



ASTRI V2X technology for Smart mobility



ASTRI C-V2X Technology



E-V2X module (hardware)

- Support PC5 + Uu
- Carrier Aggregation
- 10 times faster than C-V2X



Algorithm Design (cloud)

- Road safety alarm
- Traffic planning
- PC5 + Uu message optimization



Edge processing Unit (software)

- Edge data gateway
- Edge decision maker

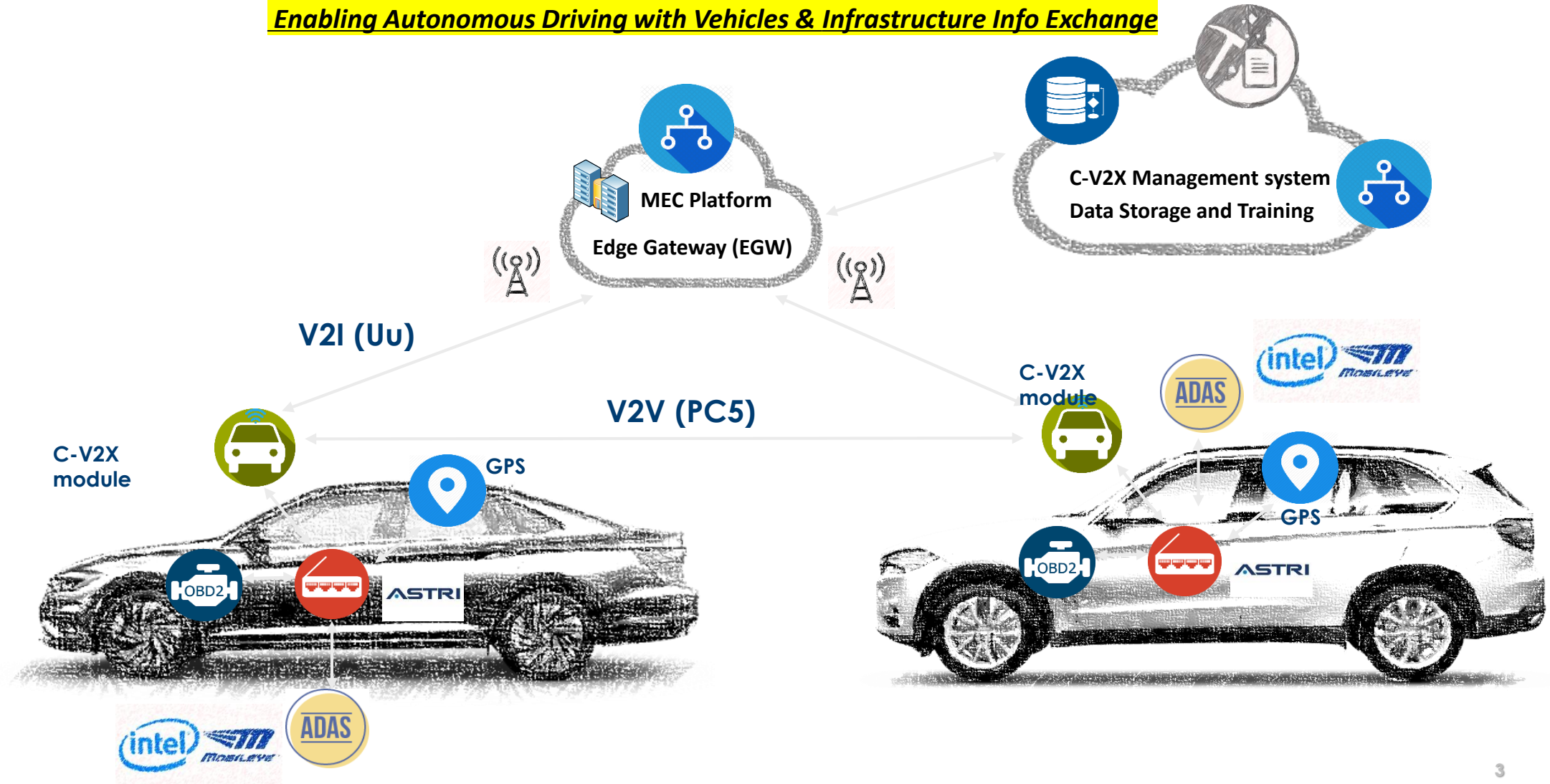


Data Training & Simulation (cloud)

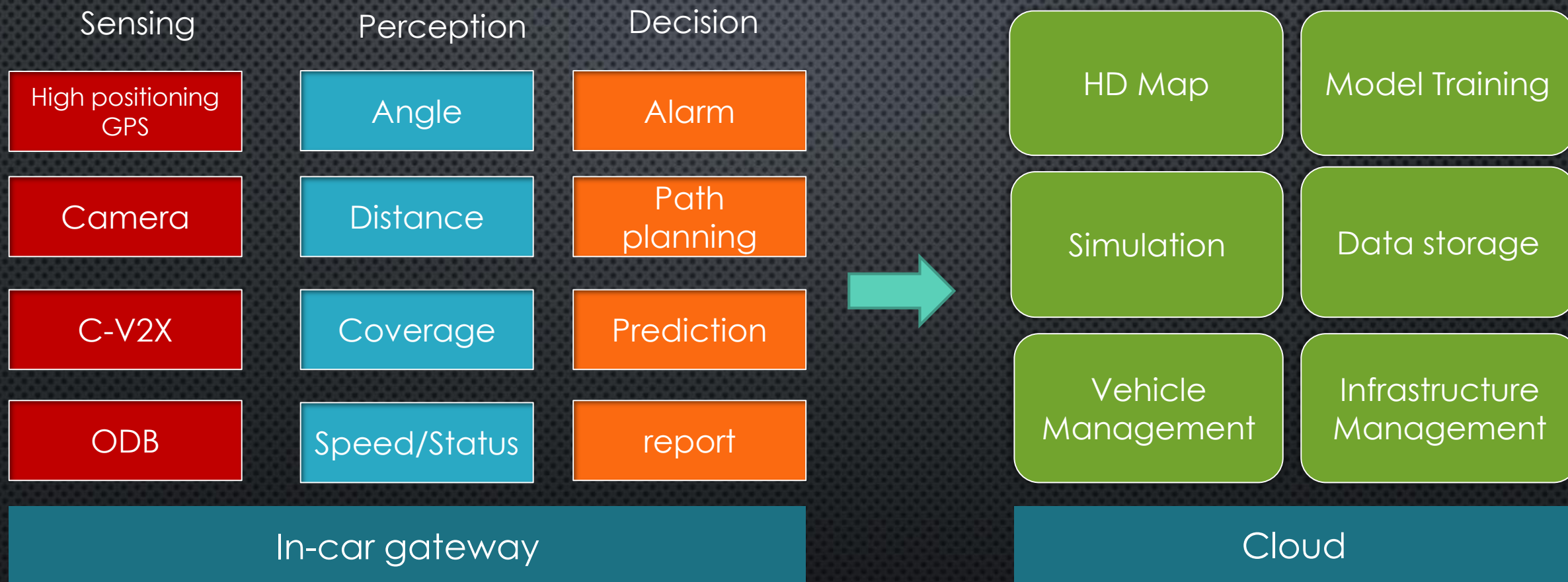
- Vehicle Data Management
- Traffic real time simulation
- Traffic Data training
- Alarm data training

V2X In-Car Architecture

Enabling Autonomous Driving with Vehicles & Infrastructure Info Exchange



C-V2X Vehicle – Edge/ Cloud interworking



ASTRI V2X Networking System

In-car info



Angle



Speed



Direction



Distance



Network coverage



additional sensors

ASTRI C-V2X algorithm design factors

Out-car info



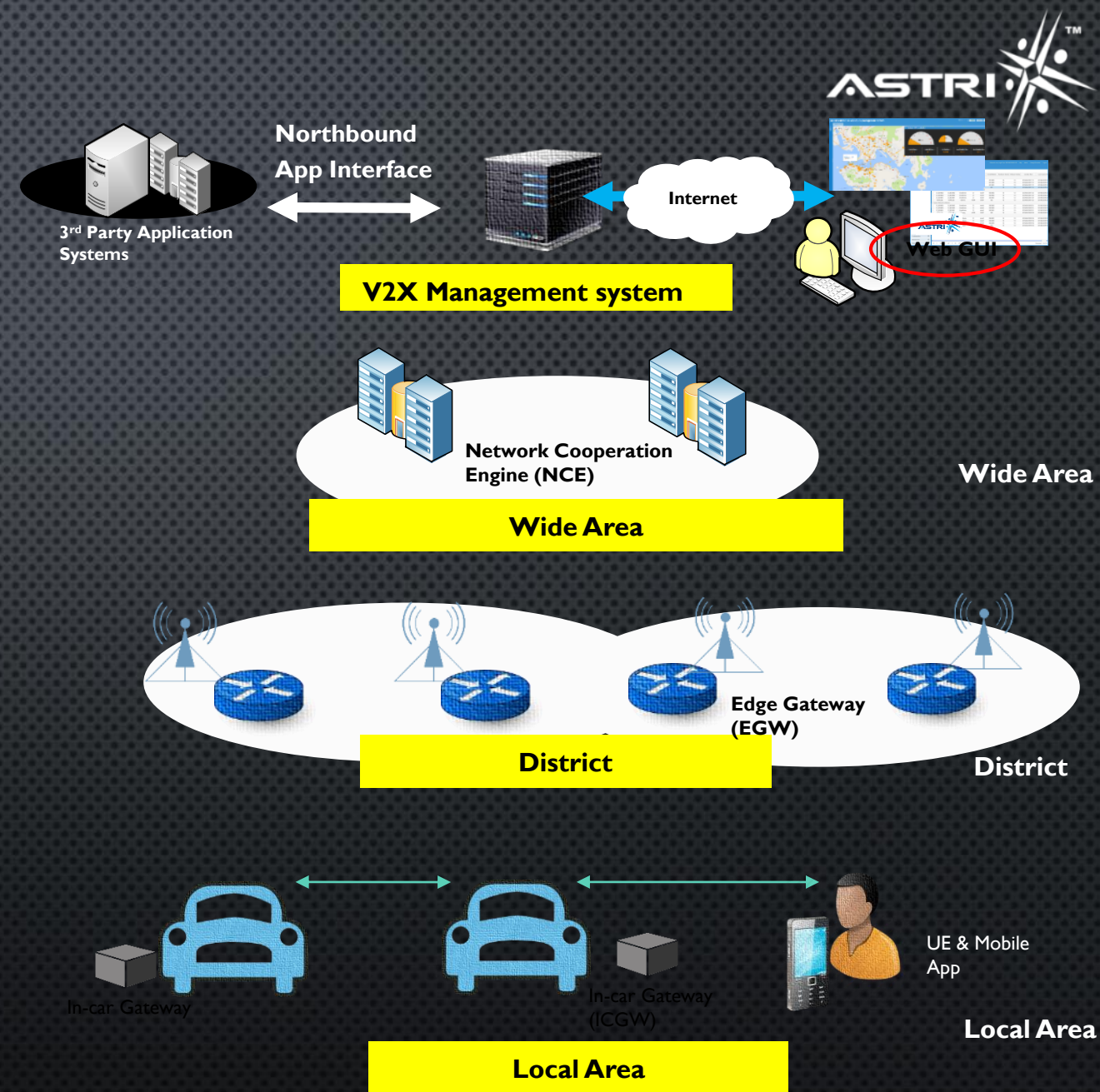
Pedestrian



Vehicle

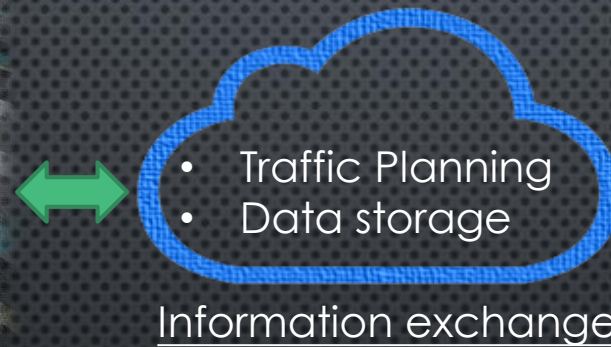
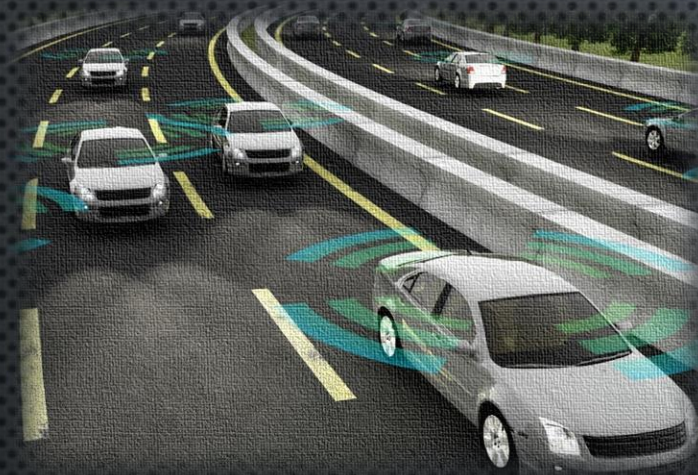


Infrastructure Info



ASTRI V2X Networking System Architecture

Future C-V2X Vehicle – Edge/Cloud interworking



- PC-5 for road safety alarm
- PC-5 will facilitate ERP
- Uu interface for reporting vehicle status

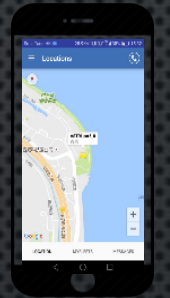
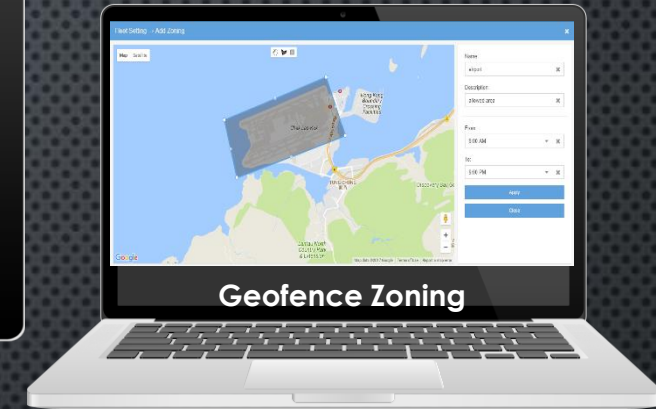


- Uu will take over the control for certain road condition(Island traffic etc.)
- Traffic will be managed by central management through Uu
- Vehicle will be released when reach the regular road condition.

Enabling Large Scale Vehicle & Traffic Management



- V2X TECHNOLOGY AGNOSTIC, INTEROPERABLE, OPEN & EXTENSIBLE PLATFORM
- TRAFFIC MANAGEMENT
- WEB-BASED GUI & MOBILE APP
- DATA MINING & ANALYTICS



Mobile App

