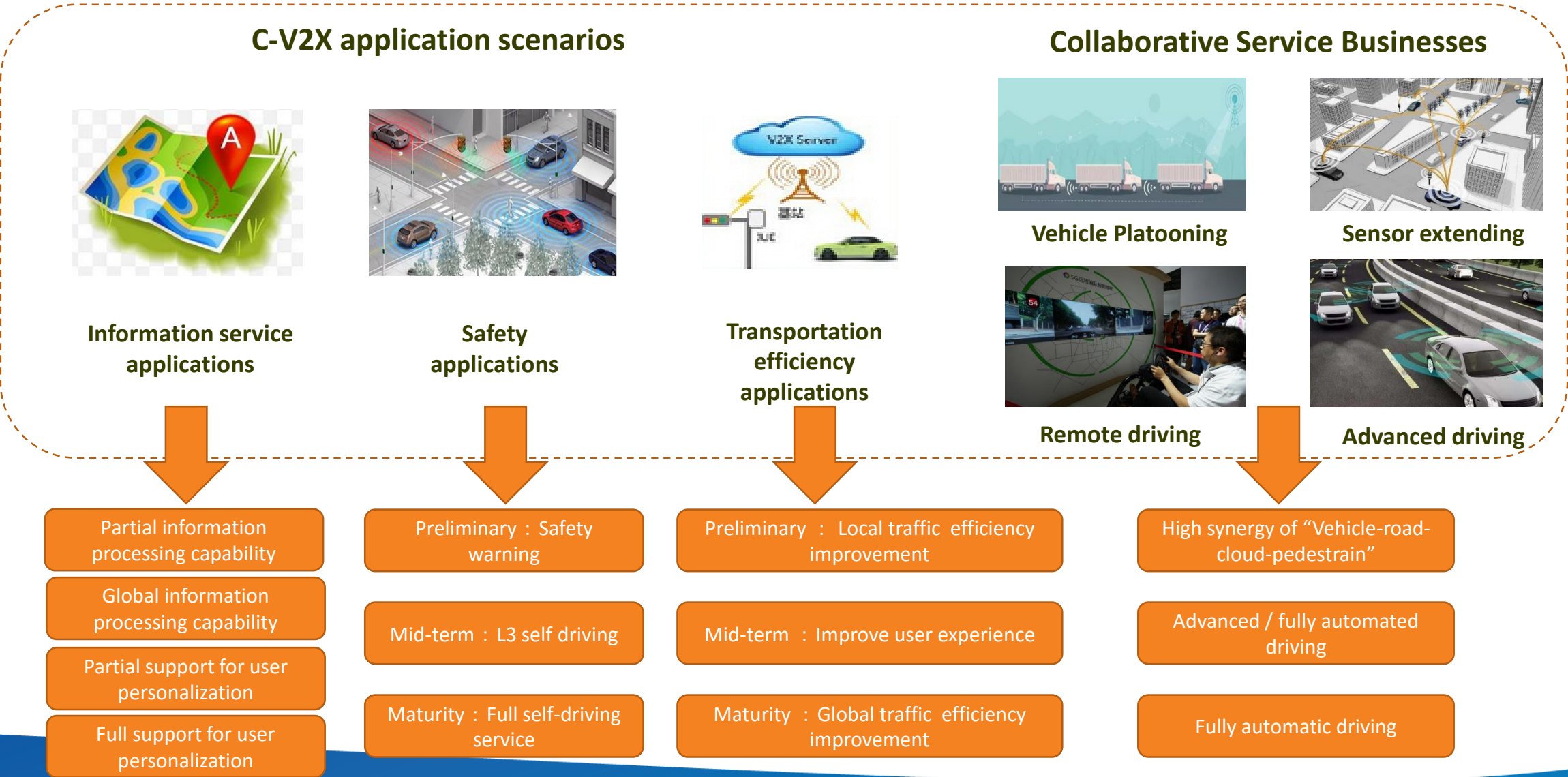
◆ For the preparation of Beijing Winter Olympic Game, the Yanchong Smart Highway will be installed 200 LTE-V2X RSUs along 33km in Beijing Part.



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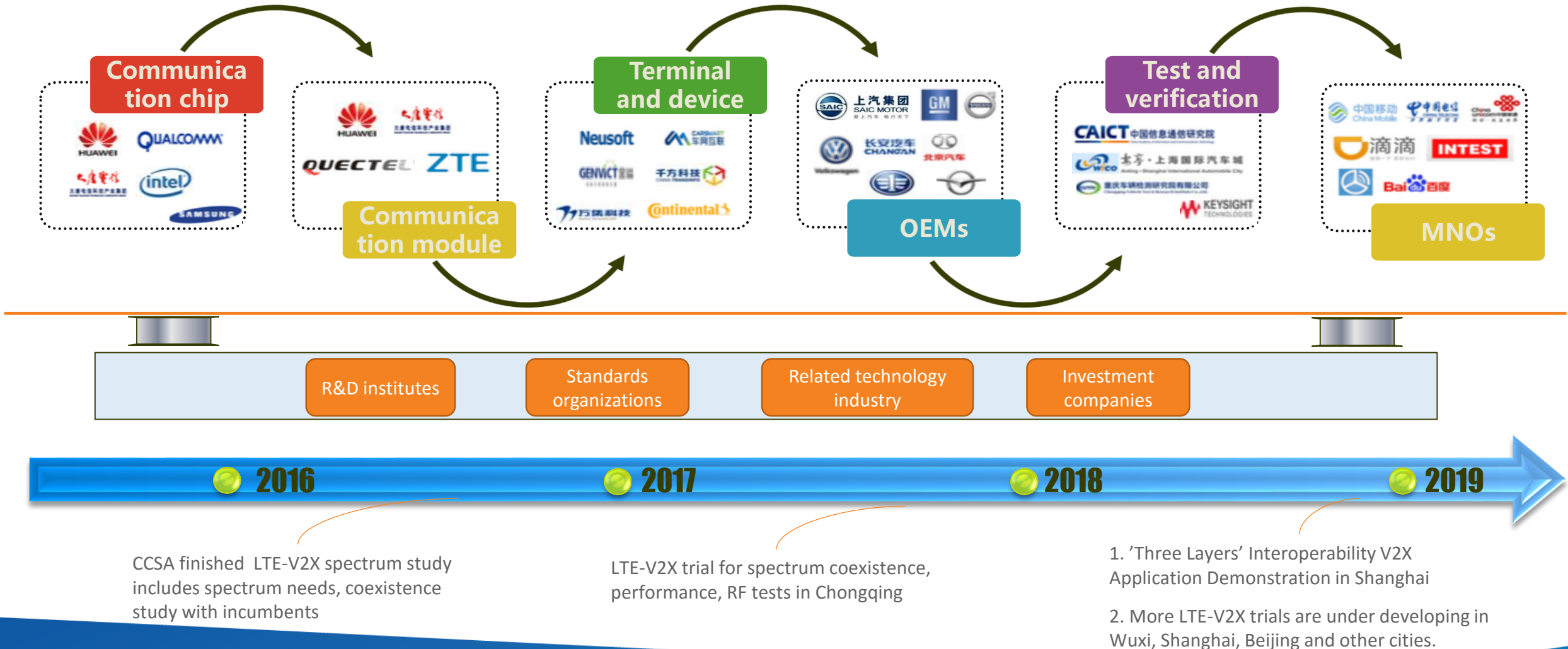
# On-going deployment activities across China region

➤ The current C-V2X applications in China



# On-going deployment activities across China region

## ➤ C-V2X industry activities across China



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## Global EU-China cooperation in connectivity

- The on-going cooperation between EU and China
  - IoV Standards and Regulations
    - CATARC and German automotive industry association (VDA) co-signed IoV MOU
    - IoV sub-committee of NTCAS and German Automotive Standards Committee co-signed IoV MOU
    - CATARC and French Automobile Standards Bureau co-signed MOU
  - Good cooperation in international standardization organization , like 5GAA/3GPP.



## Global EU-China cooperation in connectivity

- Potential cooperation in the future
  - **Standards and Regulations:** Strengthen exchanges between enterprises or organizations between EU and China, and jointly promote the research and formulation of IoV standards and regulations
  - **Scaled test** : EU and China regularly exchange test zones planning and related technical progress, and build a coordinated cross-regional IoV test environment
- Cooperation on industry eco-system and business model
  - Co-explore a more scientific and rational business model

# Thanks