

ENTERPRISE IOT BEST PRACTICES: HOW BMW CONNECTS ITS CARS TO THE AWS CLOUD.

Dr. Alexander Lenk, 06.12.2017

BMW GROUP – OVERVIEW 2016.

126.013

employees worldwide



2.367.603

sold vehicles worldwide
in 2016

ENSURING OUR POSITION AS TECHNOLOGY LEADER.

Technology and innovation leader

Future focus: Powertrain technologies



**Efficient
Dynamics
NEXT**



Hydrogen



Connectivity

Future focus: Digitalisation



**Artificial
Intelligence**



**Autonomous
driving**



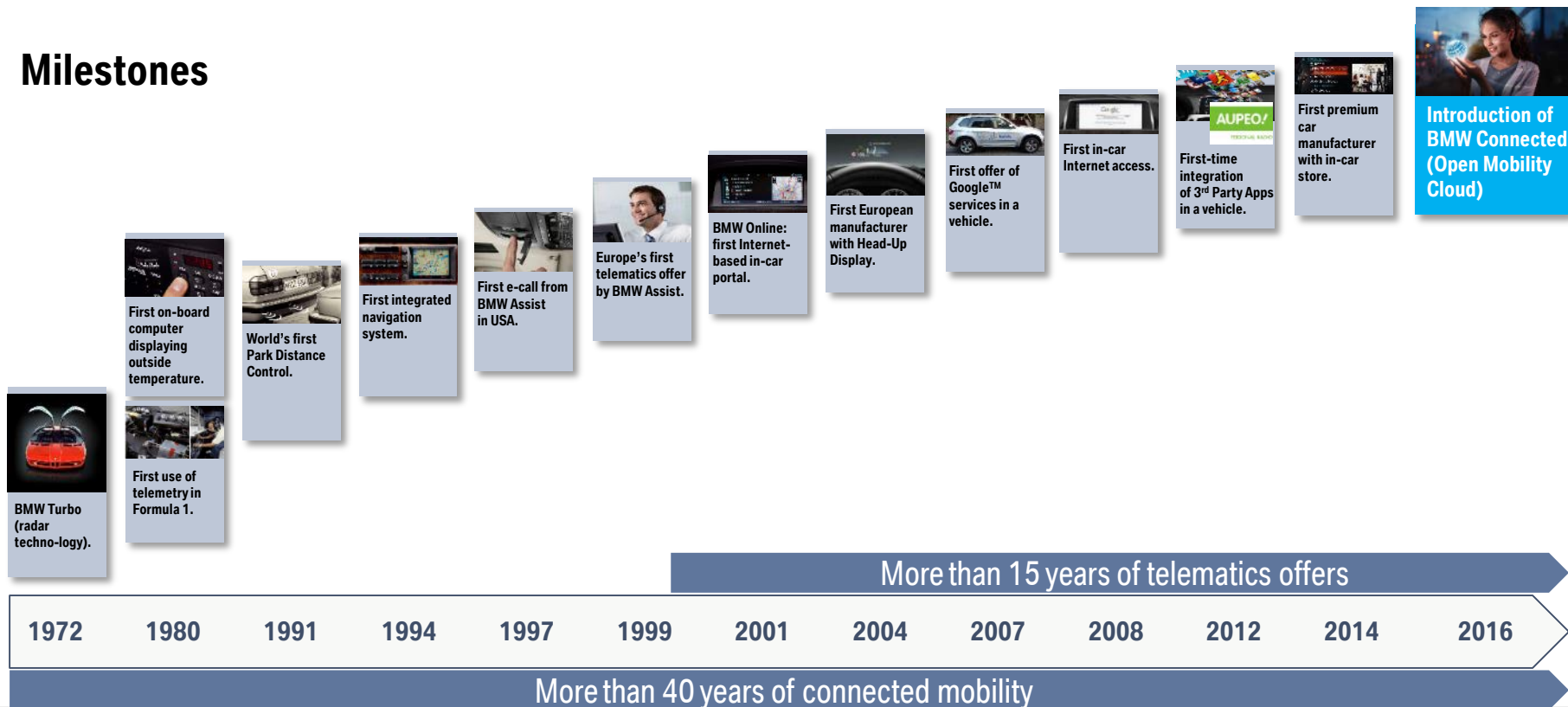
THE IMPLEMENTATION OF THE STRATEGY NUMBER ONE > NEXT LEADS TO A TRANSFORMATION PROCESS TOWARDS A TECH COMPANY.



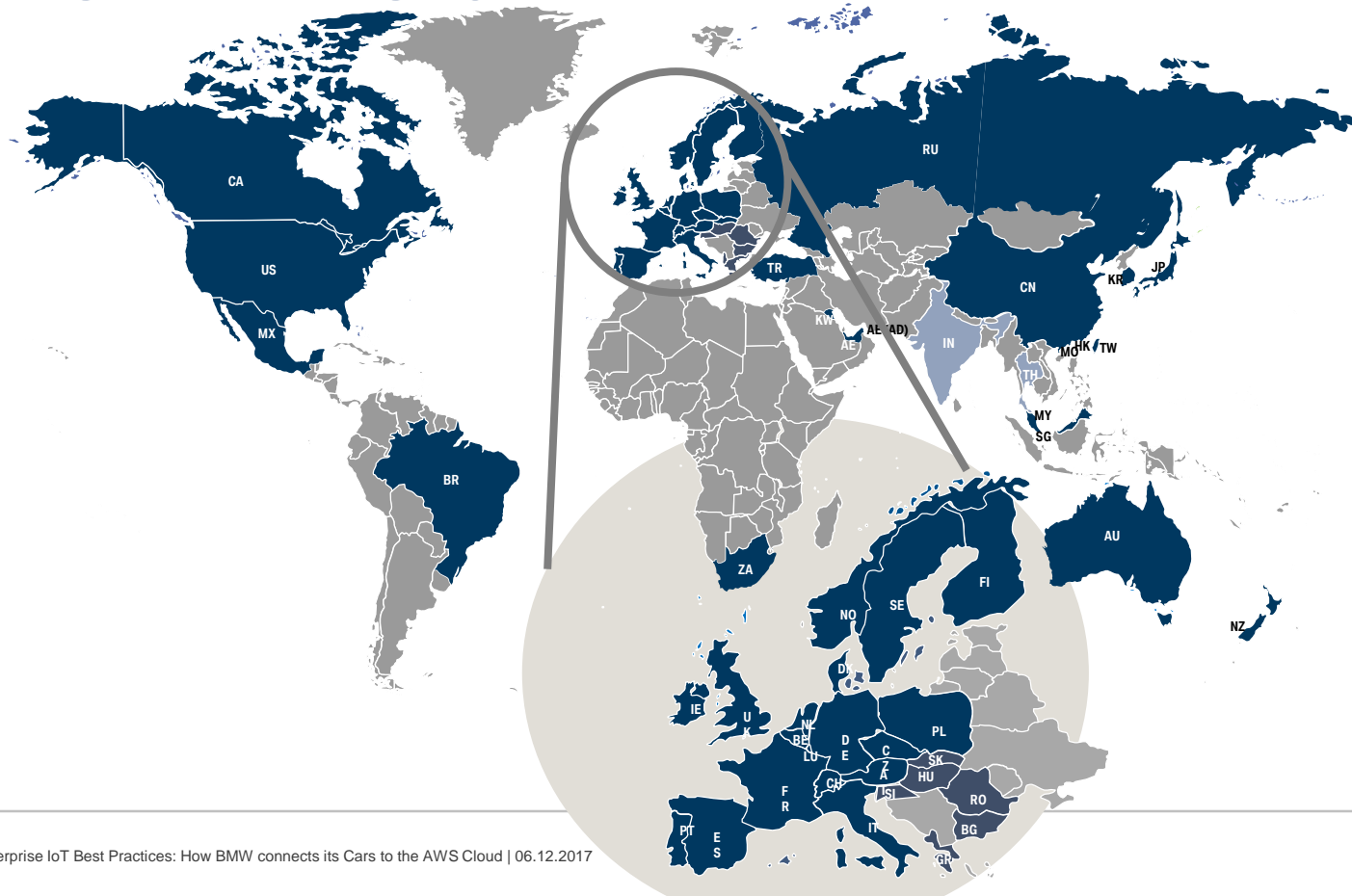
Digital customer experience, connected and automated driving and digitalized business processes lead to a transformation of the BMW Group towards software and services (Tech).

BMW CONNECTED DRIVE HISTORY. MORE THAN 40 YEARS OF EXPERIENCE.

Milestones



BMW CONNECTED DRIVE. 44 ESTABLISHED MARKETS WORLDWIDE.



BMW CONNECTED DRIVE. CONSISTING OF “SOFTWARE” AND “HARDWARE”.

BMW ConnectedDrive

BMW CONNECTED DRIVE DIGITAL SERVICES

“SOFTWARE”



Update and upgrade capable “software”

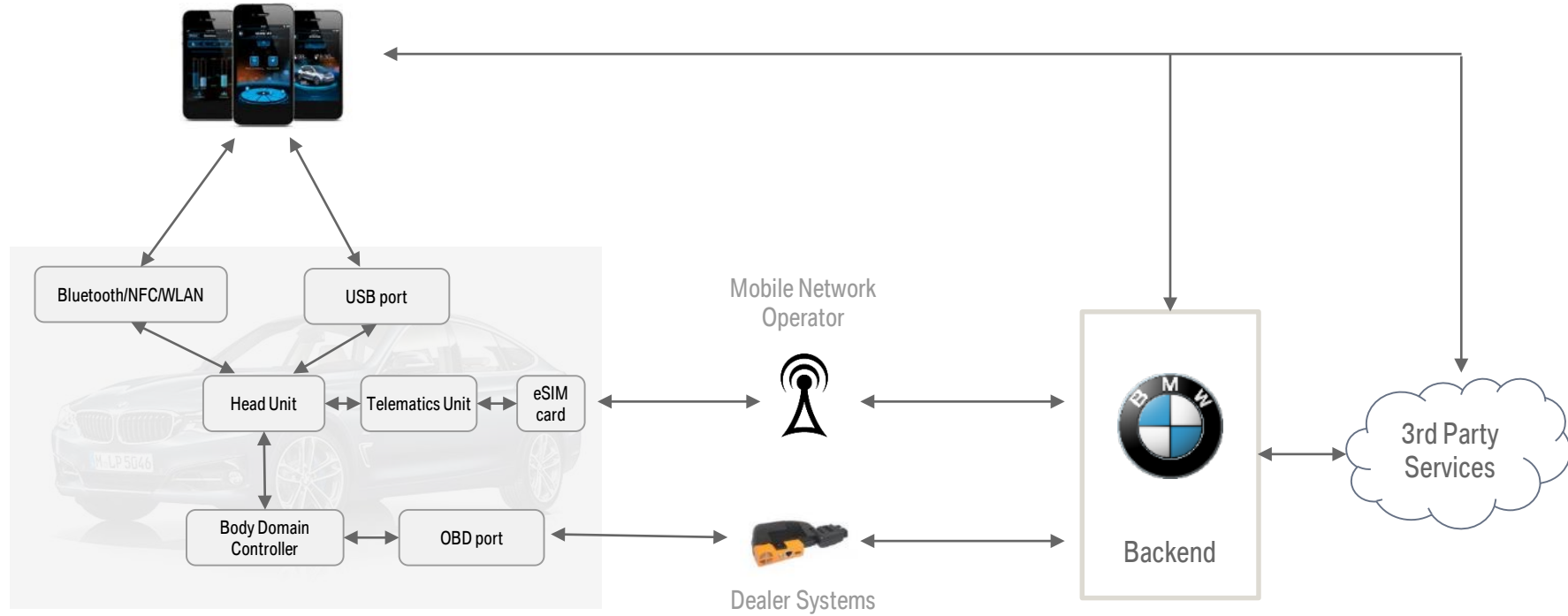
BMW CONNECTED DRIVE DRIVER ASSISTANCE

“HARDWARE”



Prefitted “hardware” and sensor technology

OVERVIEW OF THE ARCHITECTURE.



SELECTED USE CASES.



Electric Cars



Service Calls



Real-Time Traffic



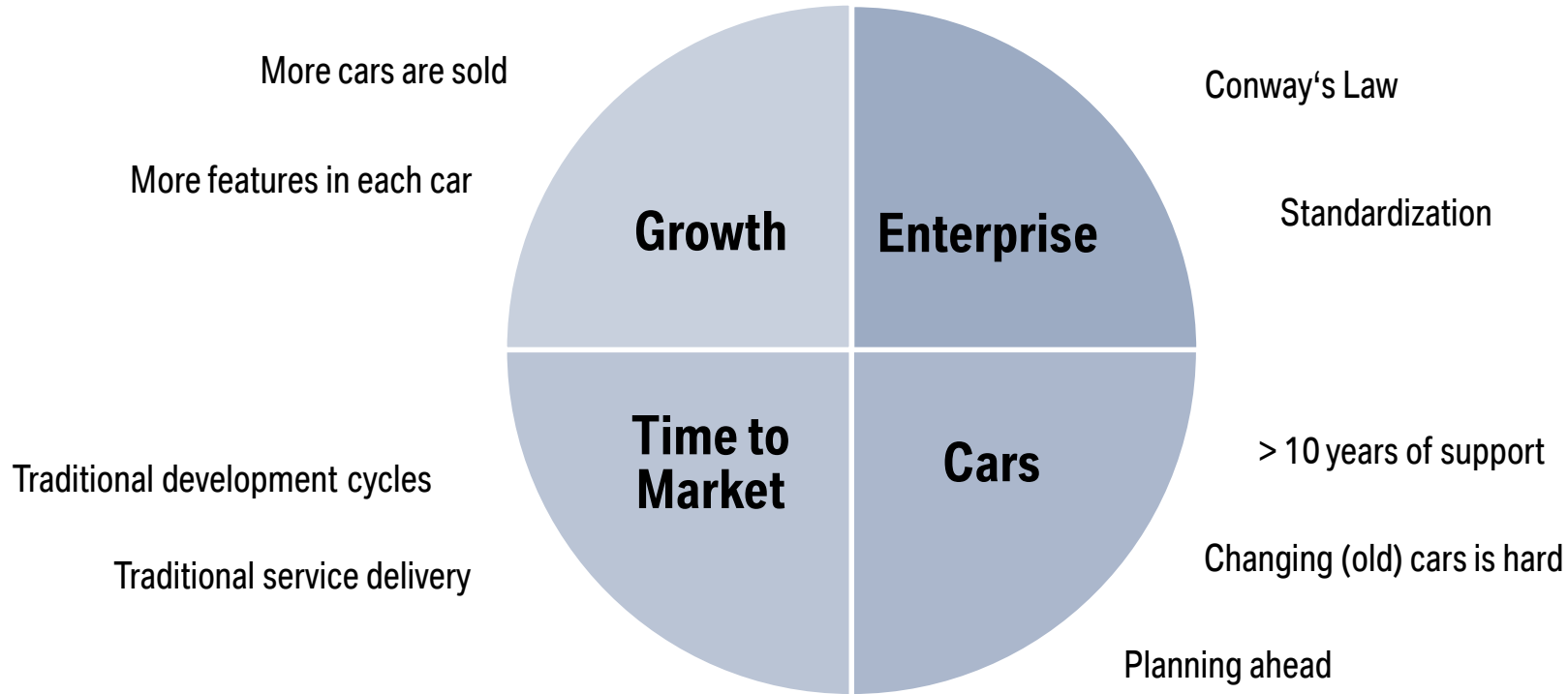
Driving Assistance



Autonomous Driving



CHALLENGES AND SOLUTIONS FOR CONNECTED CARS.



FACTS AND NUMBERS.

15

Years

8 Mio.

ConnectedDrive Cars

4 Mio.

Lines of Code (Backend)

30 %

Yearly Growth

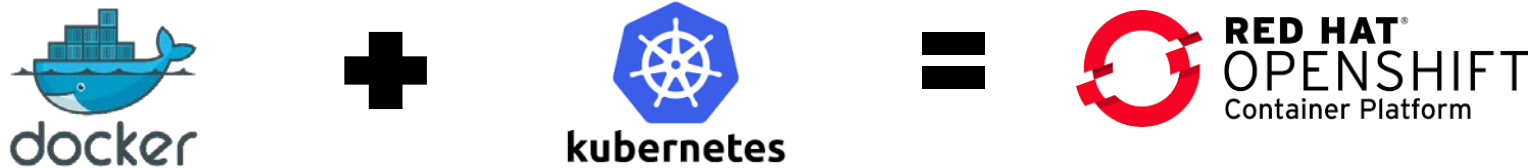
300

Microservices (Planned)

CLOUD NATIVE. CLOUD BASED SERVICE DELIVERY.

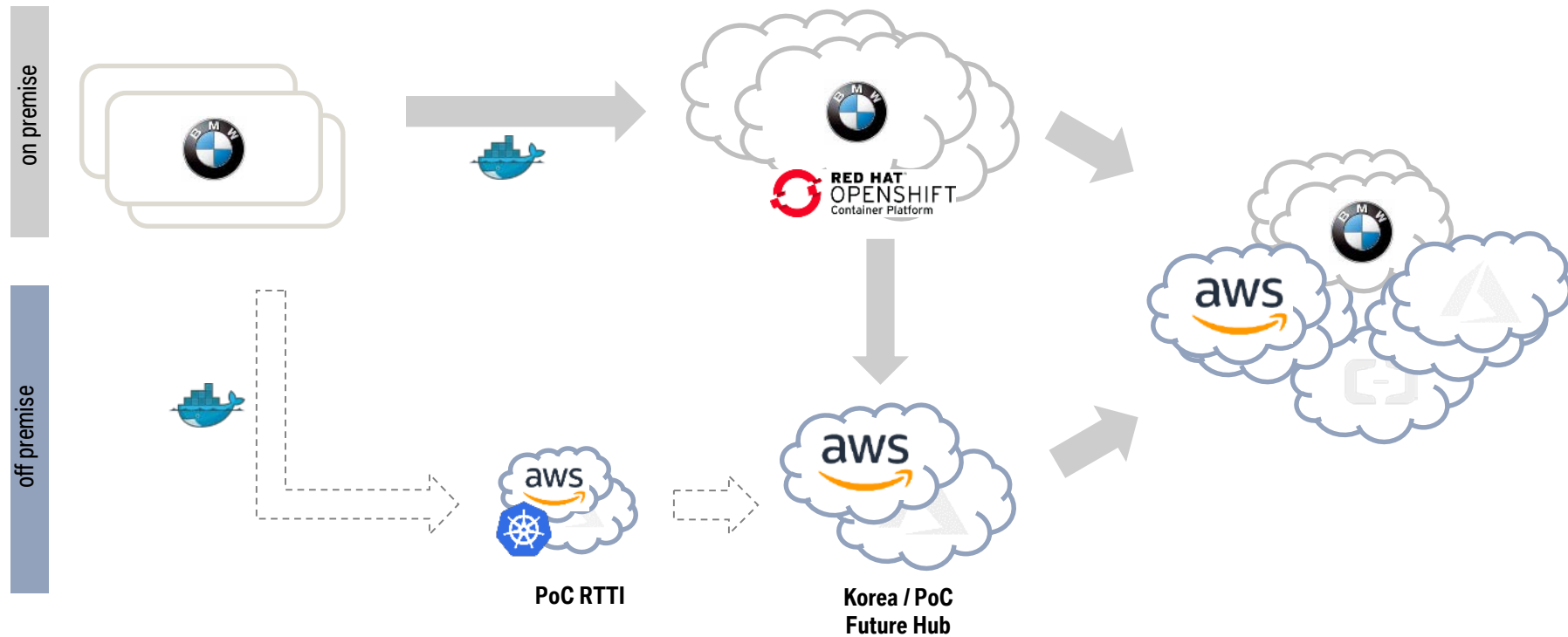


Technology Stack



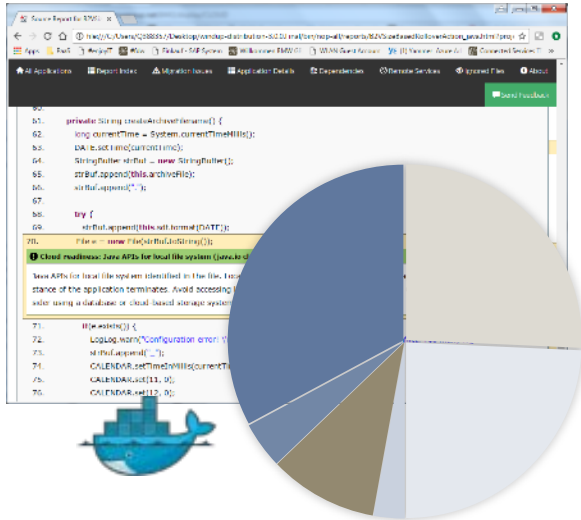
Cloud Native Platform

FUTURE BMW CONNECTED DRIVE BACKENDS.

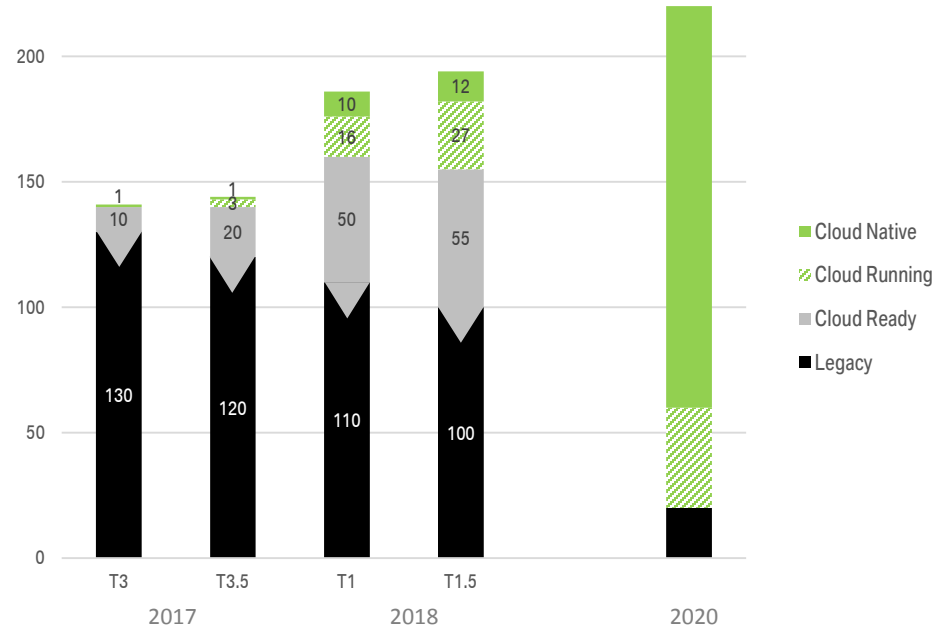


LEGACY APPLICATION MIGRATION.

Cloud Nativeness Analysis



Timeline



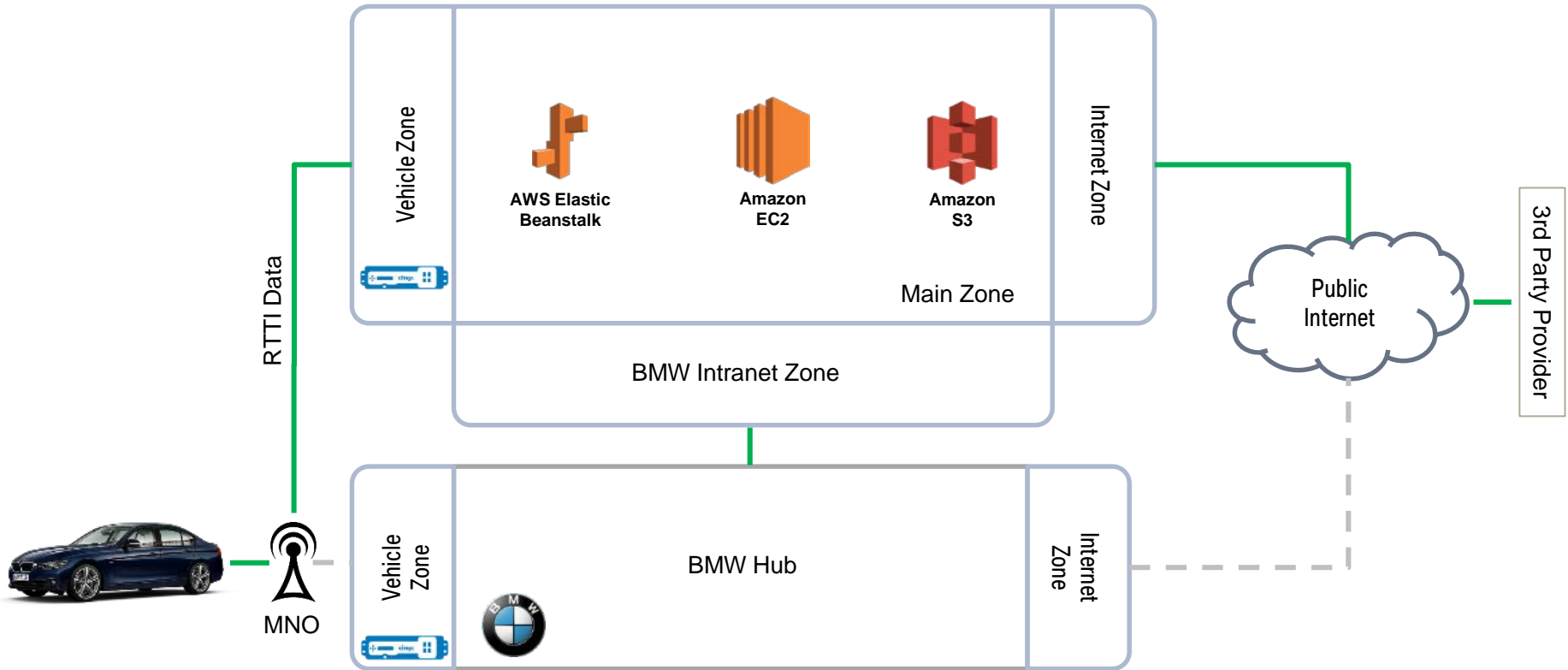
USE CASE FOR THE POC: RTTI



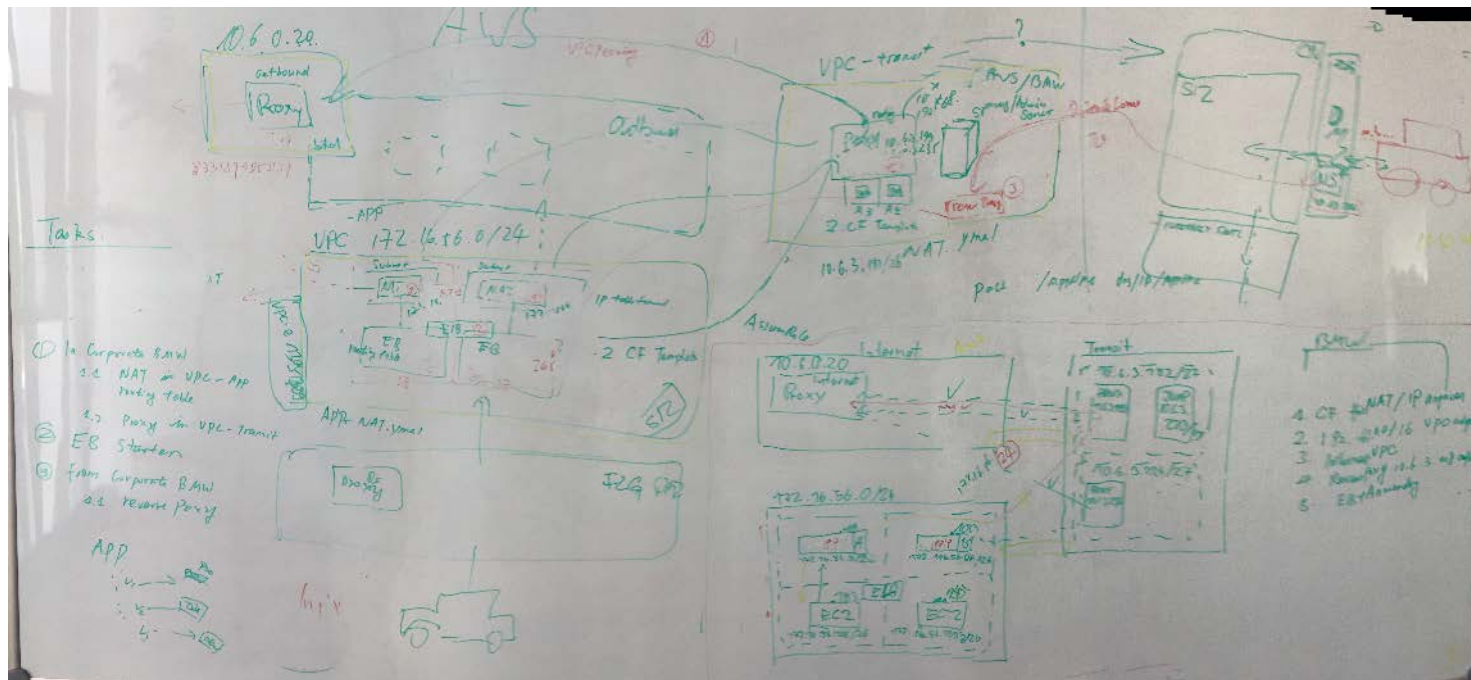
CONNECTING A CAR TO THE CLOUD SOUNDS EASY.



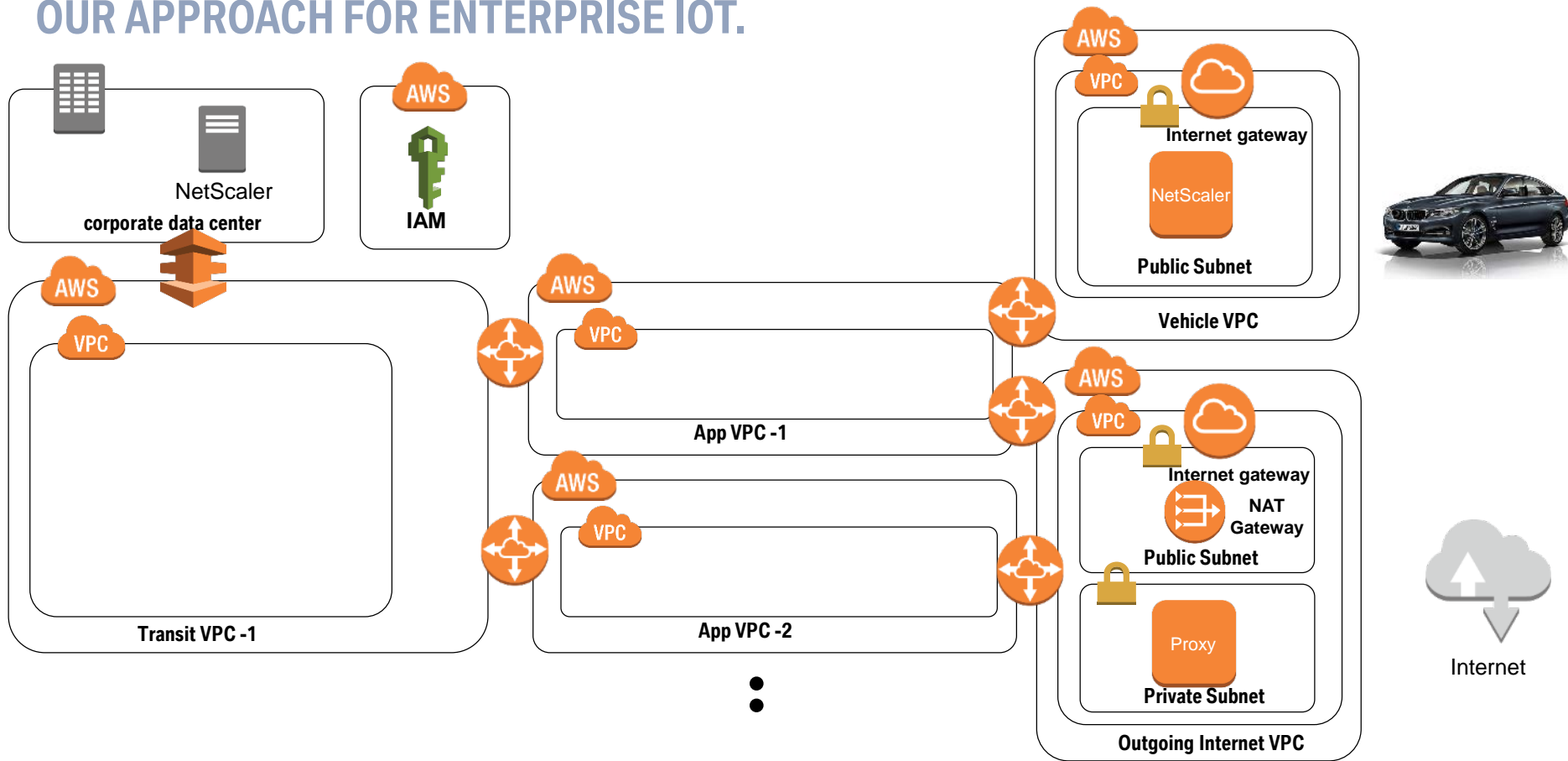
IT LOOKS ALSO EASY ON POWERPOINT.



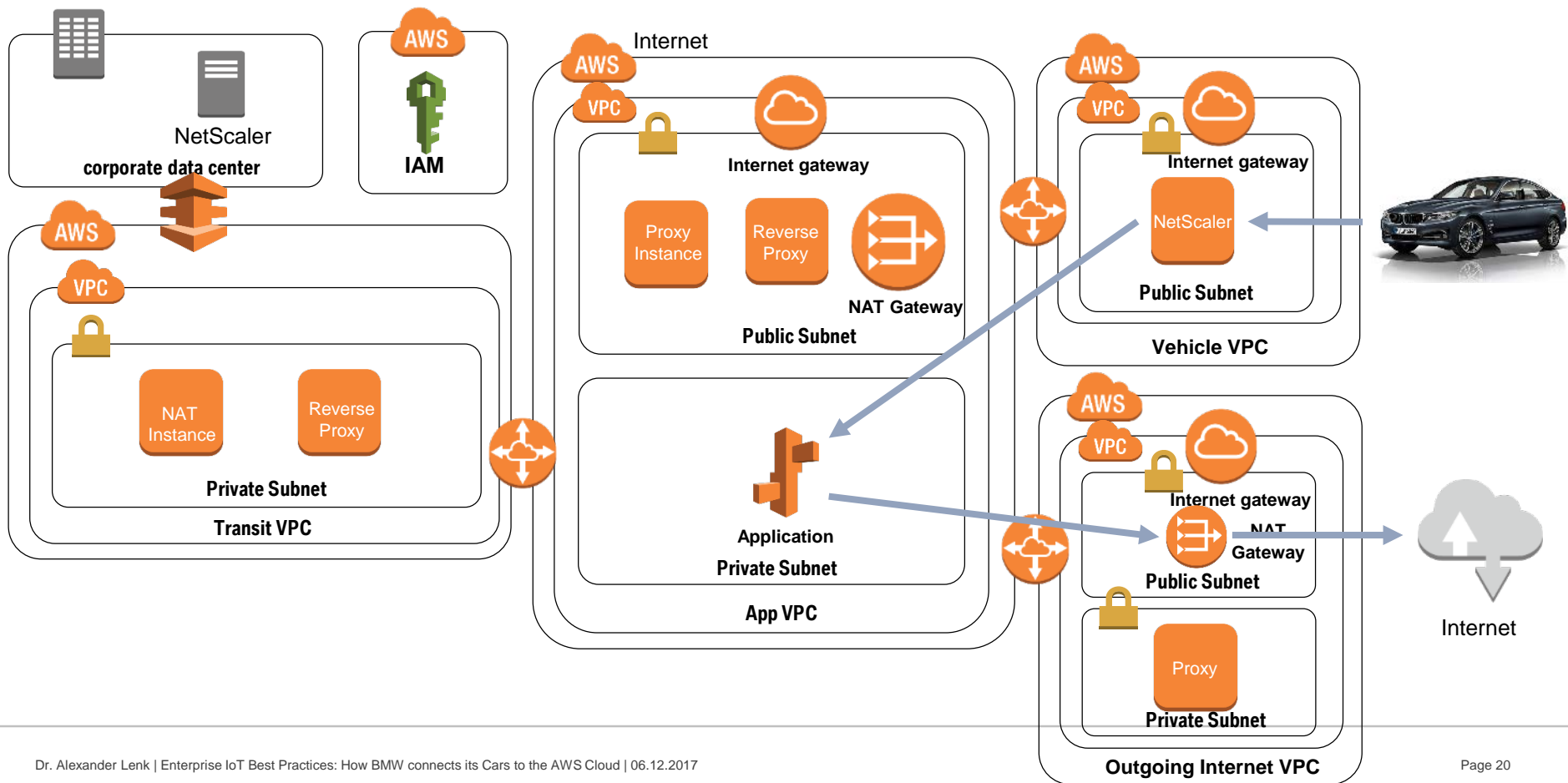
BUT THIS HAPPENS IF POWERPOINT MEETS REALITY.



OUR APPROACH FOR ENTERPRISE IOT.

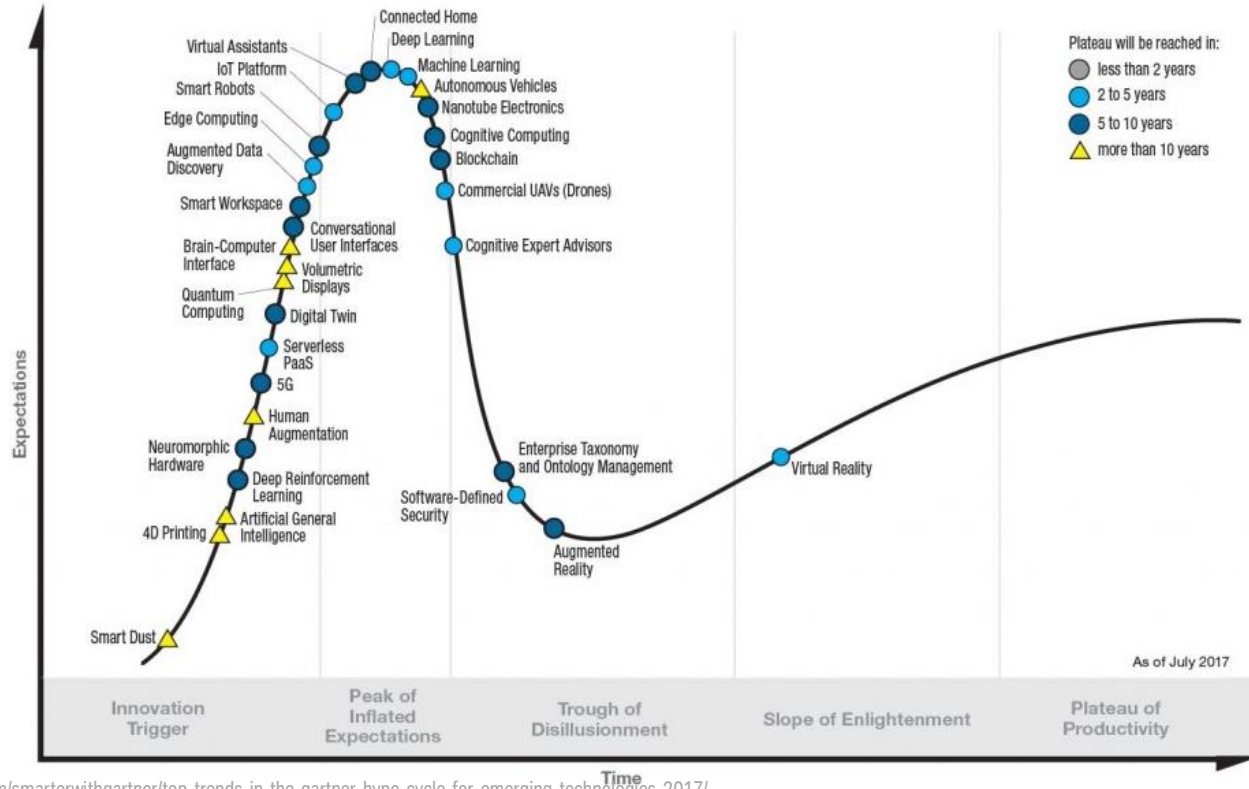


OUR APPROACH FOR ENTERPRISE IOT.



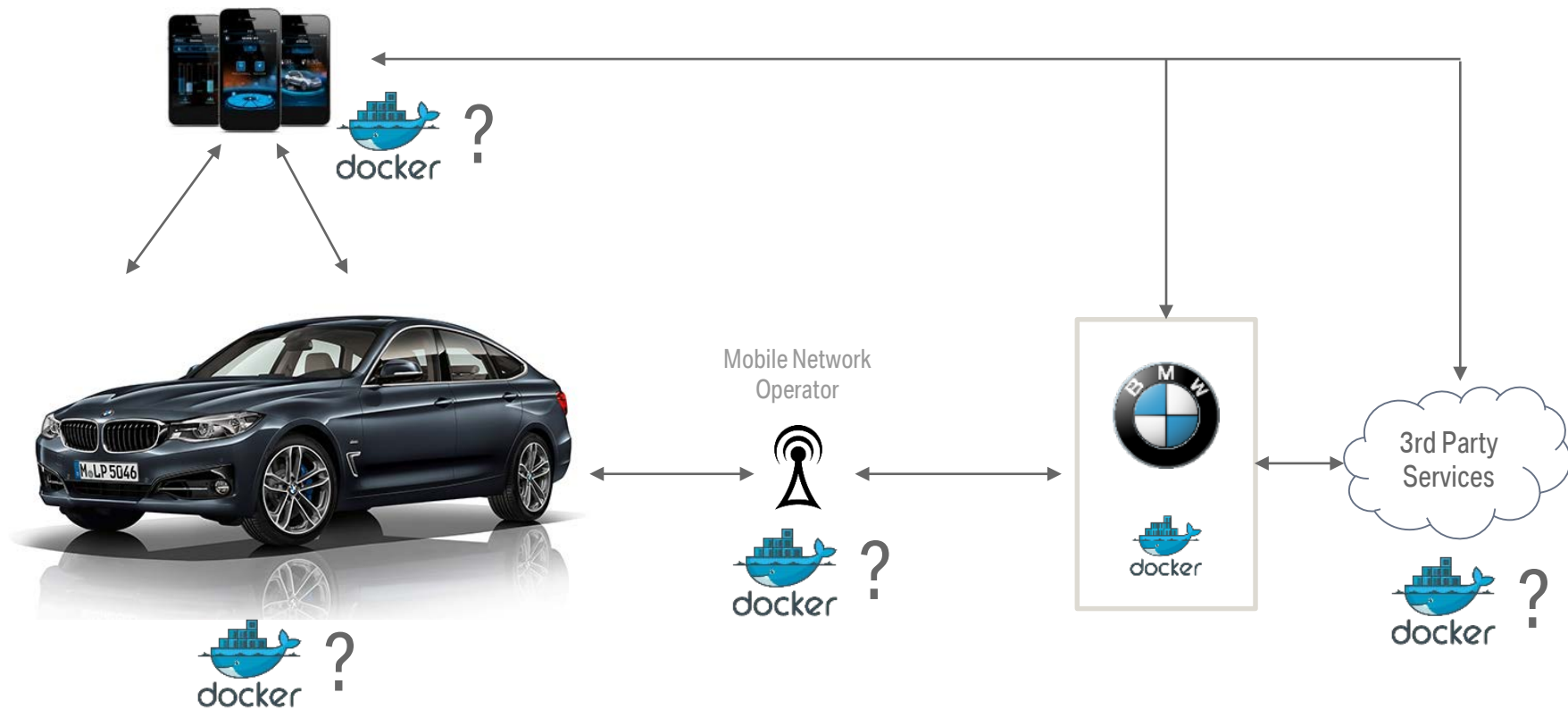
HOT TOPICS.

GARTNER HYPE CYCLE FOR EMERGING TECHNOLOGIES, 2017

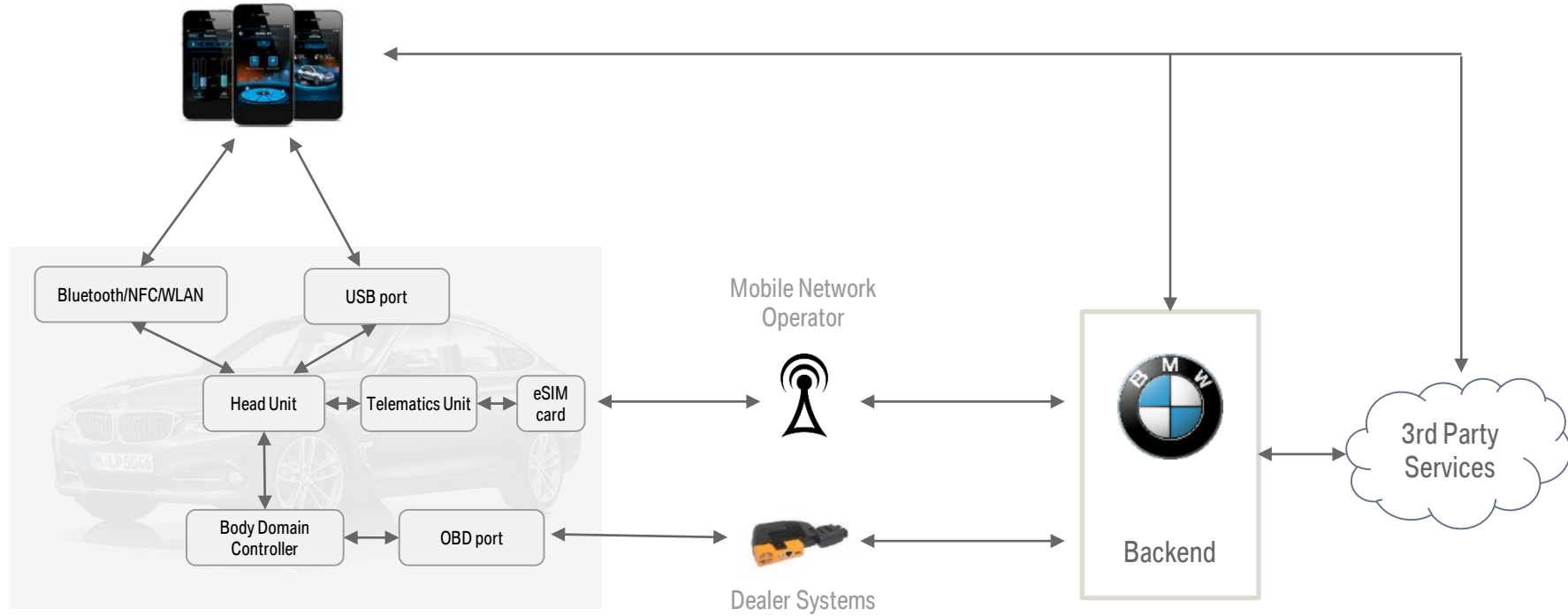


Source: <http://www.gartner.com/smarterwithgartner/top-trends-in-the-gartner-hype-cycle-for-emerging-technologies-2017/>

HOT TOPICS. EDGE COMPUTING.



HOT TOPICS. IOT PLATFORM.



Let's work on the future together!

