



Autonome voertuigen

Stand van zaken in de ontwikkeling

Wat is het belang van connectiviteit en digitalisering?

Federale Commissie voor VerkeersVeiligheid
25 april 2024



1. Introduction

- EU Commission initiative
- Smart mobility
- Many Stakeholders are involved
 - Vehicle manufacturers
 - Component & System suppliers
 - Traffic management
 - Transport providers
 - Connectivity providers
 - Public services
 - Mobility users



Trends that drive

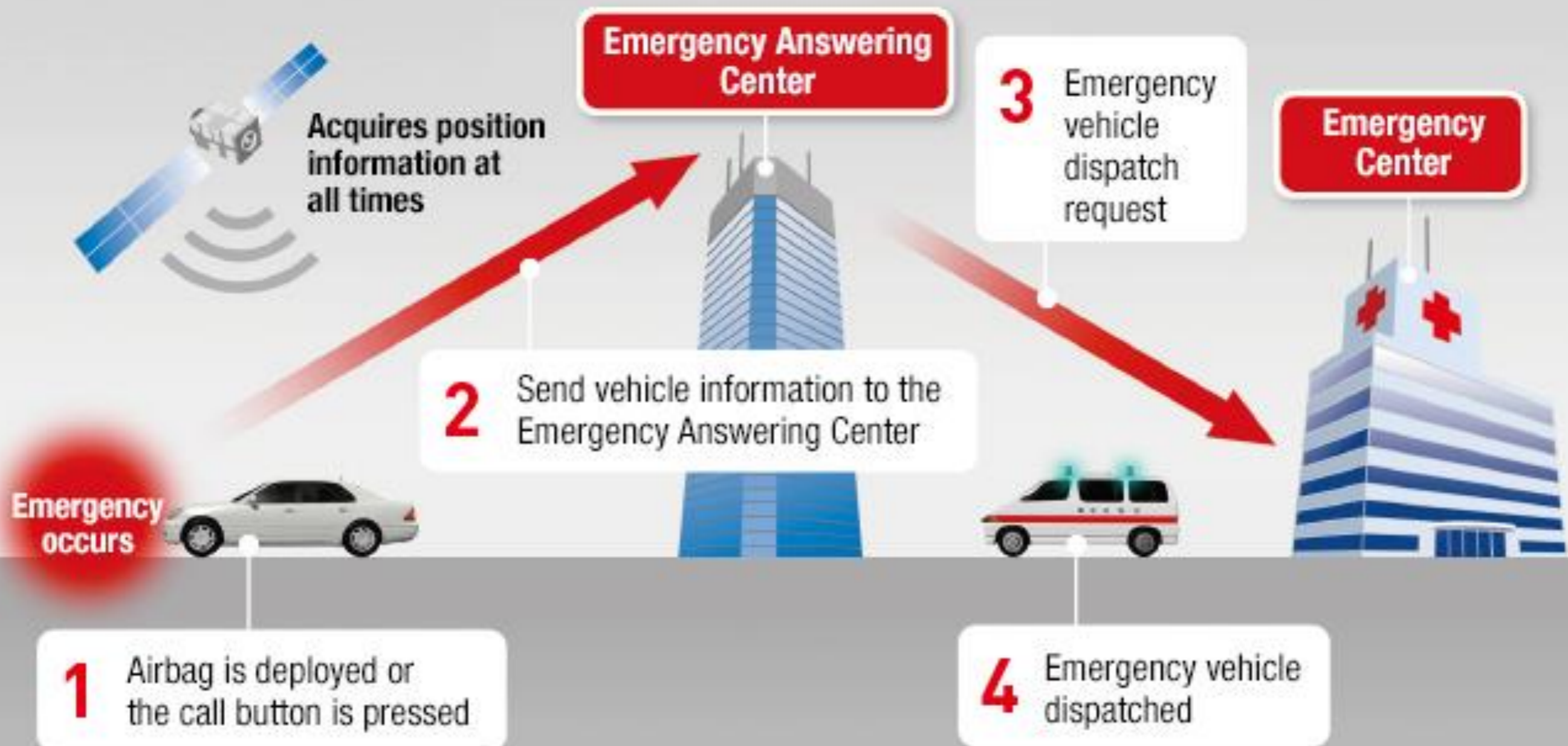
The processing power of computers has greatly increased

Powerful sensors are being miniaturized

Digitalization and connectivity

2. Familiar examples...

Vehicle emergency call (eCall)



HOW DOES SPEED LIMITING WORK?



1 GPS works out where the car is and sends the local speed limit to the dashboard



2 Car also uses a 'sign recognition camera' to assess the speed limit



3 Car uses information to help the driver keep the vehicle below the speed limit



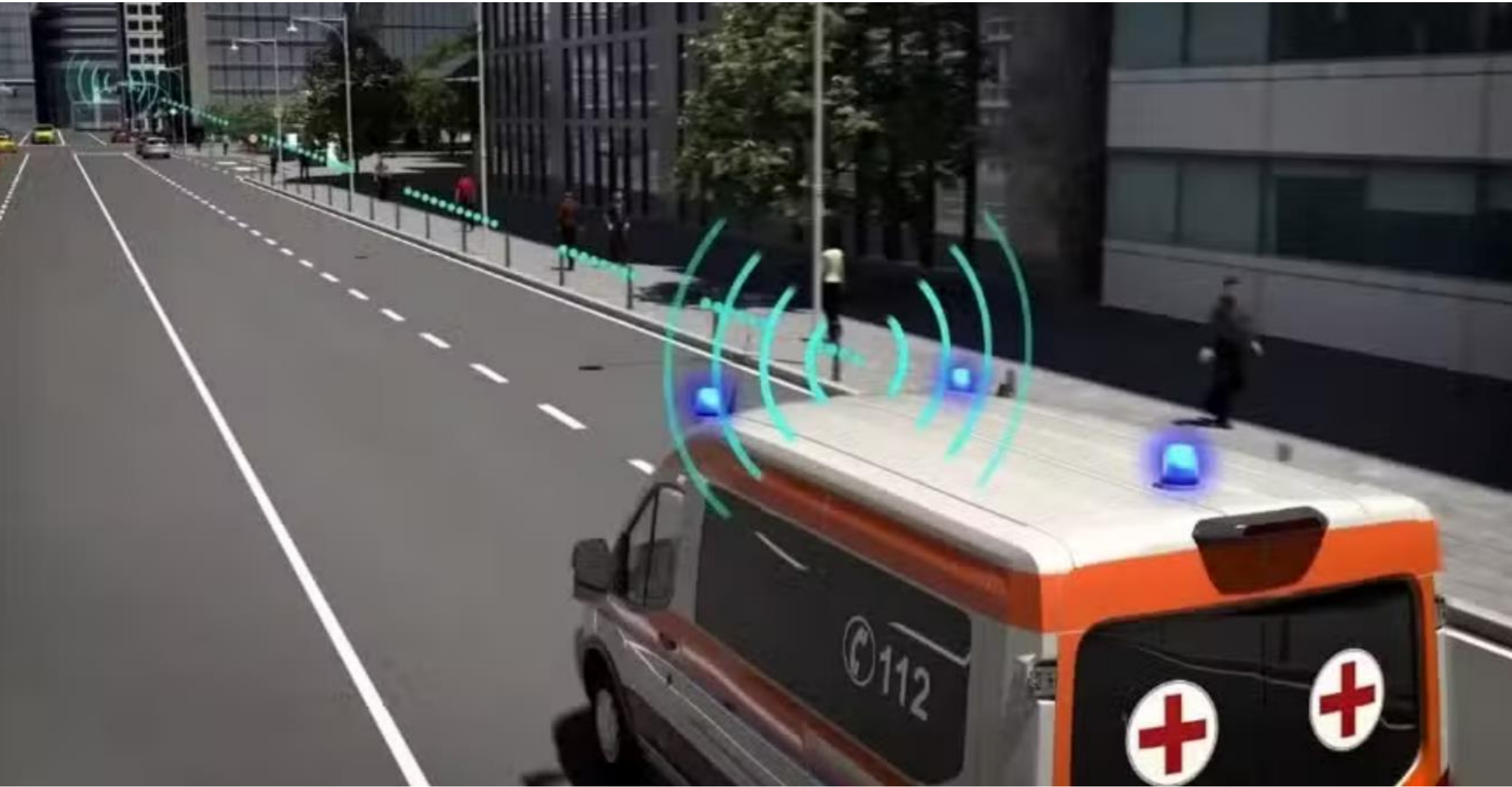
4 Driver can override the system by pushing the accelerator



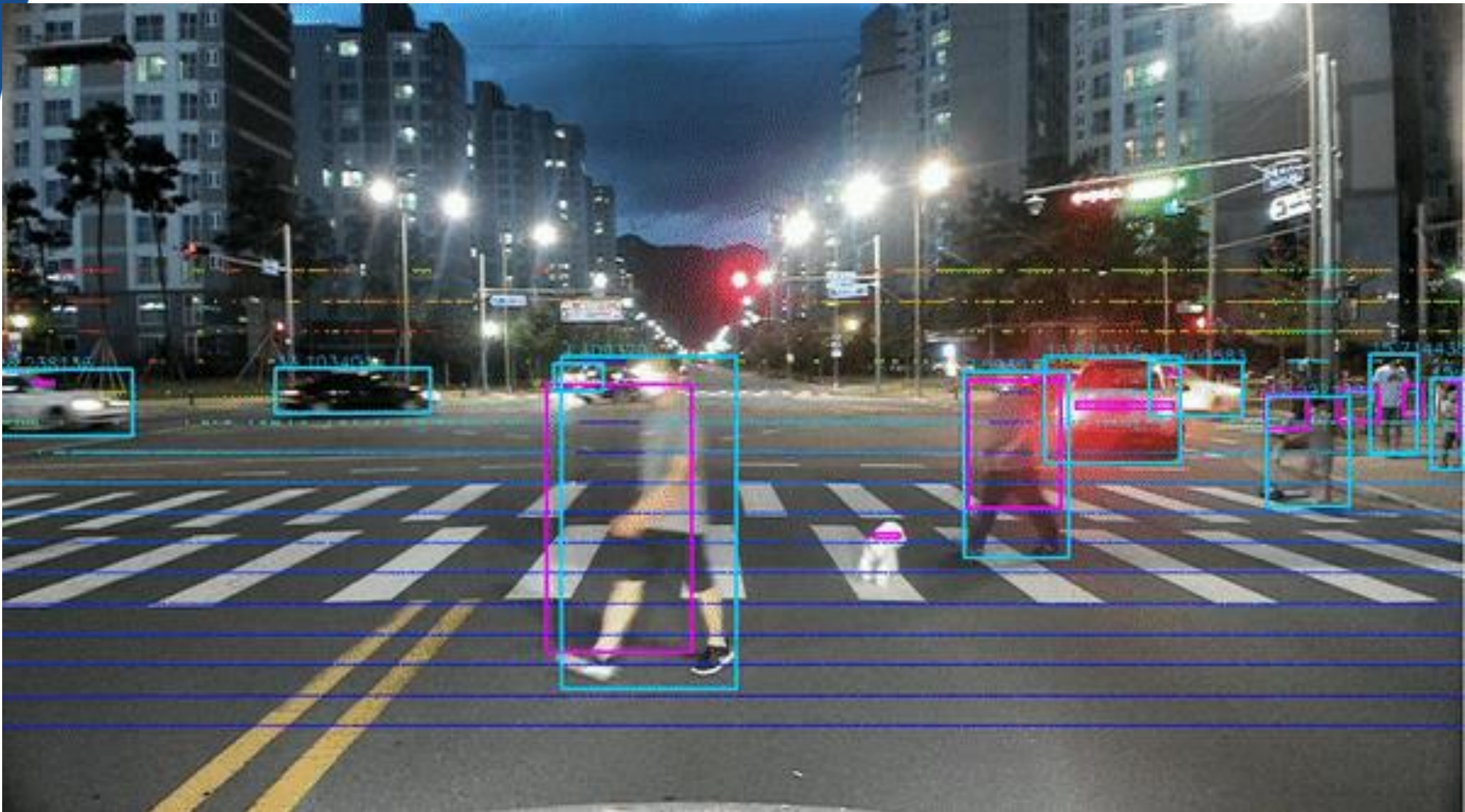
3. Cooperative ITS (C-ITS)...



Green lane for emergency vehicles

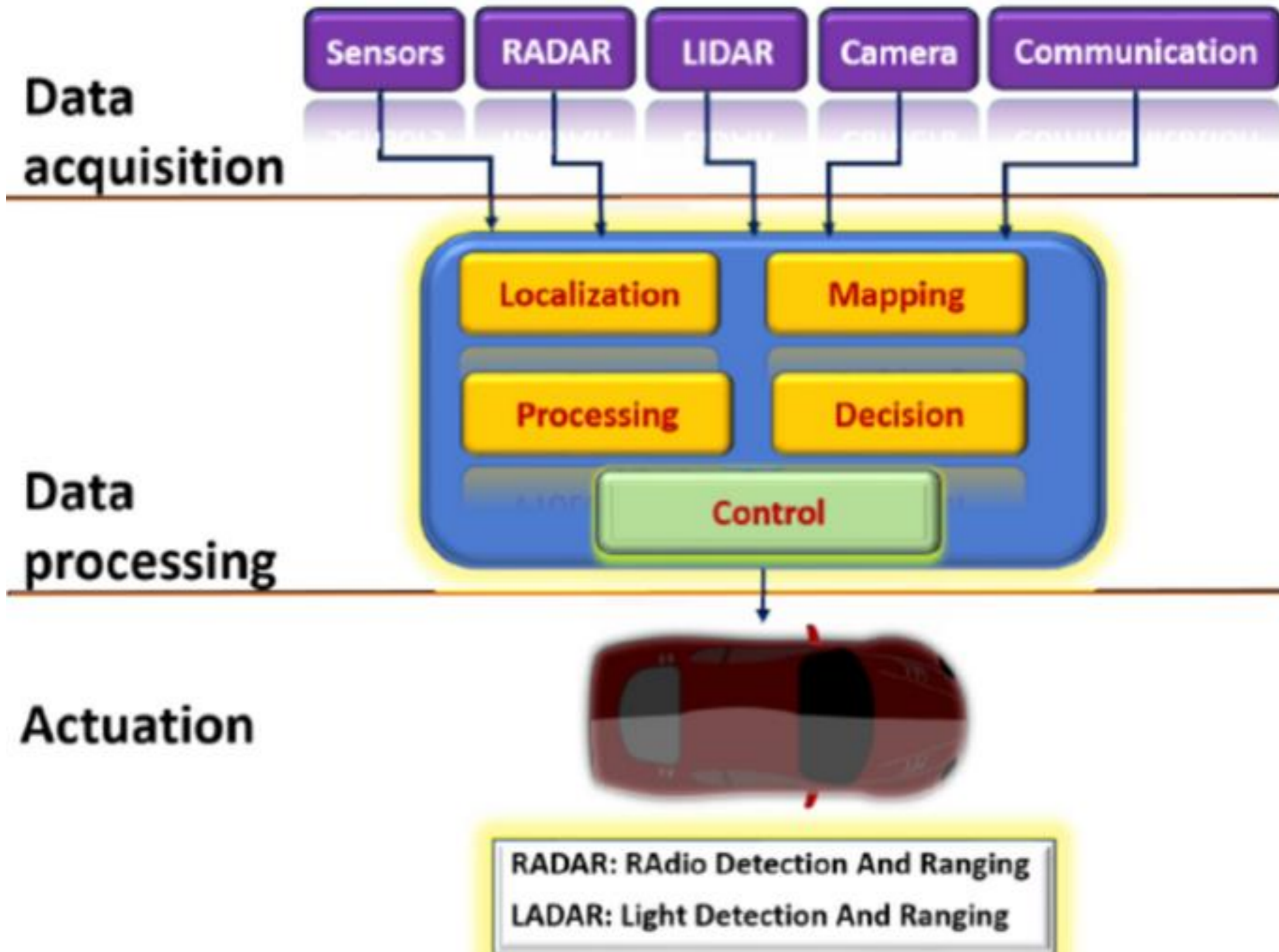


Camera & Lidar fusion



4. Autonomous Vehicle...

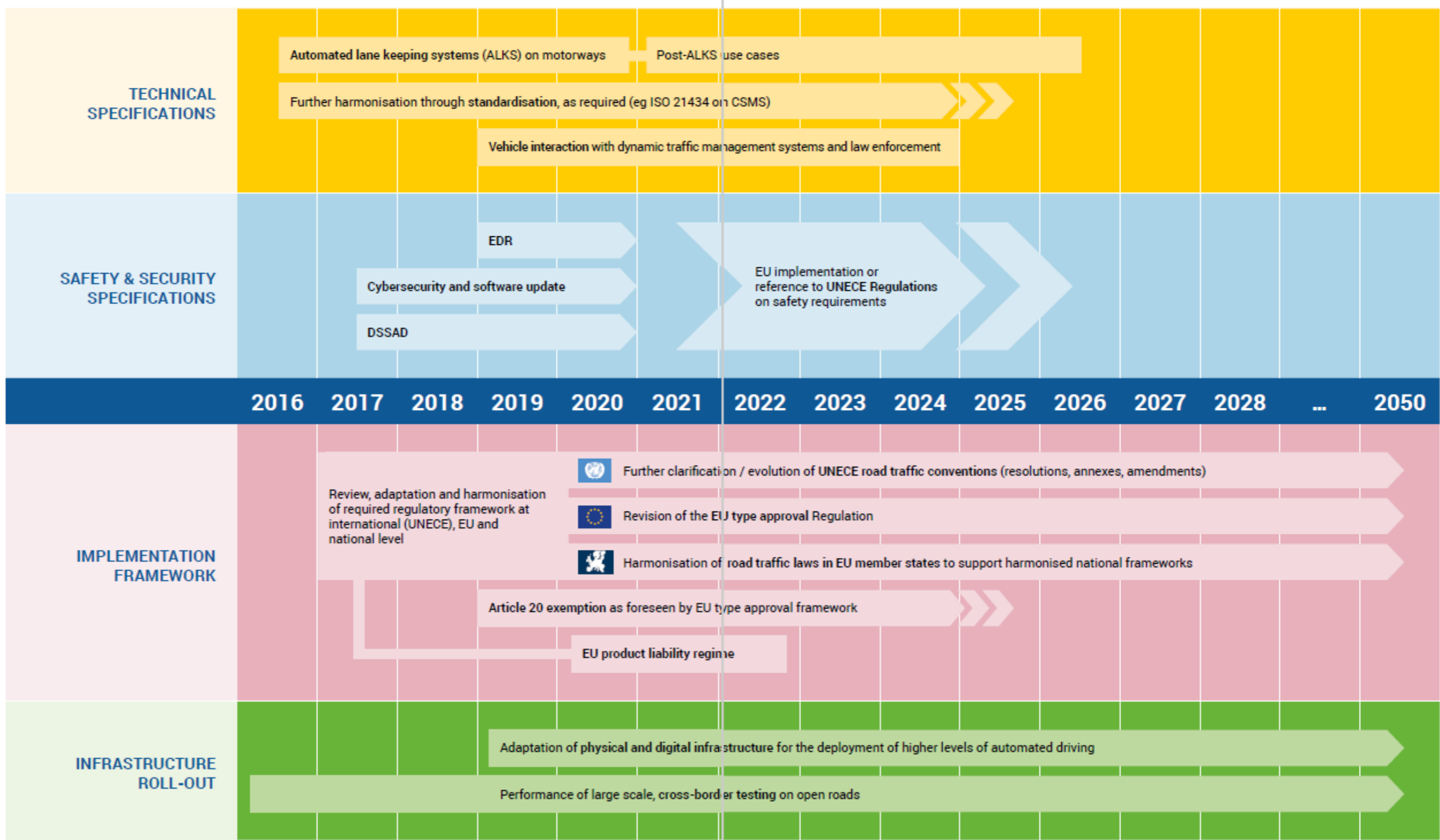
AV - Architecture



AV - Surroundings



STEPS TOWARDS THE DEPLOYMENT OF AUTOMATED DRIVING IN THE EUROPEAN UNION





LIST OF ABBREVIATIONS

- ALKS = Automated lane keeping systems
- CAD = Connected and automated driving
- CSMS = Cyber security management systems
- DSSAD = Data storage system for automated driving
- EDR = Event data recorder
- GRSG = UNECE Working Party on General Safety
- GSR = EU General Safety Regulation

In order to enable the deployment of automated vehicles on Europe's roads in the near future, it is essential to set the right legal framework at the international, EU and national level.



To that end, ACEA recommends that the following legal framework is put in place.

 UN
  EU
  National


TECHNICAL REGULATIONS / FUNCTIONALITIES

-  Framework Regulation on automated / autonomous vehicles – New regulation
-  ALKS motorway – New regulation
-  Advanced Emergency Braking Systems (AEBS) R131 (commercial vehicles); New regulation (cars)
-  Braking – R13; R13H
-  Driver monitoring – Part of ALKS
-  Minimal risk manoeuvre – Part of ALKS

CYBERSECURITY

-  Cyber Security Management System (CSMS) New regulation (2020)
-  Cybersecurity for CAD – New delegated act (GSR, based on UNECE Cybersecurity Regulation)


SOFTWARE UPDATE

-  Software over-the-air update New regulation (2020)



LIABILITY AND ACCIDENT RECONSTRUCTION

-  DSSAD – New regulation (WP 29 Informal Group)
-  EDR – New delegated act (GSR, based on UN GRSG EDR)



MUTUAL RECOGNITION

-  Art 20 Exemption Procedure Guidelines (2019)



DRIVER

-  Driving licences – New regulation (WP 1 Informal Group)
-  Human Machine Interface (HMI) – Part of ALKS


TRAFFIC RULES

-  Evolution of the Geneva and Vienna Conventions
-  Harmonisation of national road traffic laws


ROAD INFRASTRUCTURE

-  Road signs (harmonised under UNECE WP1) Regulation (EC) 1071/2009
-  Vehicle interface with dynamic traffic management and law enforcement – New regulation or standard
-  Road Infrastructure Safety Management (RISM) Directive – Directive 2008/96/EC
-  Road signs – National laws on road signs to be updated

ROAD WORTHINESS

-  Periodic technical inspection Directive 45/2014/EU, possible future harmonisation within the 97 Agreement

SOCIAL LEGISLATION

-  Driving time – Regulation (EU) 561/2006
-  Tachograph – Regulation (EU) 165/2014



ACEA

European
Automobile
Manufacturers
Association

ACEA represents the 15 major Europe-based car, van, truck and bus manufacturers

www.acea.be
 +32 2 732 55 50
communications@acea.be



Thank you

ir. Steven Soens
Regulatory Affairs & Technologies
sts@febiac.be
0472/96.05.86

FEBIAC
Woluwedal 46
1200 Brussel
www.febiac.be