

Smart Car Services Commercialization Strategy and Achievement

Kwag, Su-Jin

KATECH



CONTENTS

01

Smart Car Technology & Service Trends

02

Smart Car-Talk Demonstration Project

01.

Smart Car Technology & Service Trends

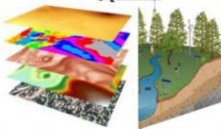


Background

Internet of Things



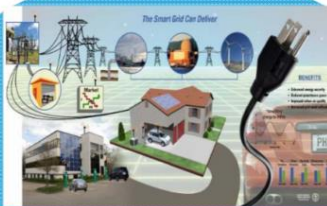
Predictive maintenance



Enable New Knowledge



Agriculture



Smart Grid

Energy Saving (I2E)



Intelligent Buildings



Transportation and Connected Vehicles



Defense

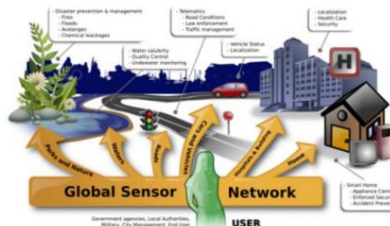


Industrial Automation

Enhance Safety & Security



Healthcare



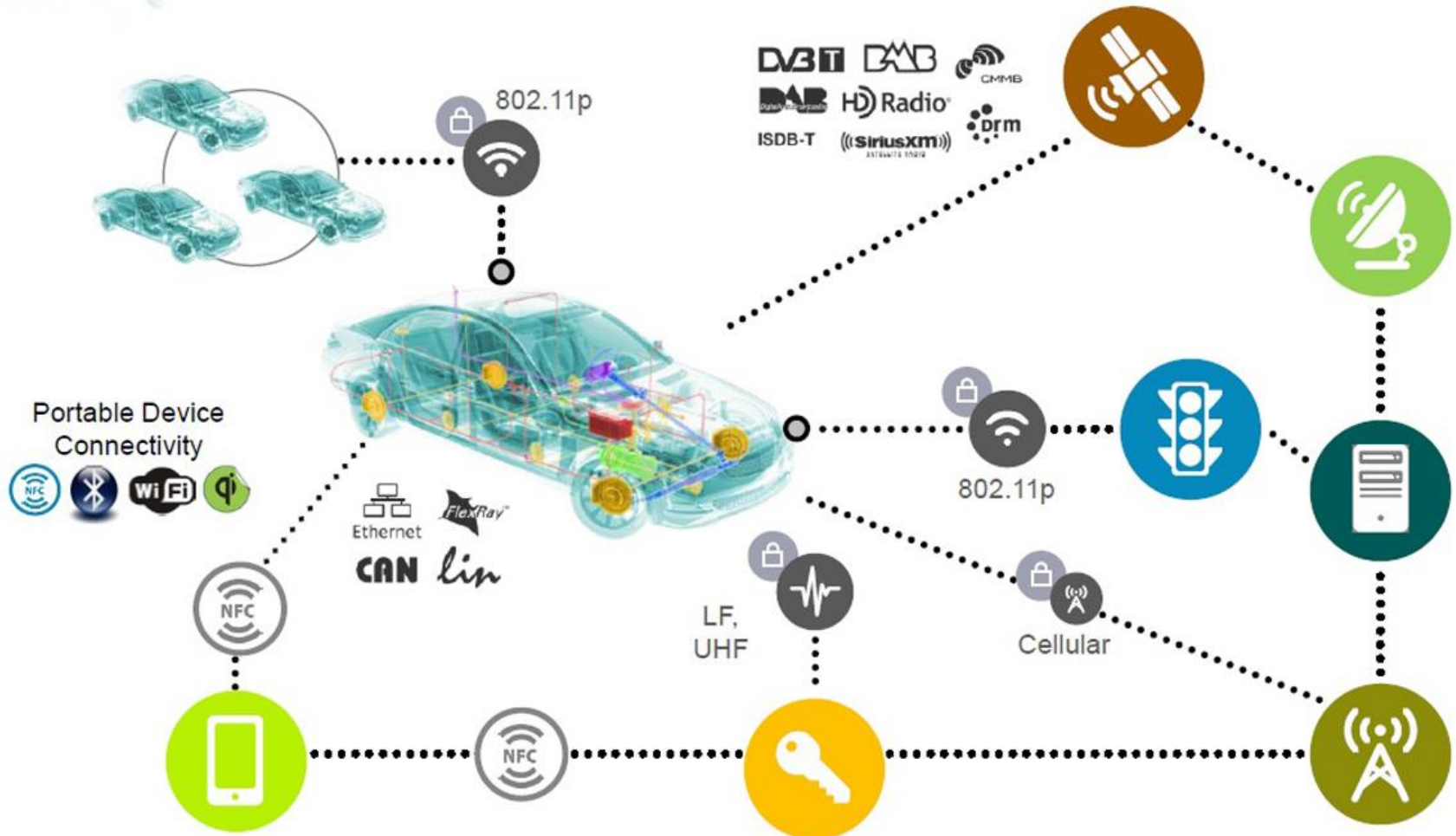
Smart City



Smart Home

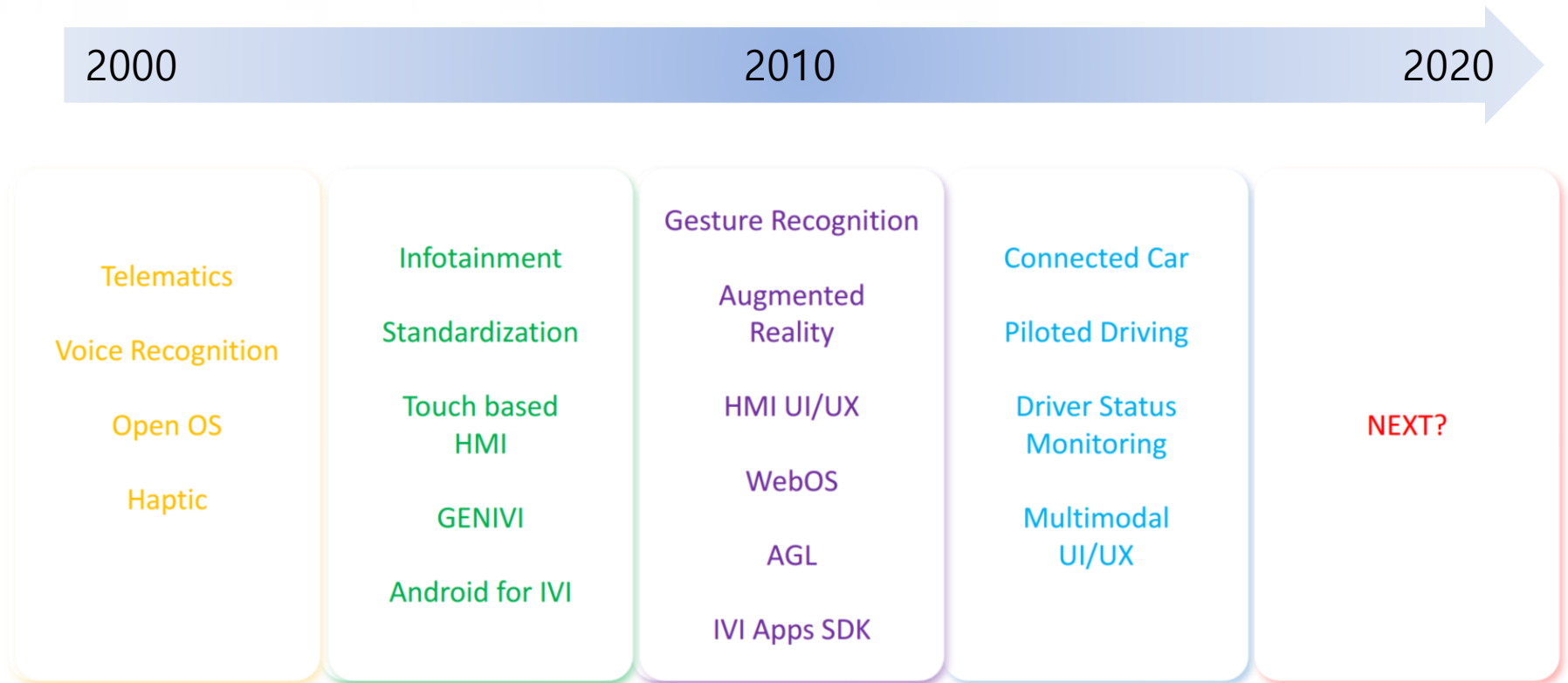
Background

What is Connected Car



Background

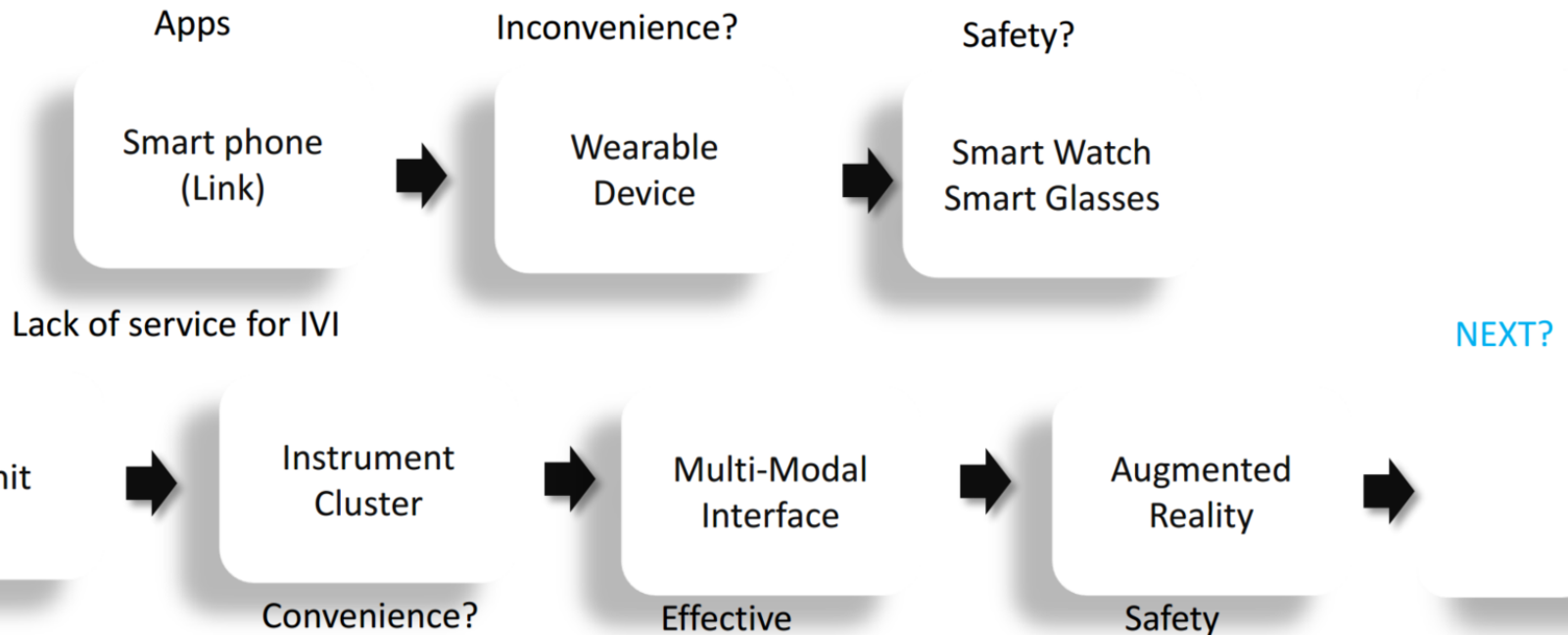
Technical Trend



Background

Technical Trend

- Change the conception for "Connected"

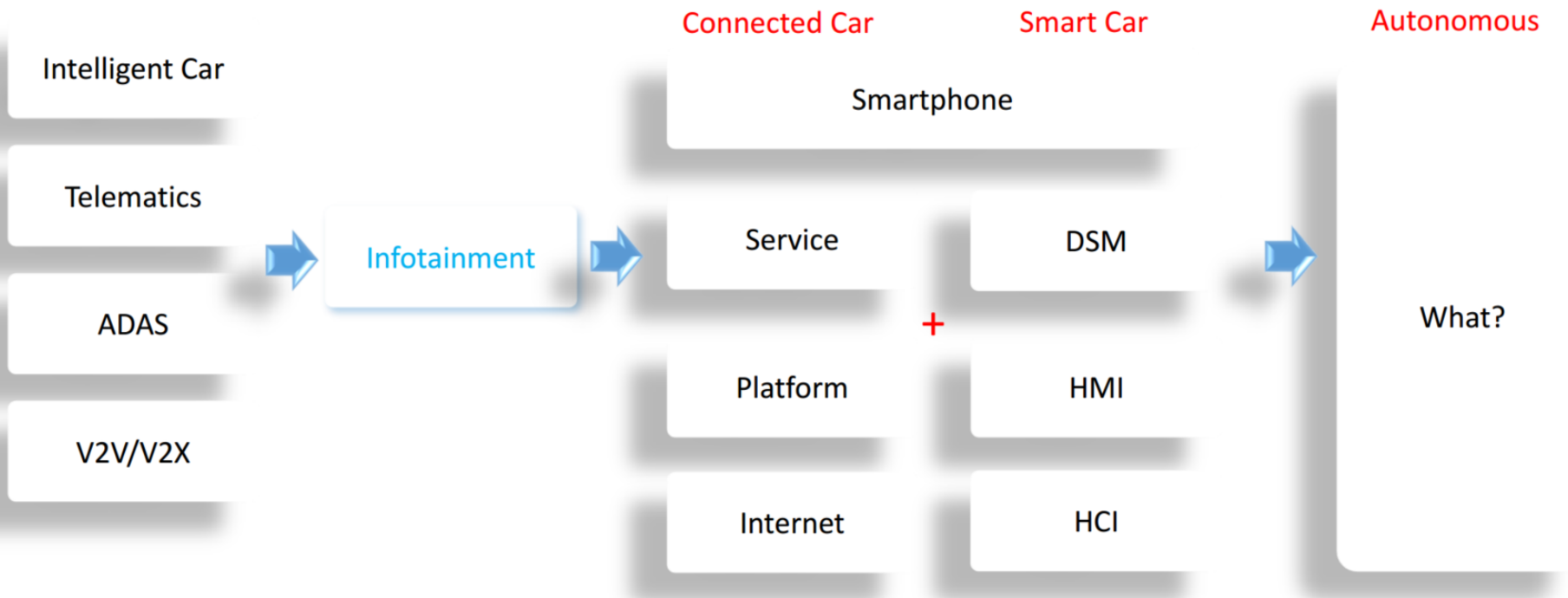


GENIVI is a registered trademark of the GENIVI Alliance in the USA and other countries
Copyright © GENIVI Alliance 2013

Background

Technical Trend

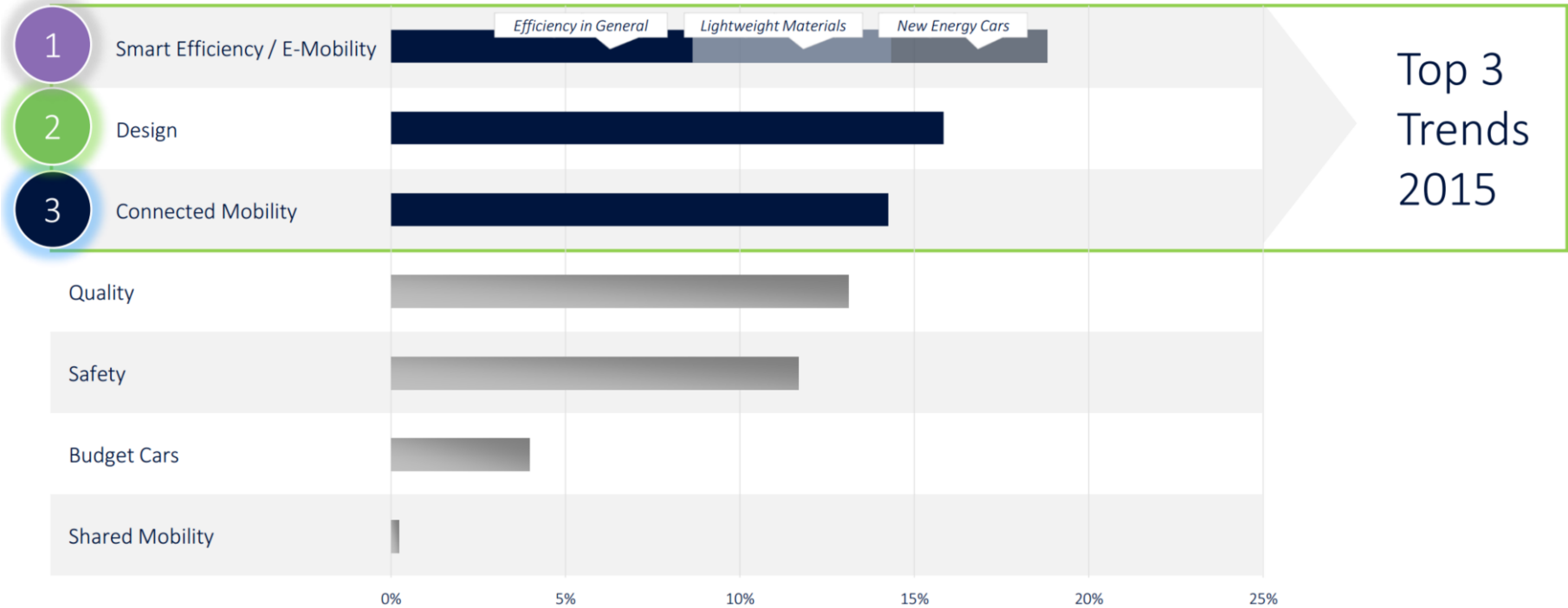
■ The relation of Infotainment



2015 Trend

Automotive Trend

The most important trends in the automotive

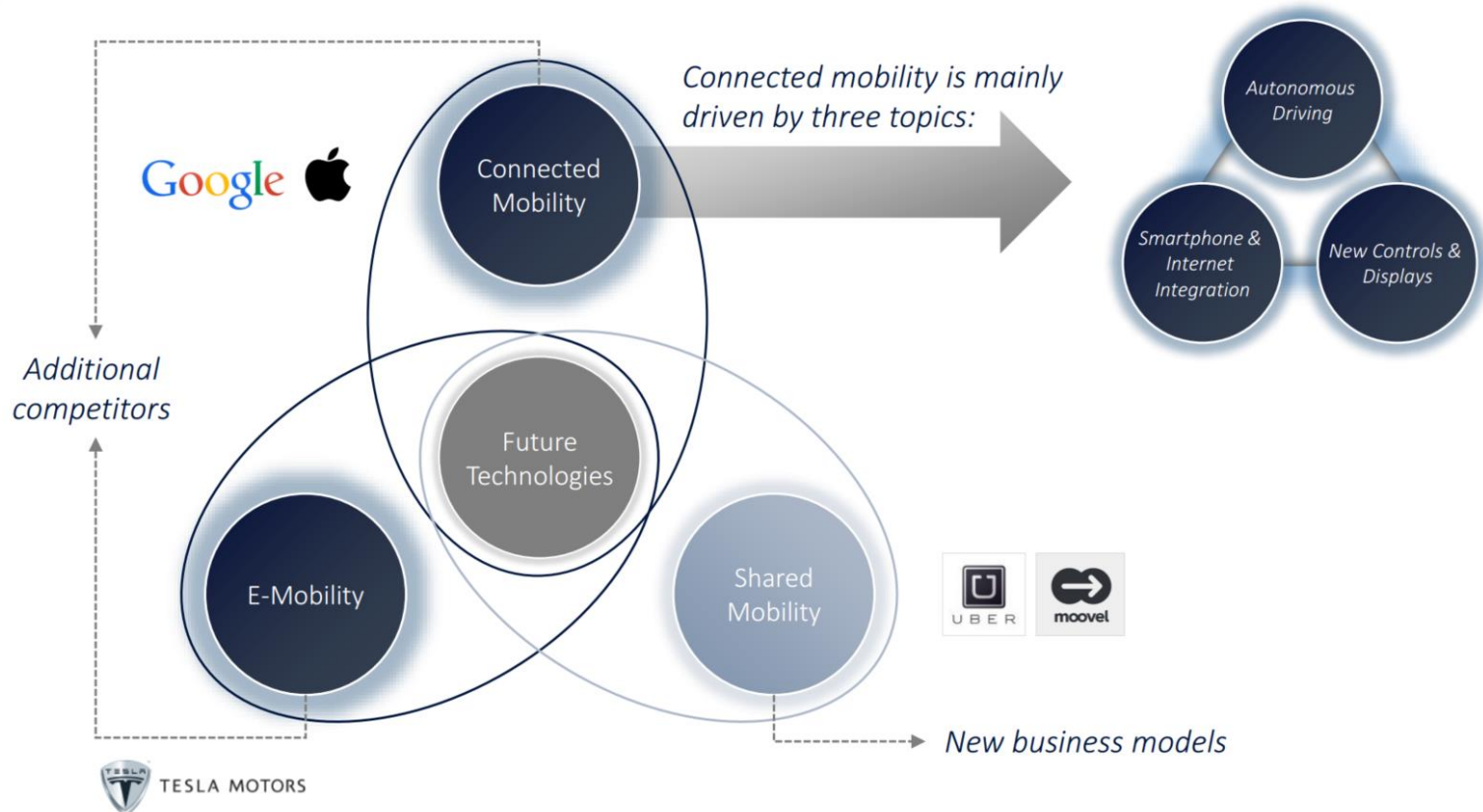


By World Car Trends 2015 - Prime Research

2015 Trend

Automotive Topic

- The current hype surrounding connected mobility is mainly driven by three topics: Autonomous driving, smartphone & internet integration and new controls & displays



By World Car Trends 2015 - Prime Research

2015 Trend

Automotive Topic

- A full smartphone integration also implies full audio integration and navigation and web access, making a lot of current features redundant



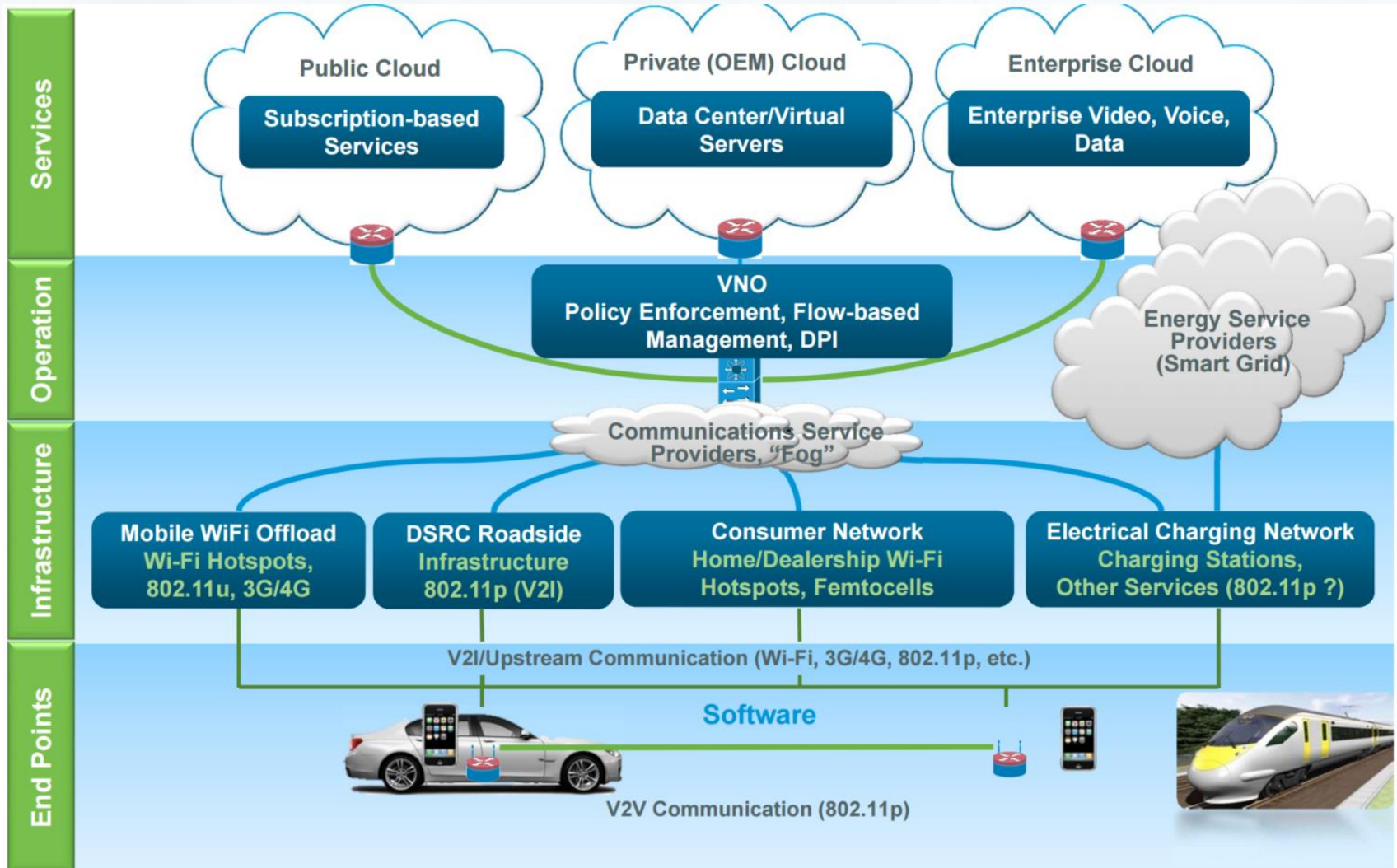
2015 Trend

Automotive Topic

- Apple and Google are very close with their infotainment offerings and are much better-evaluated than the worst 5 OEM infotainment systems



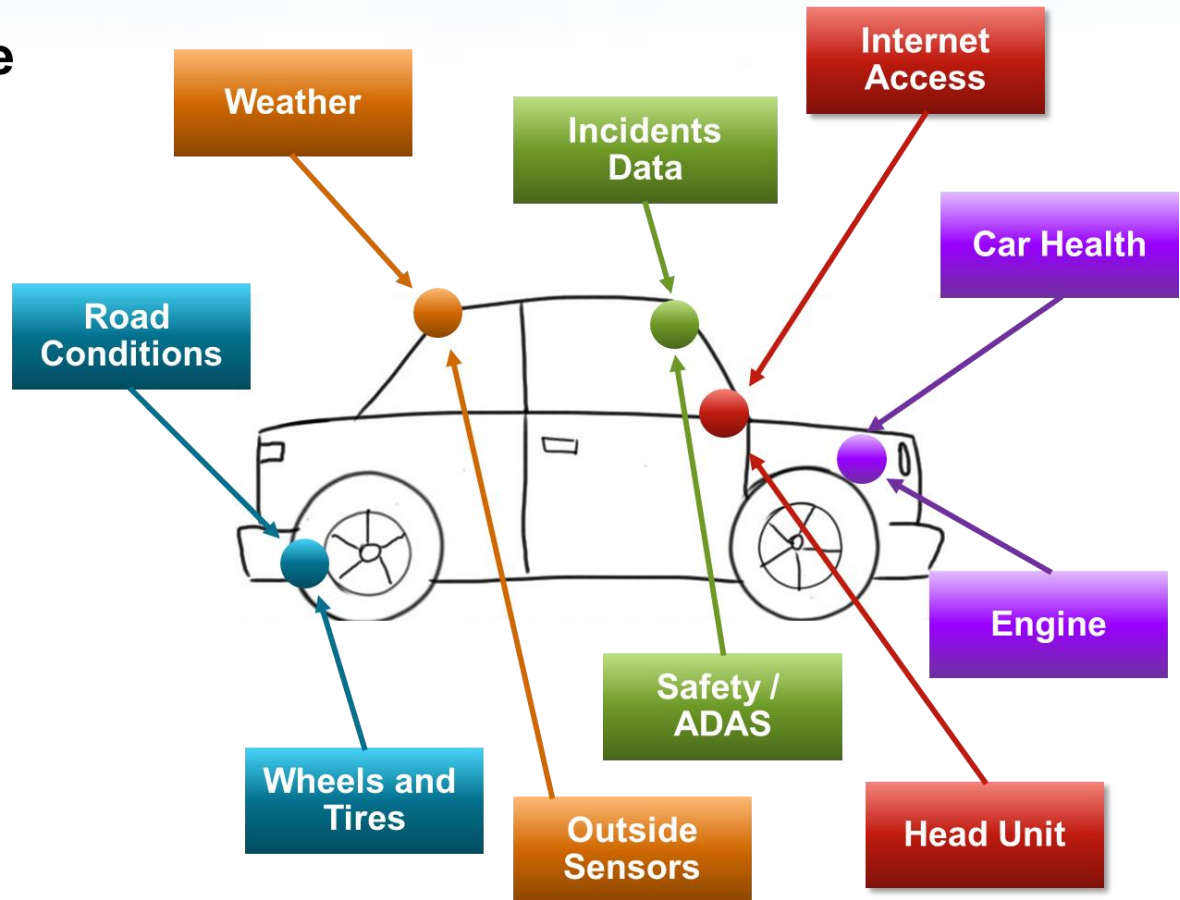
Connected Car Architecture



Connected Car Service

Connected Car Example

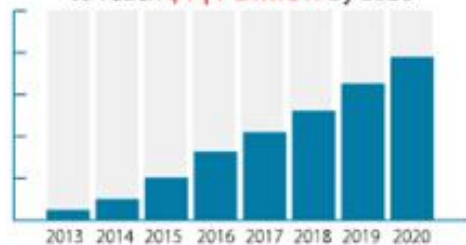
- Schedule maintenance based on car health
- Weather station on wheels
- Share incident data (location, speed, video) with authorities
- Send road conditions to maintenance authorities
- Adapt car performance based on road condition and weather
- Adapt car behavior based on adjacent cars' history
- Configure car based on driving patterns
- Way more...



Connected Car Global Market

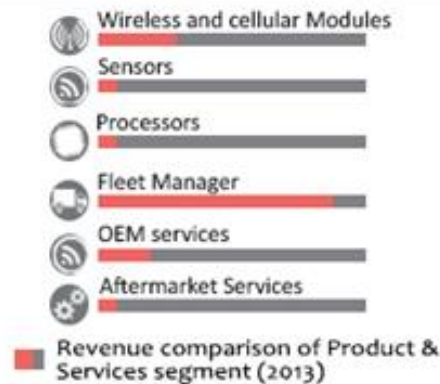
Global Connected car Market

Global Connected Car Market is Expected to reach **\$141 Billion** by 2020



Growing at a CAGR of **32.7%** (2014-2020)

Global Connected car Market By Product & Services (2013)



Revenue comparison of Product & Services segment (2013)

Connected car Market By Geography

Europe, North America, LAMEA

Asia-Pacific

Fastest Growing Region at aM CAGR **35.9%** (2014-2020)

Global Connected car Market Dynamics

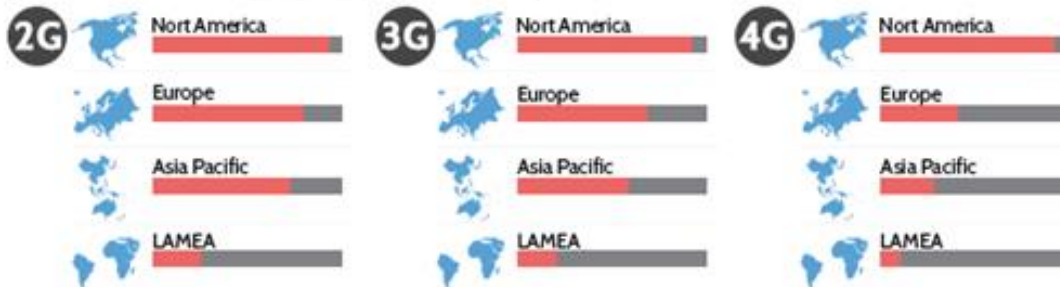
Drivers

- 24*7 connectivity solution
- Vehicle diagnostics and maintenance
- Superior driving experience
- Alert systems
- Safety & security
- Multiple Connectivity solution type

Restraints

- Additional expenditure
- Non availability of uninterrupted & seamless connectivity
- Lack of awareness

Global Connected car Market By Technology (2013)



Revenue comparison of Technology segment (2013)

For More Details See Table of Contents

02.

Smart Car-Talk Demonstration Project



Background

Smart Car

- An automobile with advanced electronics. added assisted parking, Web and e-mail access, voice control, smart card activation instead of keys and systems that keep the vehicle a safe distance from cars and objects in its path

- (Service oriented) Providing a customized service corresponding to the various needs
- (System oriented) Reducing traffic accidents and improve the convenience of driving

Service oriented → Connected Car



System oriented → Autonomous Car



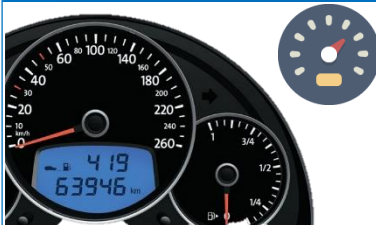
Needs

Smart Car-Talk As-Is vs. To-Be

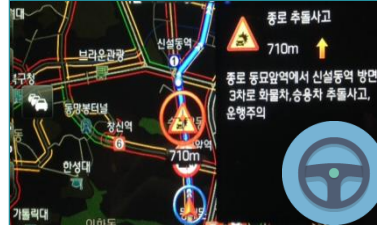
AS-IS

- Single Service
- OEM Dependence
- Closed Service Platform

Insurance Discount



Traffic Information



Flag-Ship Diagnostic Service



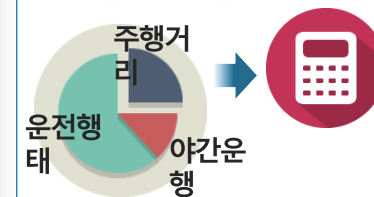
Multimedia Play



TO-BE

- New Convergence Business Model
- New Industrial Ecosystem
- Open Platform Based Service

Insurance Discount By Driving Habit



Active Traffic Information



Diagnostic Service For All Models



MirrorLink & Auto Secretary

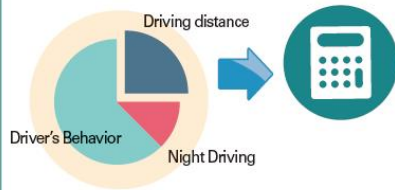


Overview

Smart Car-Talk

Safety

Driver's Behavior Analysis



School Bus Safety Support (Boarding & Alighting)



Safe Driving Support in School Zone



Vehicle Management

Remote Vehicle Diagnosis



Parcel Delivery Support



Driver's Convenience

Complex Parking Guidance



Infotainment

V2X SNS

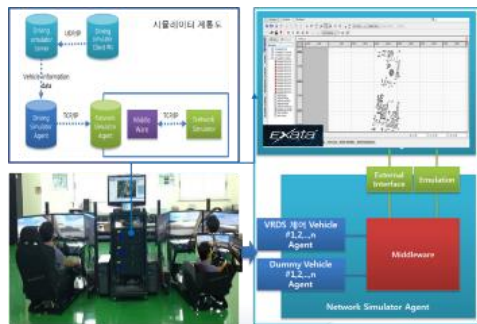


Categorizes Into 4 fields services in 7 areas
Concerning verification possibility during project period

- General public: 100 drivers
- Institute : 50 vehicles drivers
- Test vehicles : 10 vehicles
- Kindergarten: at least 10
- School zone: at least 1
- Parking facility (more than 50 spaces): 1

Verification Of Smart Car-Talk Service

Smart Car-Talk Services Environment



LAB Environment

- Service Effectiveness
- Comm. Interoperability
- Comm. & Service Reliability

KATECH

PG Environment

- Testing Road : 20 sets
- Service Testing
- Marginal situations

KIAPI

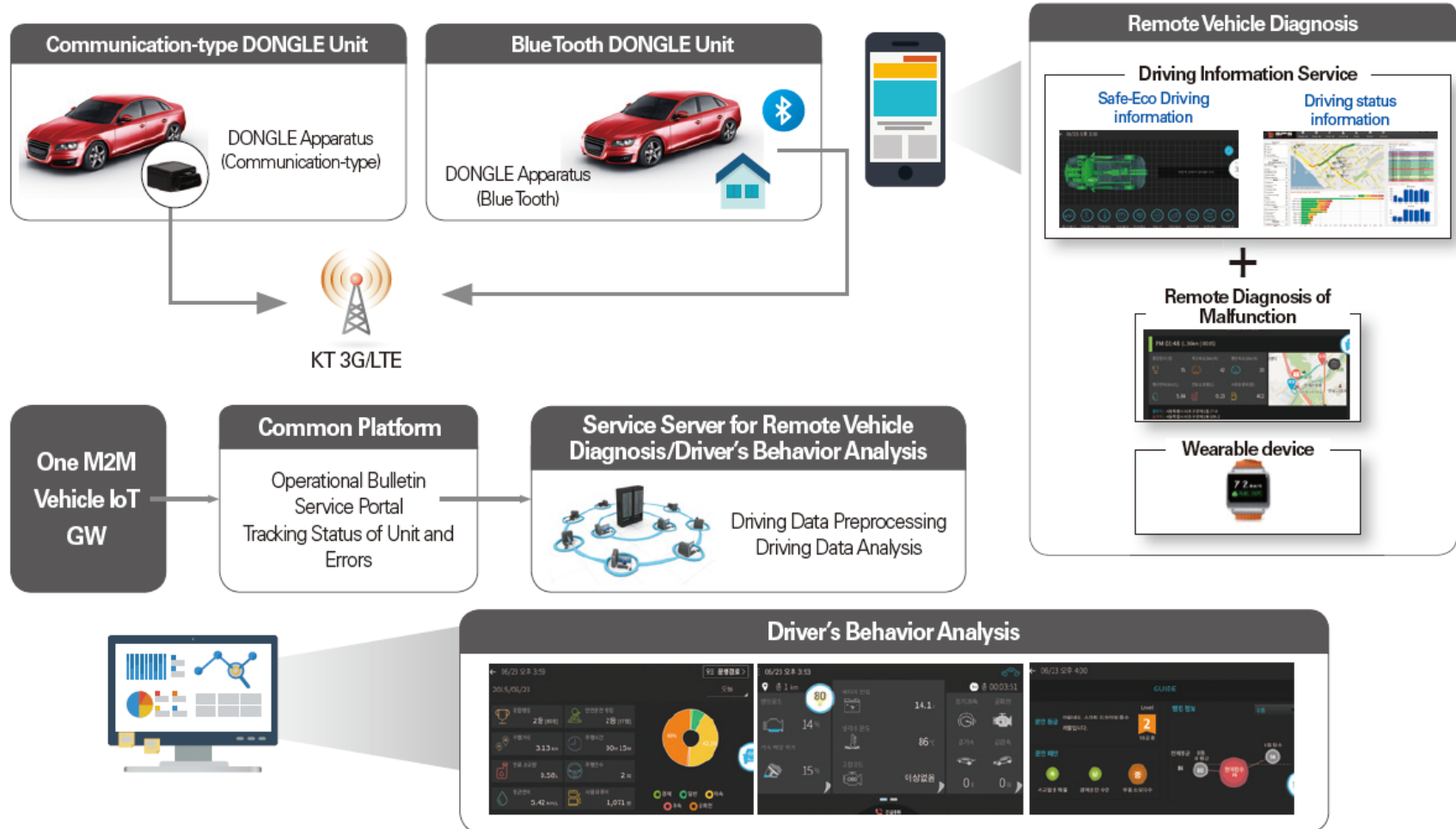
Real-Road Environment

- Surrounding Gyeongsan city
- Childcare Center : 10 ~ 15 set
- School Zone : 2 set

GITC

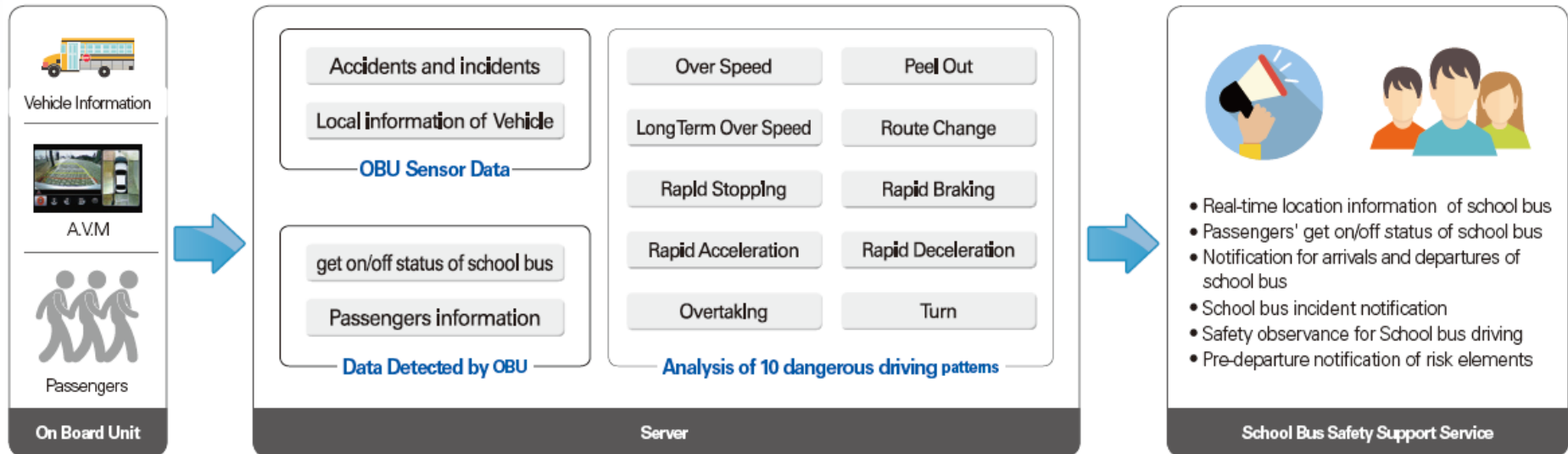
Smart Car-Talk Service_01

Driver's Behavior Analysis & Remote Vehicle Diagnosis – KT



Smart Car-Talk Service_02

School Bus Safety Service- Ajin



부팅 화면



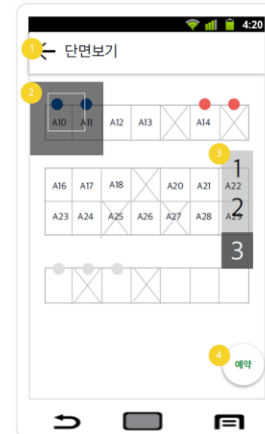
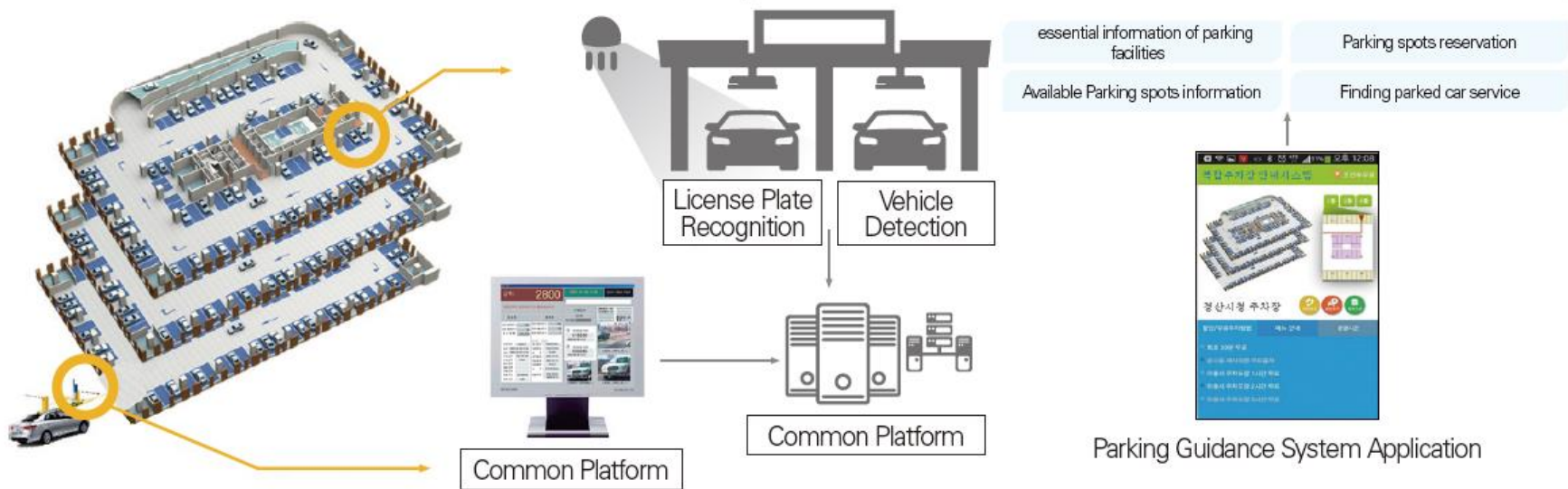
실행 화면



경고 화면

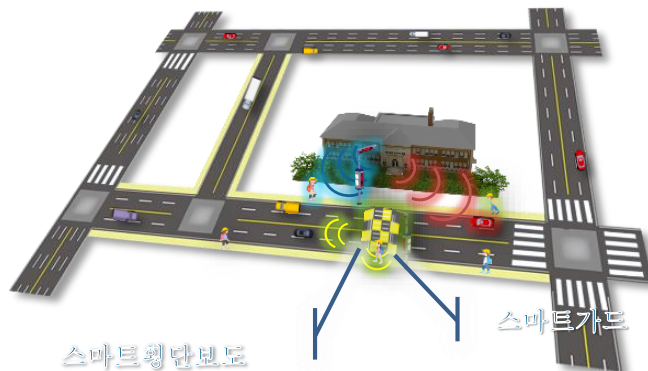
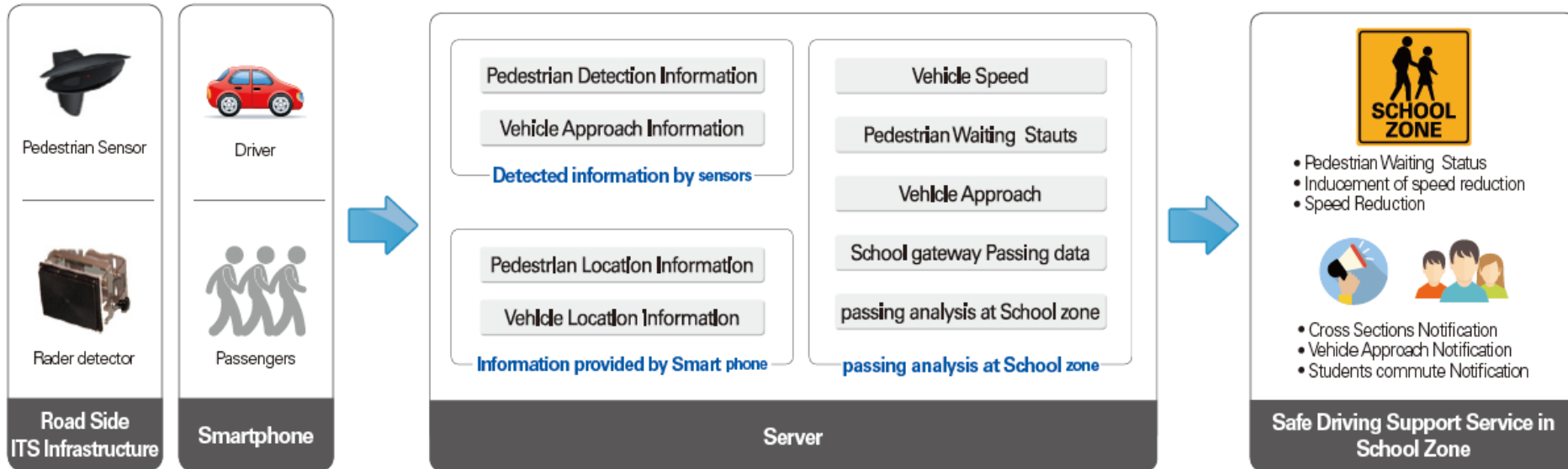
Smart Car-Talk Service_03

Complex Parking Lot Guidance – HANIL



Smart Car-Talk Service_04

Safe Driving Support in School Zone – TRACOM



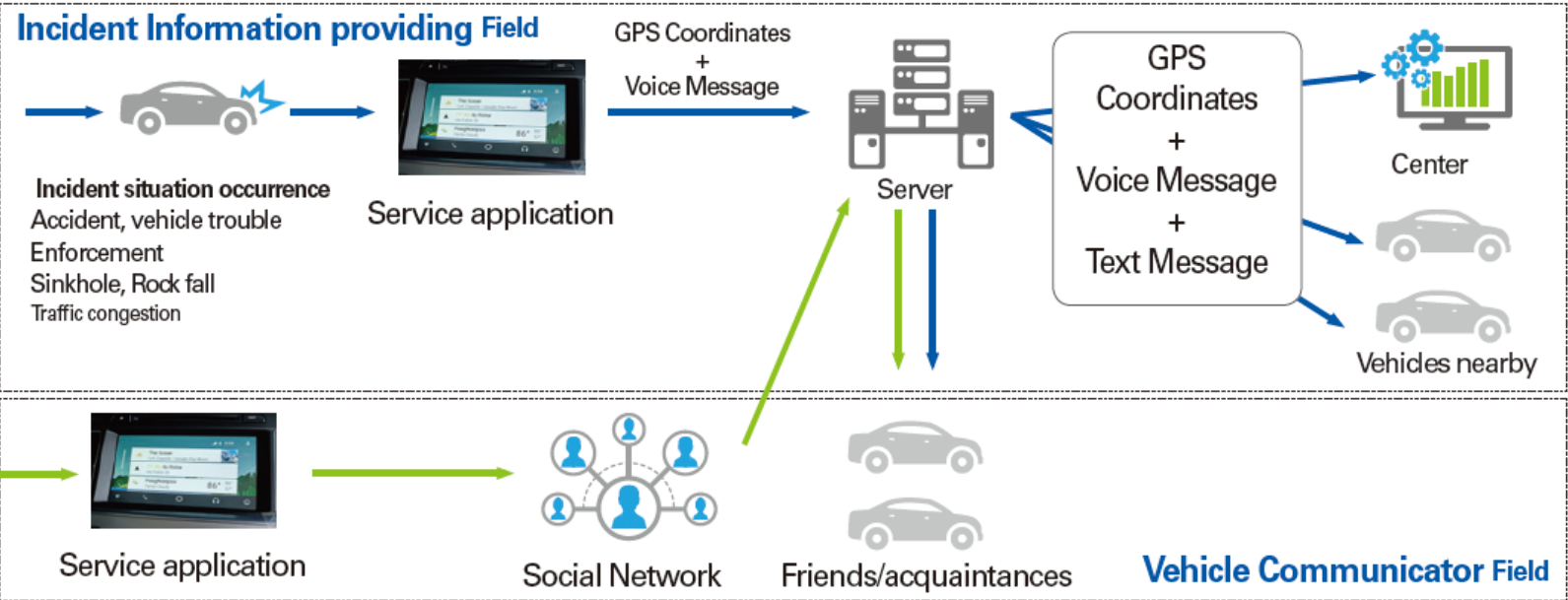
Smart Car-Talk Service_05

Parcel Delivery – LogiForcus



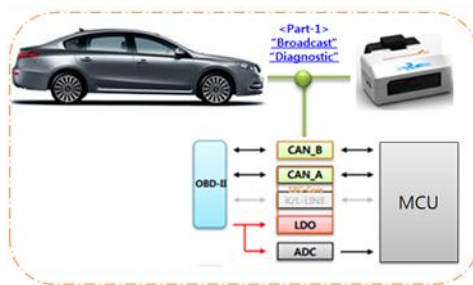
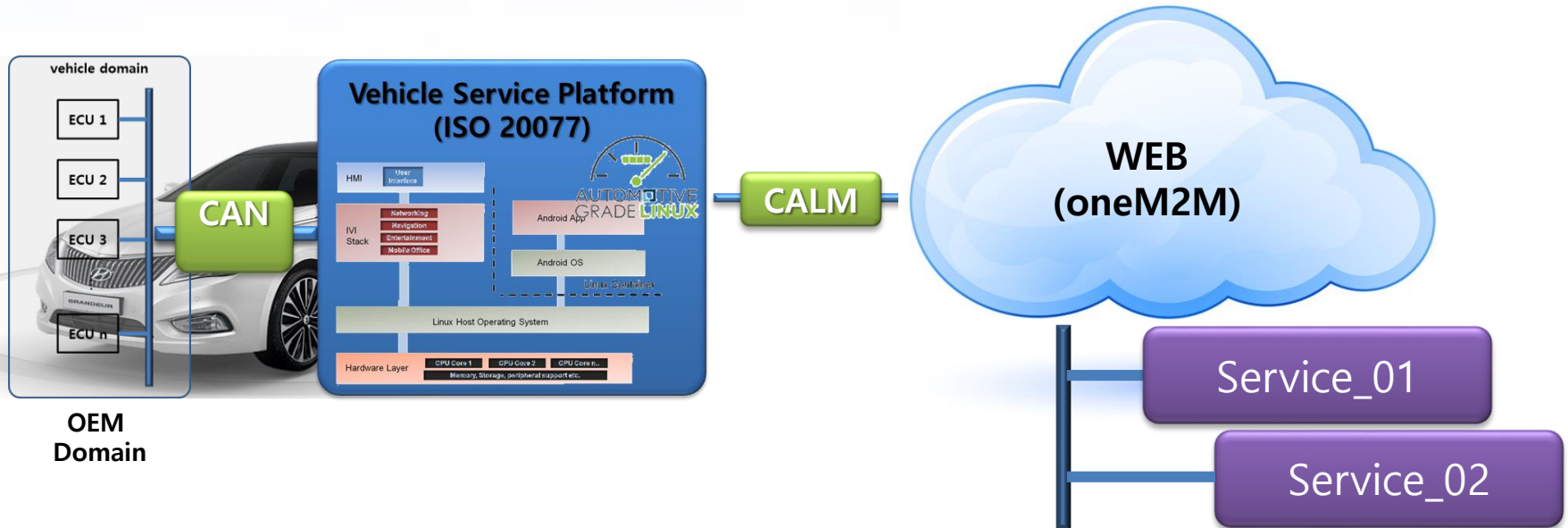
Smart Car-Talk Service_06

V2X SNS – InforBank

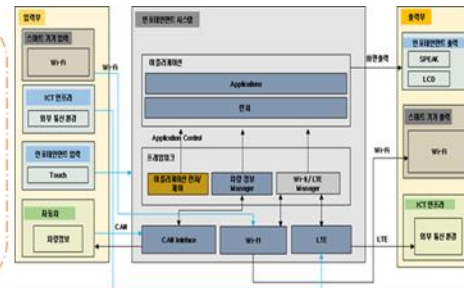


Smart Car-Talk Platform

Smart Car-Talk Platform – KATECH, RSM, KT, Seco, FusionSW



OBD Dongle



Platform Architecture



HW Platform

Thank you

