5G Automotive Association, **pioneering digital transformation** in the **automotive industry**

Maxime Flament, CTO 5GAA

Learn more at
WWW.5GAA.ORG

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5GAA brings together automotive, technology and telecommunications companies to work closely together to develop end-to-end solutions for future mobility and transportation services

AUTOMOTIVE INDUSTRY

Vehicle Platform, Hardware and Software Solutions

TELECOMMUNICATIONS

Connectivity and Networking Systems, Devices and Technologies

End to end solutions for intelligent transportation, mobility systems and smart cities

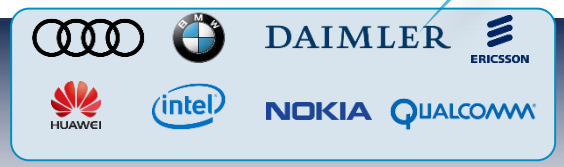
5GAA: A Global Cross Industry Association

September 2016

- “Audi, BMW Group, Daimler AG are teaming with Ericsson, Huawei, Intel, Nokia, and Qualcomm to create the 5G Automotive Association (5GAA), which will help develop, test, and promote 5G standards”
- “Scope of the alliance is focused on bringing connectivity solutions to market addressing technical, business, and regulatory challenges”

Q2 2018

- 5GAA unites 80+ members working together to:
  - Deliver innovation for road safety, connectivity and sustainability
  - Accelerate cooperative, connected, automated mobility
  - Develop 360º solutions for SMART mobility services
  - Pave the way towards 5G mobility



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ANALOG DEVICES
ALPINE
Anritsu
envision:ensure
AT&T
Audi
BAIC GROUP
Bell
BMW GROUP
BlackBerry
BOSCH
大唐电信科技产业集团
CETECOM
千方科技
CHINA TRANSINFO
China unicom中国联通
中国移动
China Mobile
Continental
The Future in Motion
Cohda Wireless
commsignia
DAIMLER
DANLAW
AUTOMOTIVE MADE SMART
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FEV
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Fraunhofer
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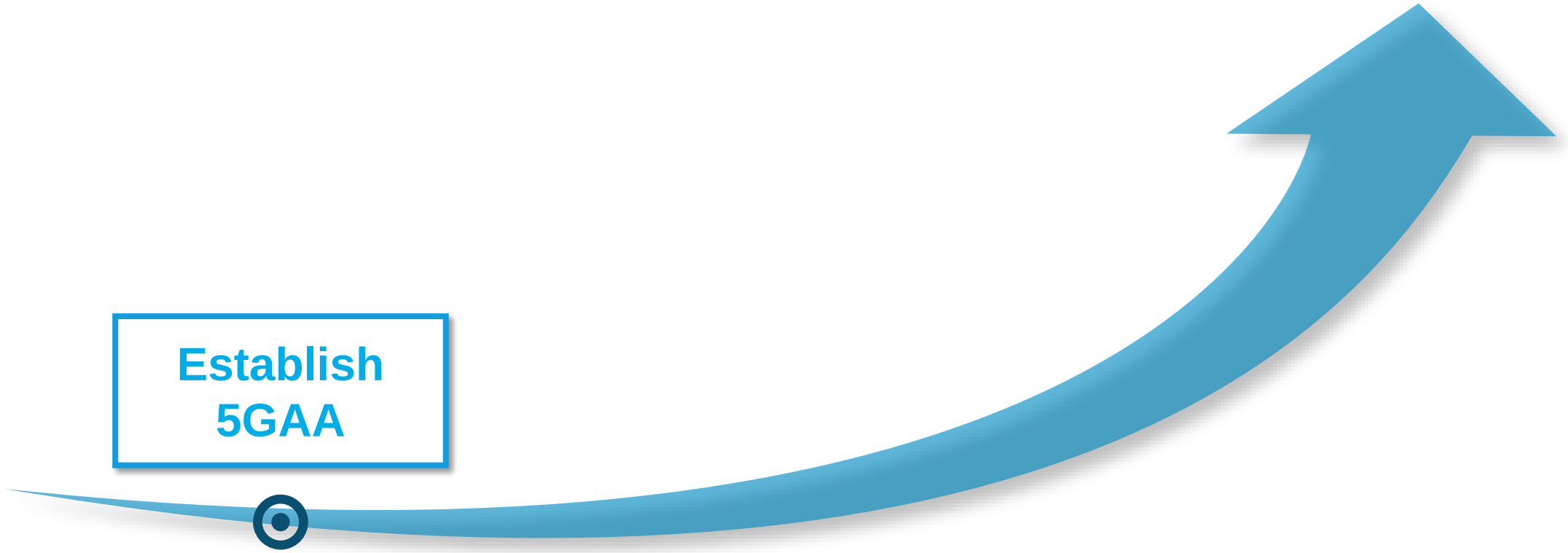
Looking 18 months back…



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Set up 5GAA - Our Organizational Structure

BOARD

EXECUTIVE COMMITTEE

GENERAL ASSEMBLY

WG1	WG2	WG3	WG4	WG5
Use Cases and Technical Requirements	System Architecture and Solution Development	Evaluation, Testbeds and Pilots	Standards and Spectrum	Business Models and Go-To-Market Strategies

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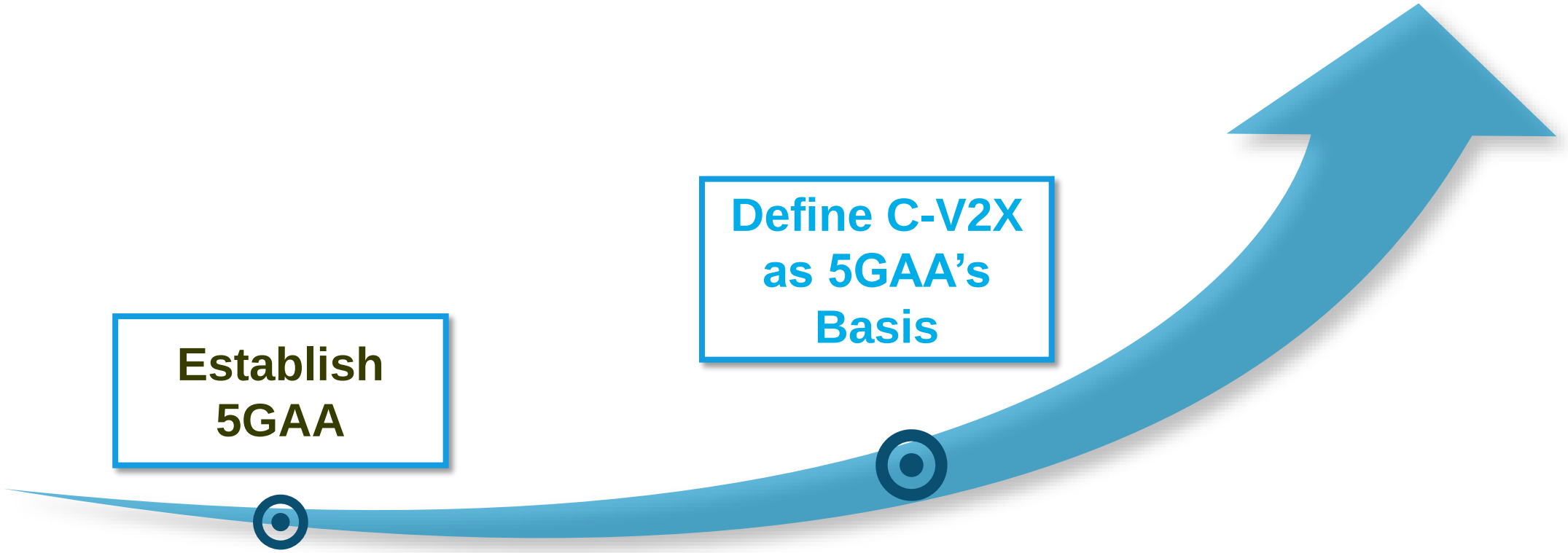
Liaisons with regulators and organizations

- MoU with European Automotive Telecom Alliance (EATA) – **Feb 2017**
- MoU with Next Generation Mobile Networks (NGMN) – **Feb 2017**
- MoU with Alliance Global TD-LTE Initiative (GTI) – **Feb 2017**
- Market Representation Partner (MRP) in 3GPP – **April 2017**
- Round Table with Chinese Government during Mobile World Congress Shanghai – **June 2017**
- MoU with China IMT 2020 – **November 2017**
- Round Table with European Road Operators Munich – **Februay 2018**
- Round Table with Telematics Industry Application Alliance (TIAA) – **March 2018**

Looking 18 months back…



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What is V2X (Vehicle to Everything)?

Comprehensive vehicle and traffic safety

Enabling autonomous driving

Allows vehicles to communicate with each other (**V2V**) and the wider transport ecosystem (**V2N**, **V2P**, **V2I**)

Why Cellular-V2X (C-V2X)?

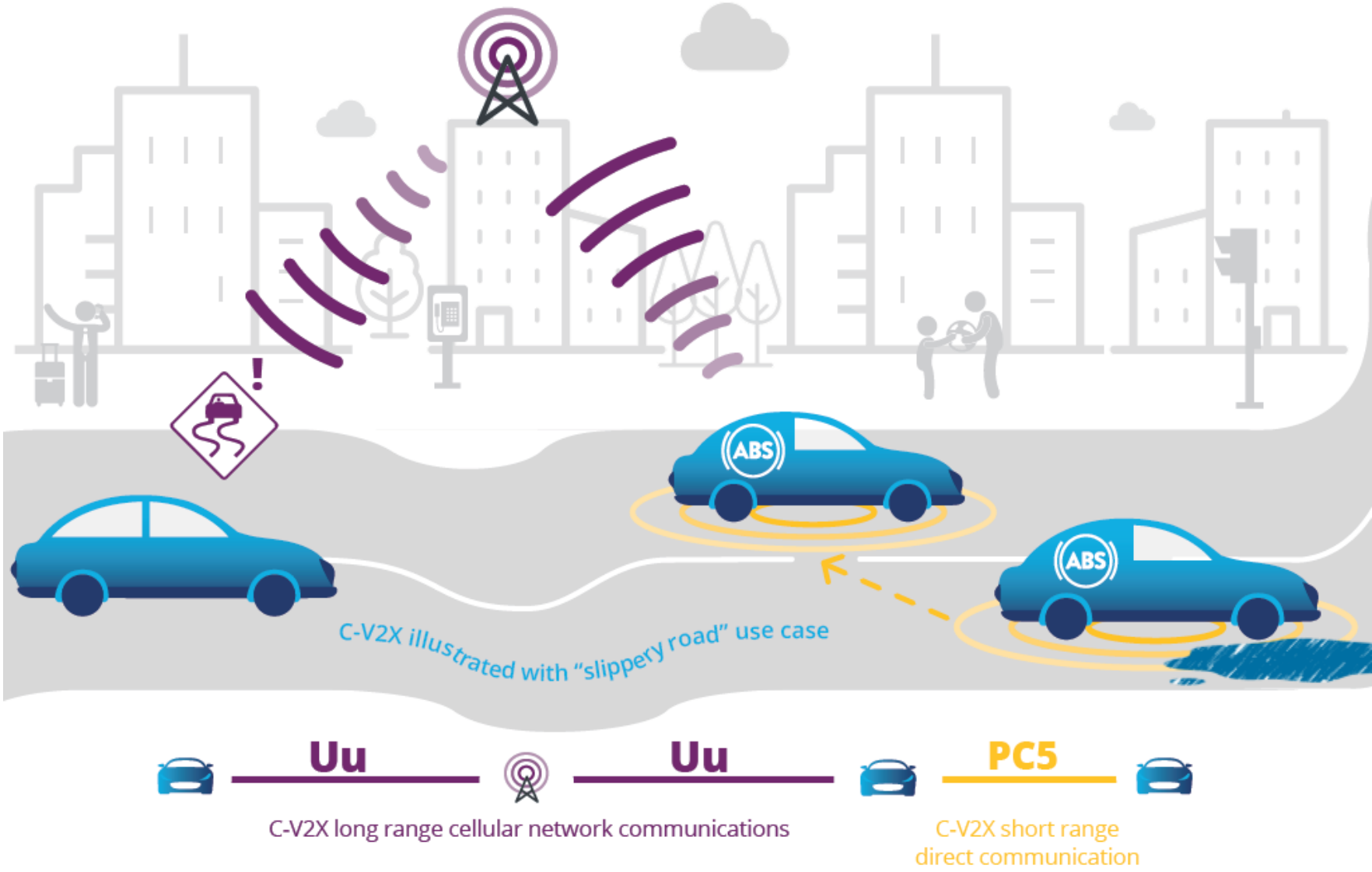
C-V2X is a unified technology platform including both:

- Short range direct communications (LTE-V2X PC5)

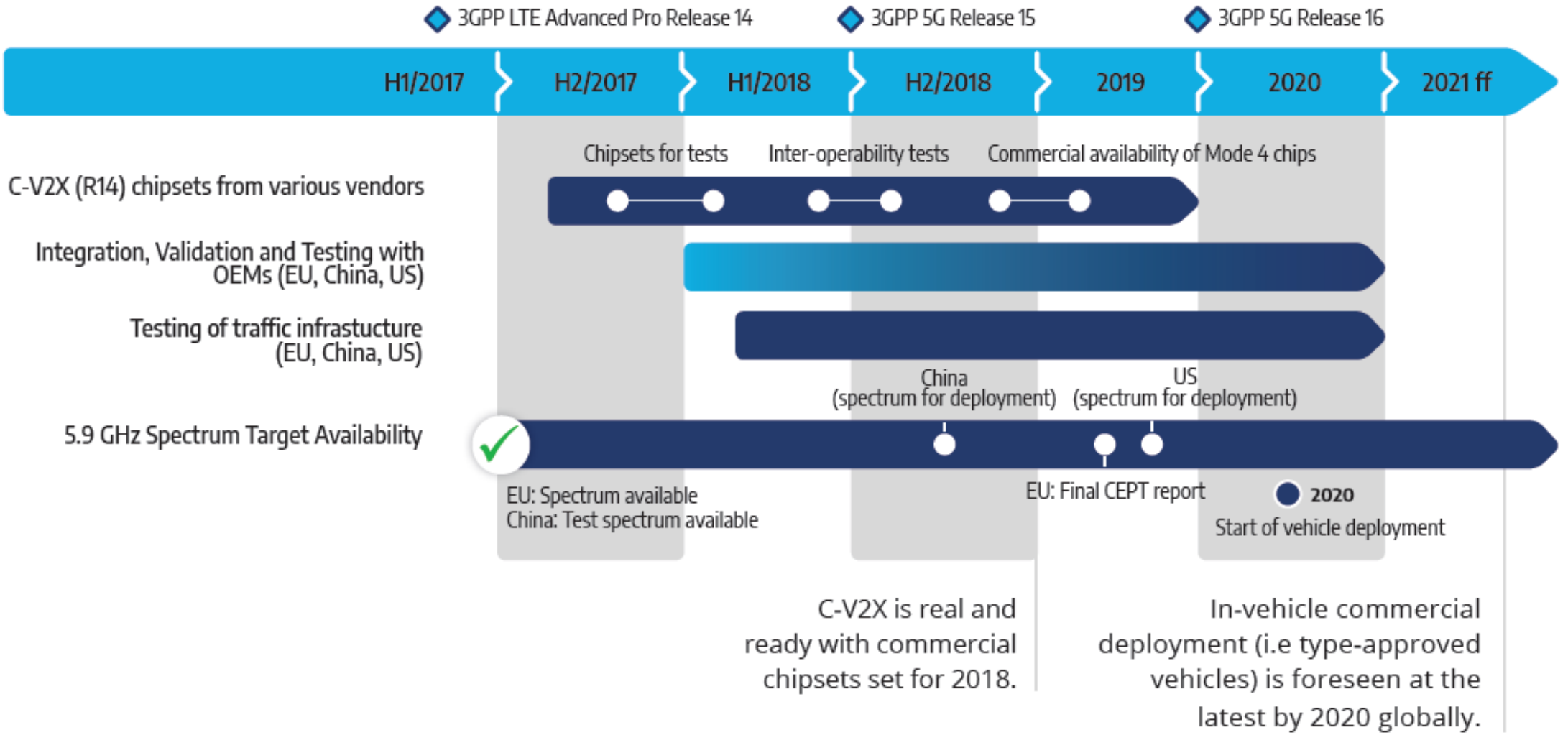
Low-latency, direct safety, communication to work without network coverage

Can operate without a SIM or network assistance

- Long range cellular network communications (LTE-V2X Uu)



Timeline for deployment of C-V2X (V2V/V2I)



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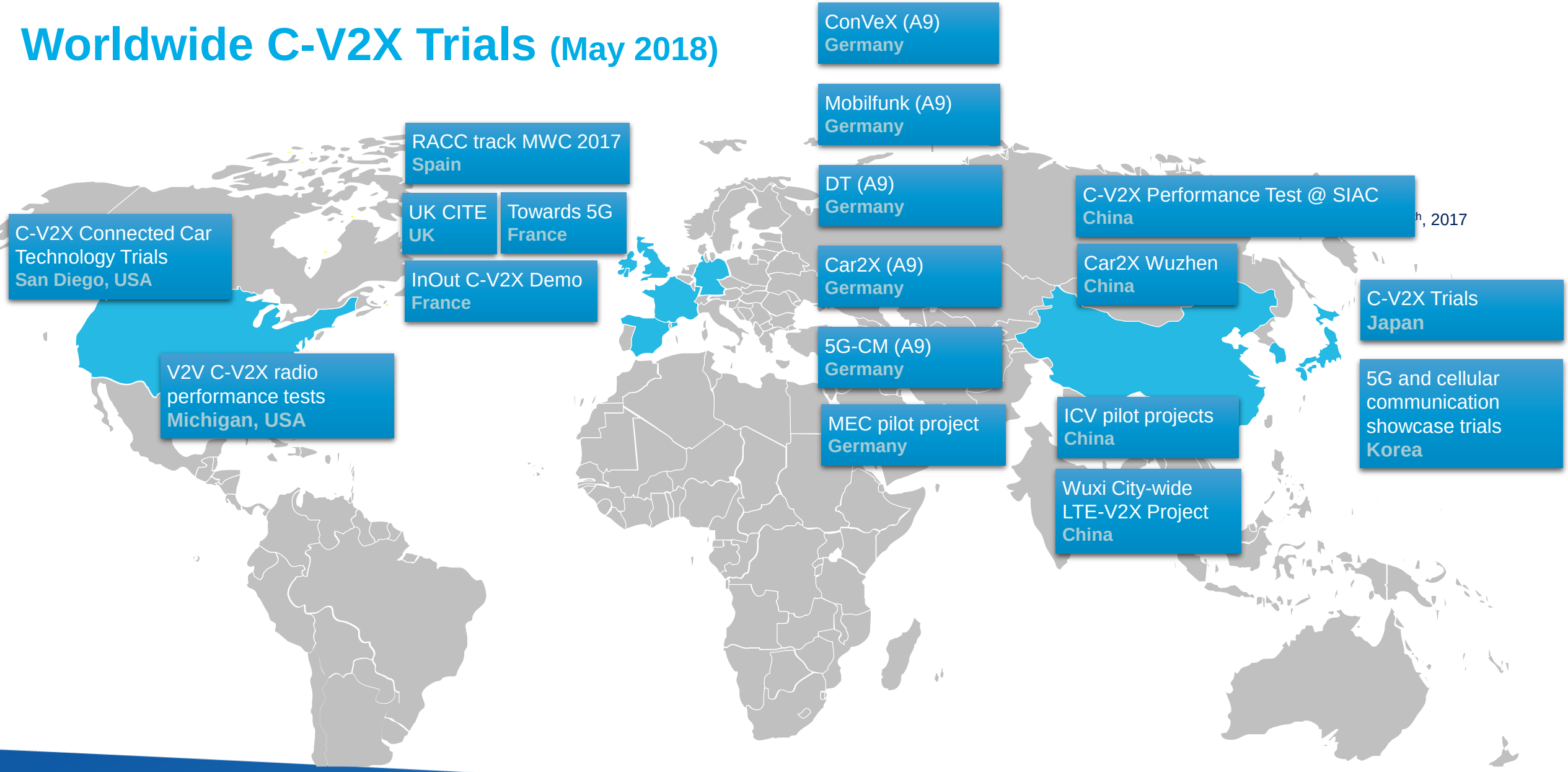
Worldwide C-V2X Trials (May 2018)



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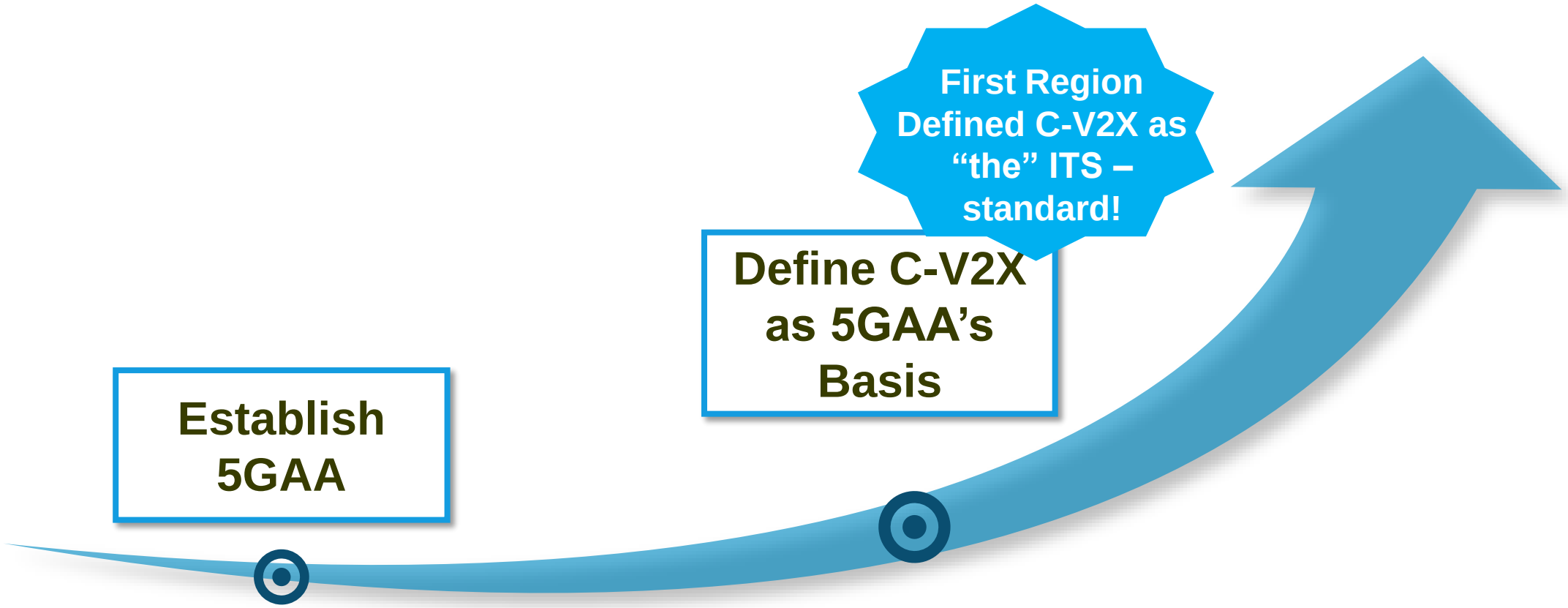
Looking 18 Months Back…



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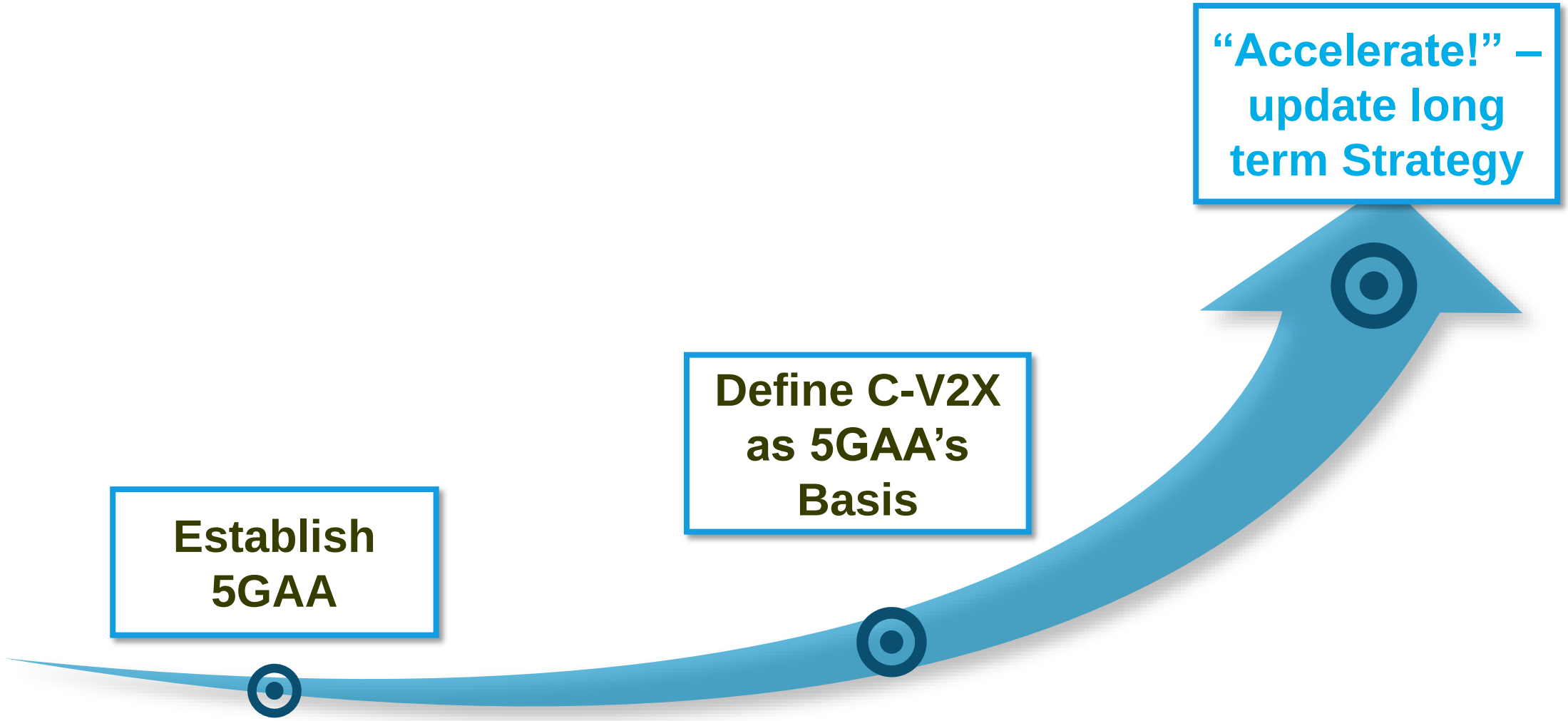
And now? – Accelerate!



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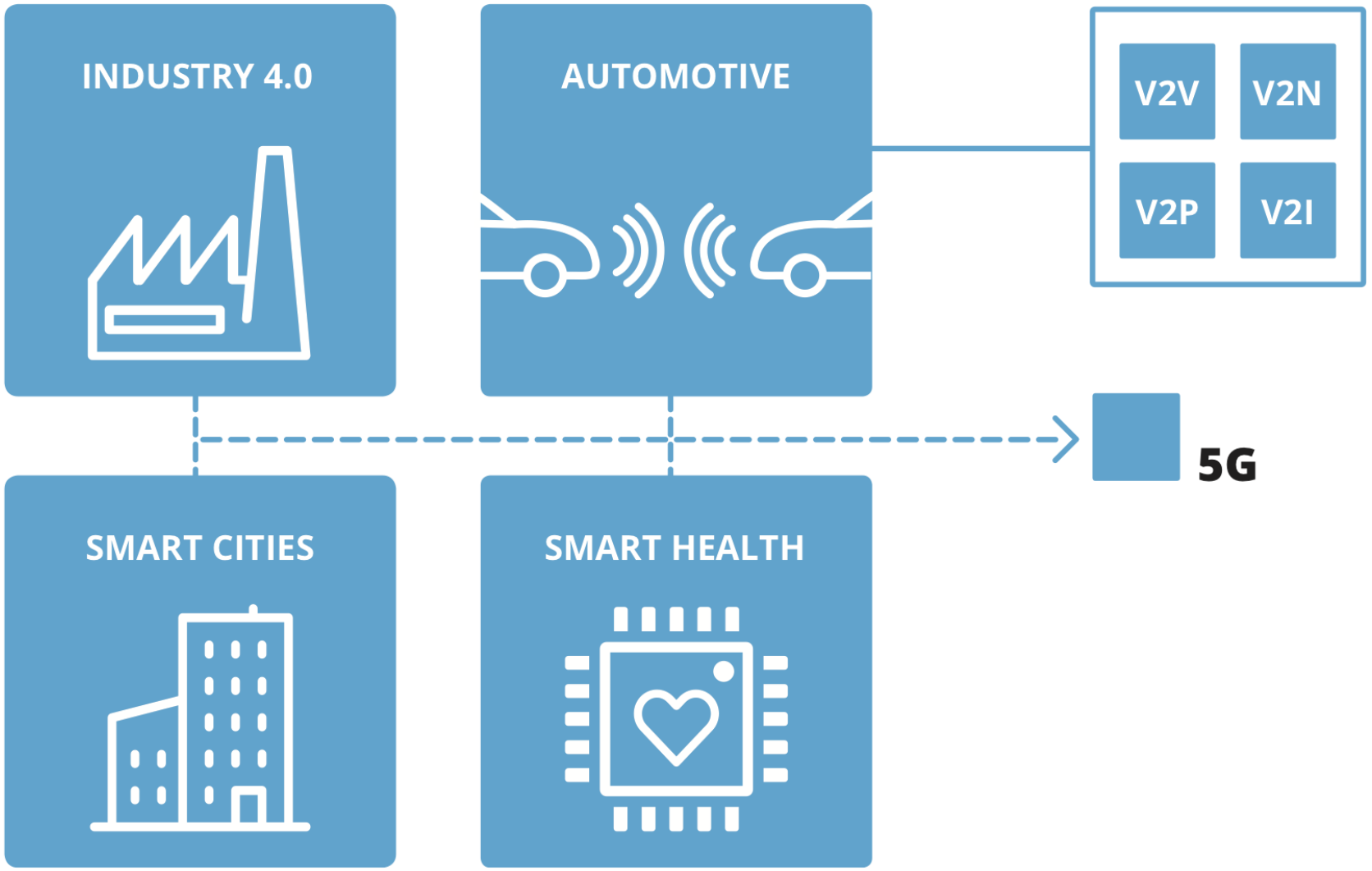
5G for Major Industry Verticals

C-V2X and its evolution to 5G V2X will foster synergies between the automotive industry and other verticals which are moving to 5G



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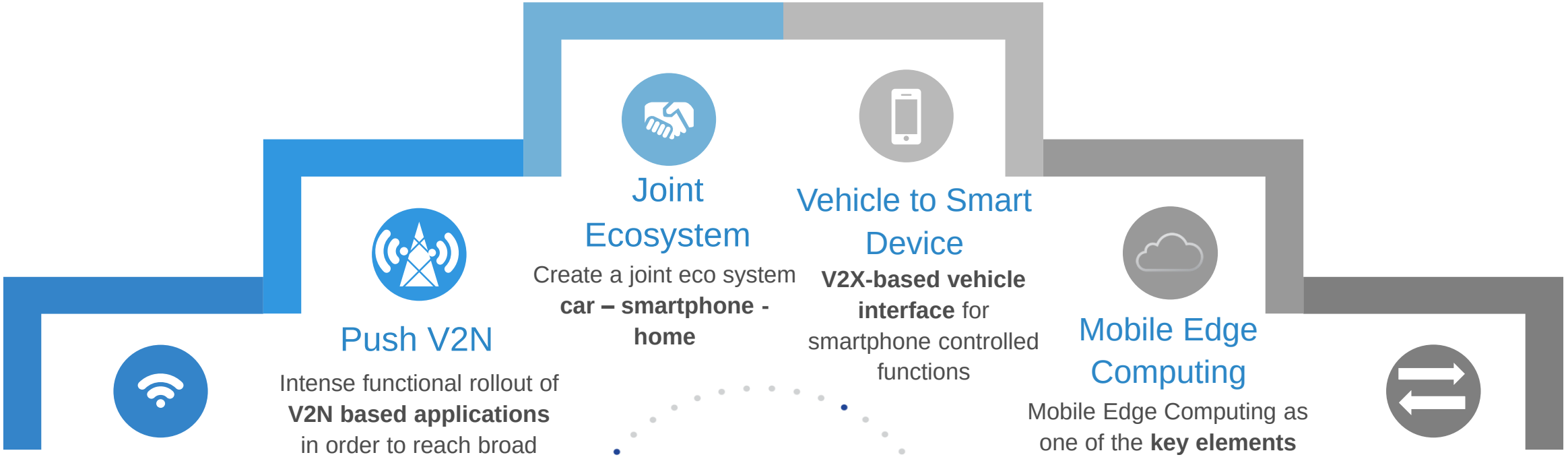
Our updated Strategy



New Radio

"Define the next step" - accelerate definition of **5G-V2X** based on 5G New Radio

Push V2N

Intense functional rollout of **V2N based applications** in order to reach broad penetration fast

Joint Ecosystem

Create a joint eco system **car – smartphone - home**

Vehicle to Smart Device

V2X-based vehicle interface for smartphone controlled functions

Mobile Edge Computing

Mobile Edge Computing as one of the **key elements of the connected future**

Interoperability

Make sure that **cross-OEM** cars and **cross-operator** networks **can "speak" with each other**

5GAA Automotive Association

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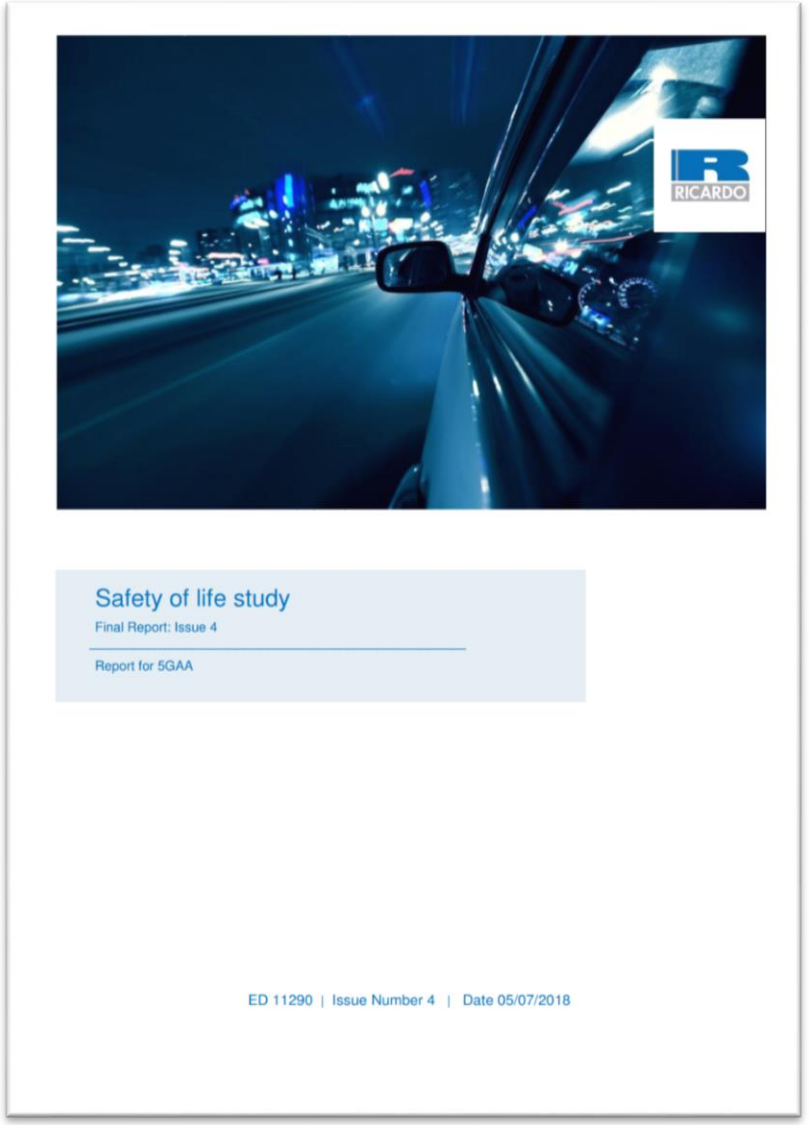
NEW: Safety of Life Study

- Aim: explore the impact of different technical solutions for Cooperative Intelligent Transport Systems (C-ITS) communication solutions on EU road safety over time.
- Compare impact of LTE-PC5, LTE-Uu, and 802.11p
- Two major potentially live saving services:
  - Red signal violation/intersection safety,
  - Vulnerable Road User (VRU) protection.
- Highest impact are on LTE-Uu with 114,066 avoided fatalities and serious injuries by 2040
- Combined deployment of PC5 and Uu is very likely
- 802.11p shows lower impact as VRU protection is most likely not supported through smartphones



http://5gaa.org/wp-content/uploads/2018/07/Safety-of-life-study_Final_Issue-4.pdf

5GAA Automotive Association

For more information please contact:

secretariat@5gaa.org

or visit:

www.5GAA.org