

# Use Case: Private & Public C-ITS Federation

2023. 07. 20

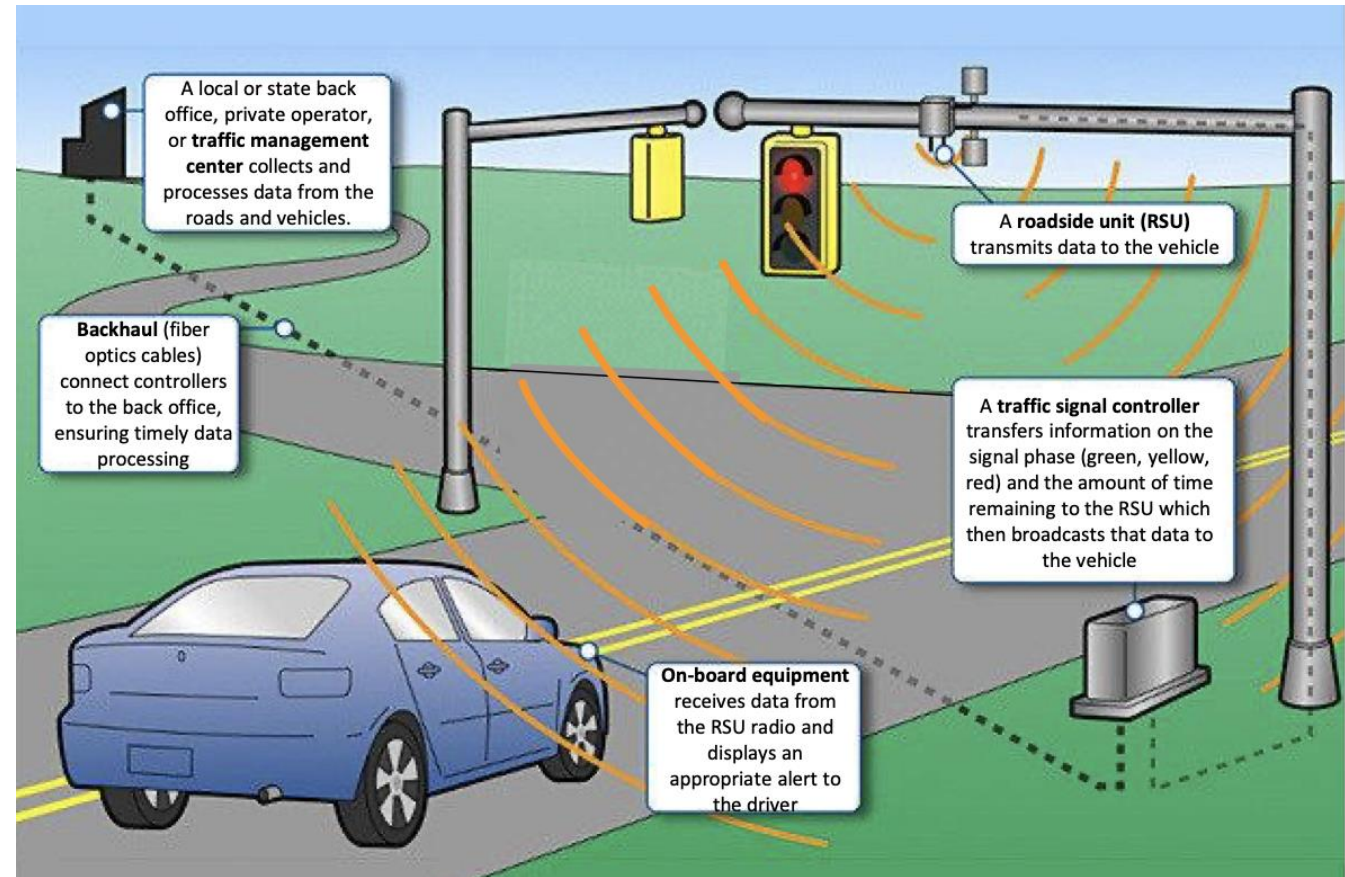
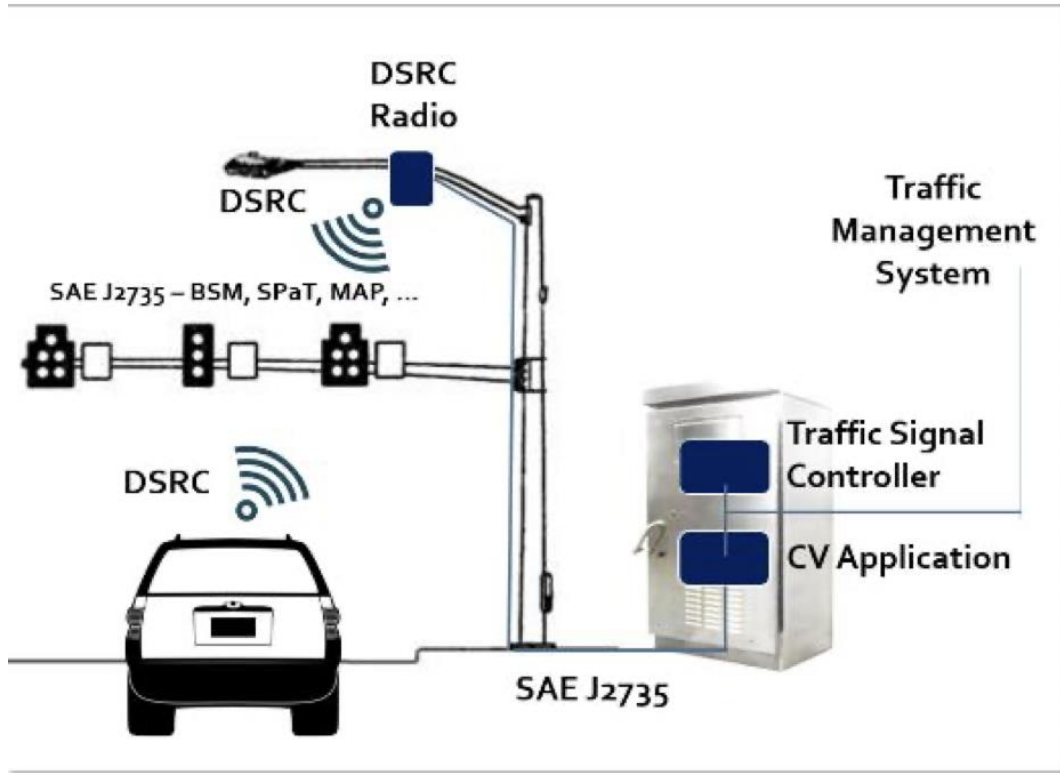
MDKP Public WG Meeting #2

Taesang Choi

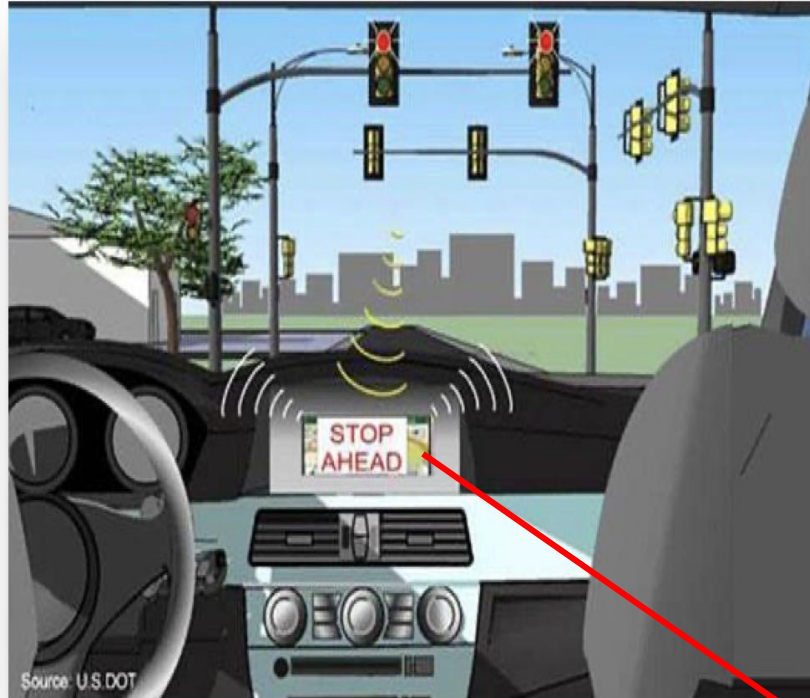
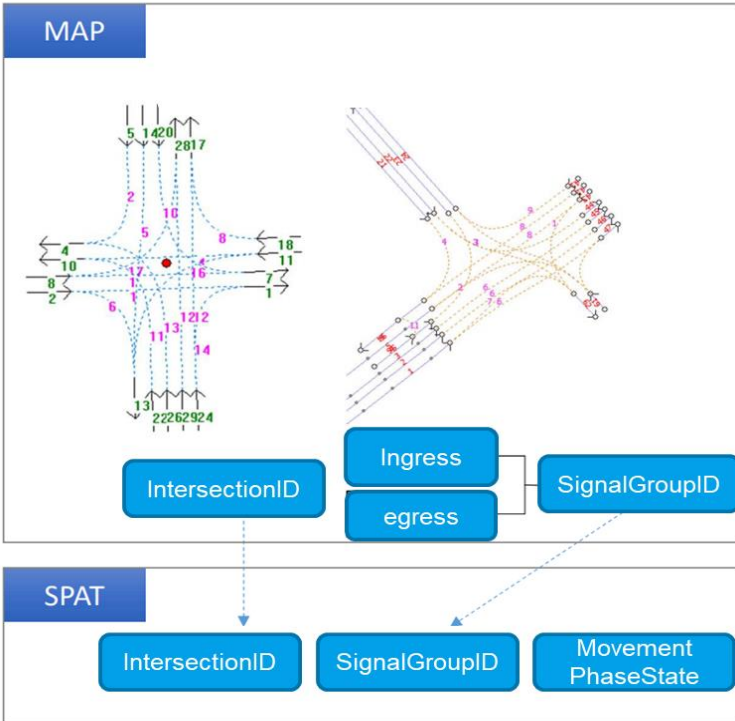
ETRI



# V2X services based on SPaT and MAP (DSRC / 802.11p)



# V2X Messages (SPaT & MAP) - from SAE J2735 – broadcast to vehicle

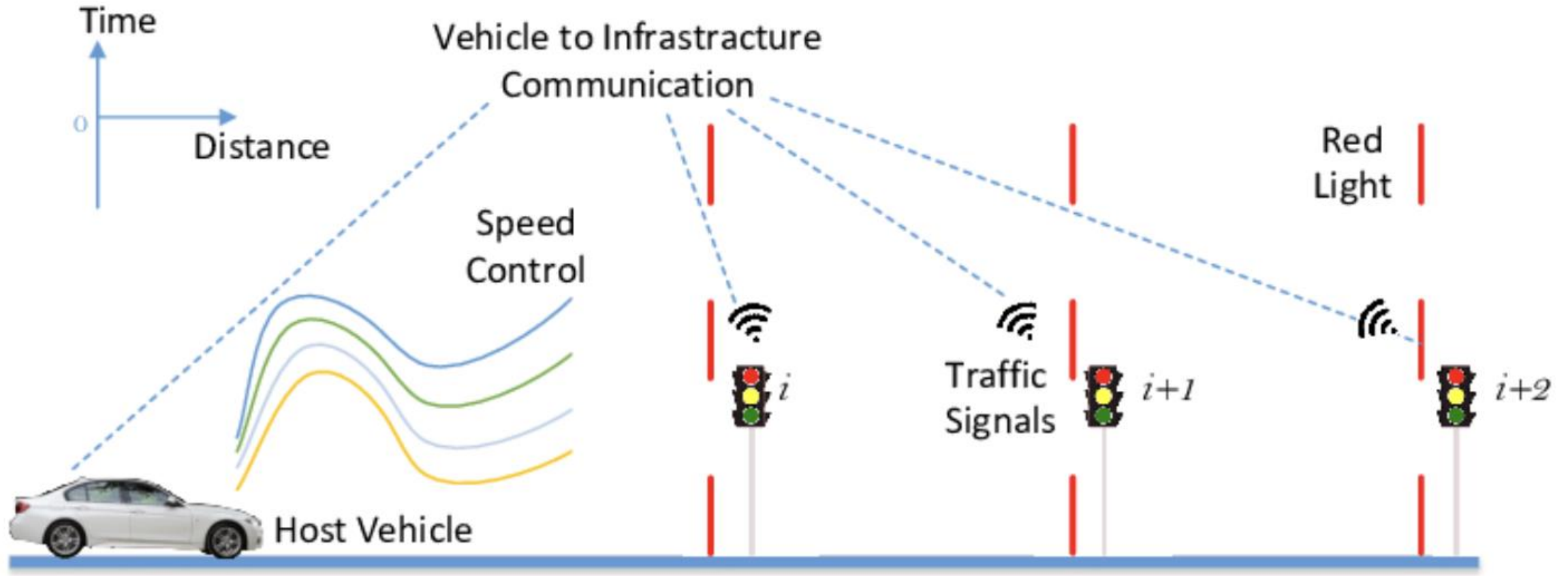


- SPaT (Signal Phase and Timing)
  - current signal state
  - time until change
- MAP (Intersection Map)
  - geometry of the intersection

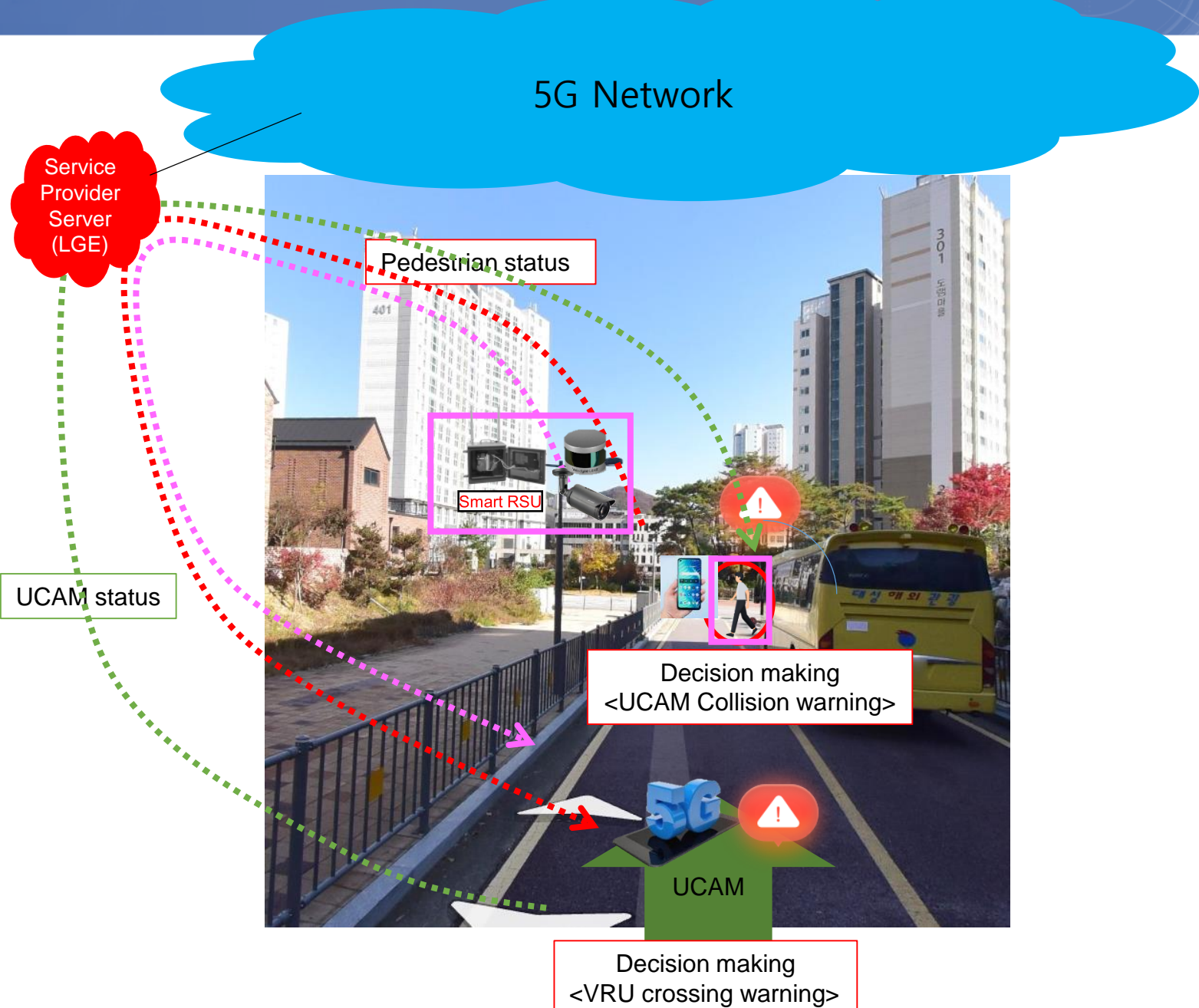




# Connected (Automated) Vehicle based on SPaT and MAP

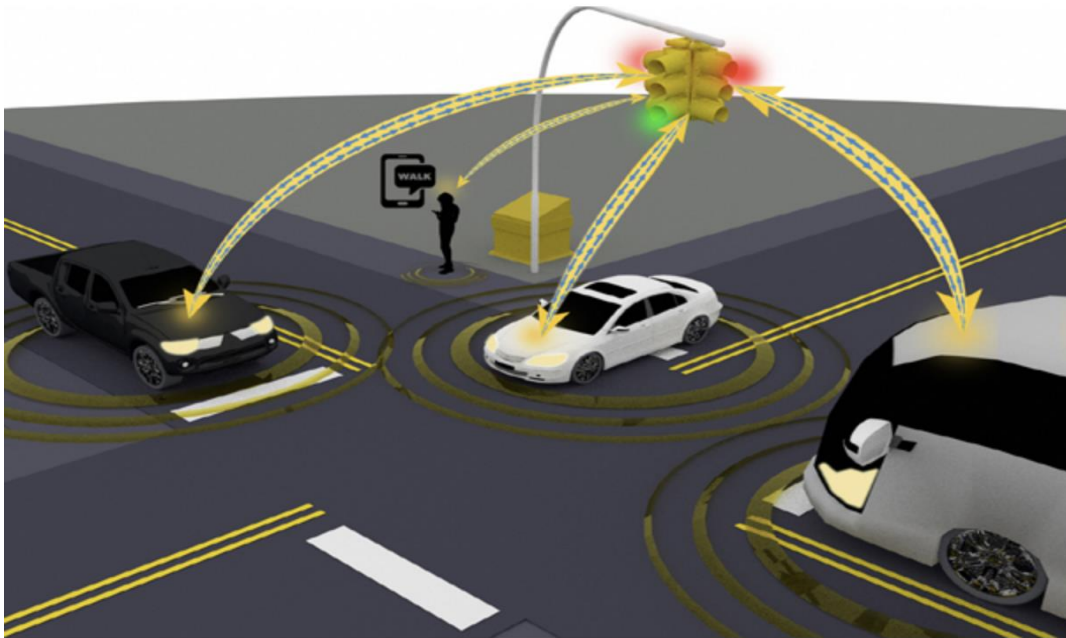


# Soft V2X (LGE) UC #1 VRU safety in School Zone



## Use Case for Agility

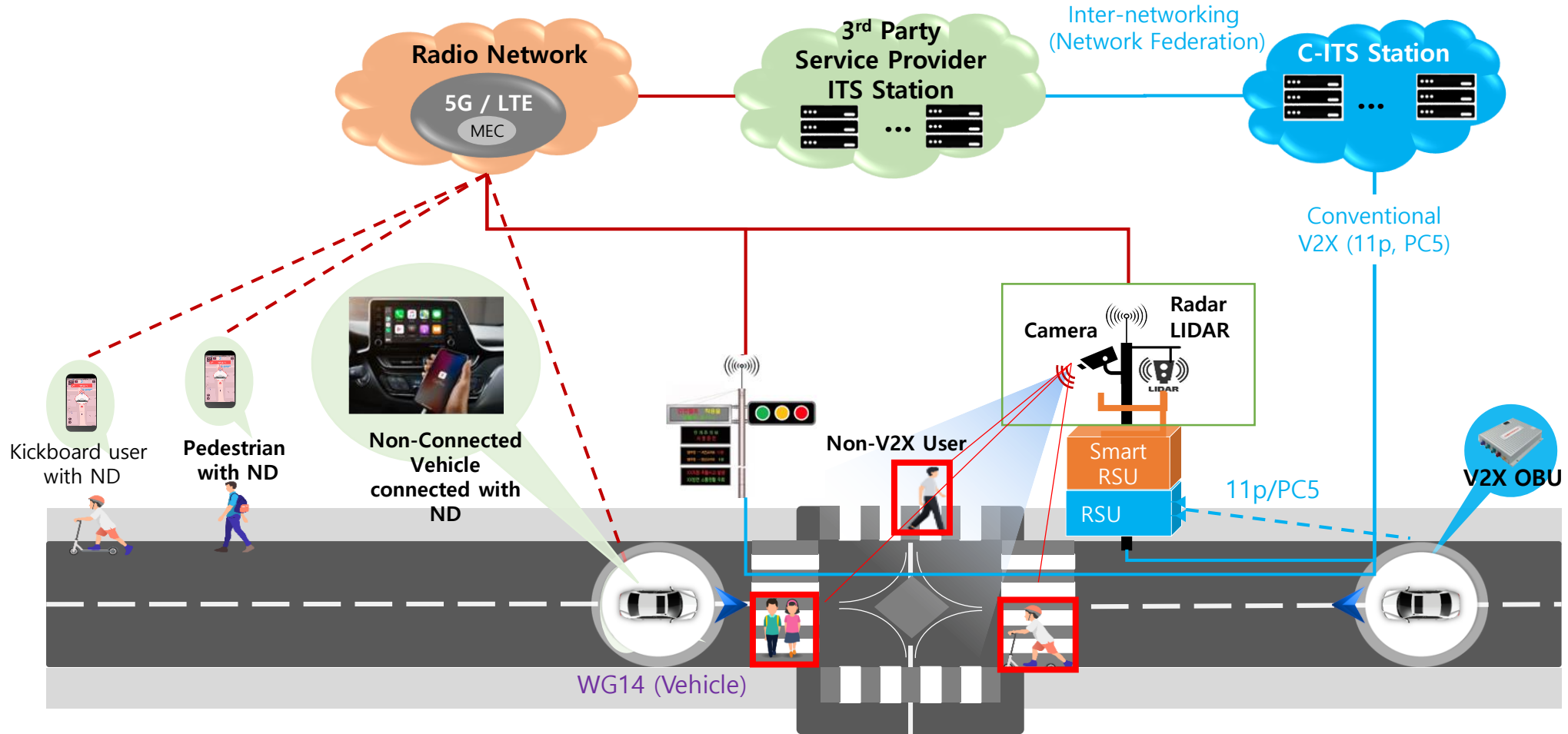
Traffic signals are an important part of the connected vehicle environment. They will help to prevent crashes by sharing messages between all nearby vehicles, infrastructure and even pedestrian cell phones.



Images courtesy of the U.S. Department of Transportation

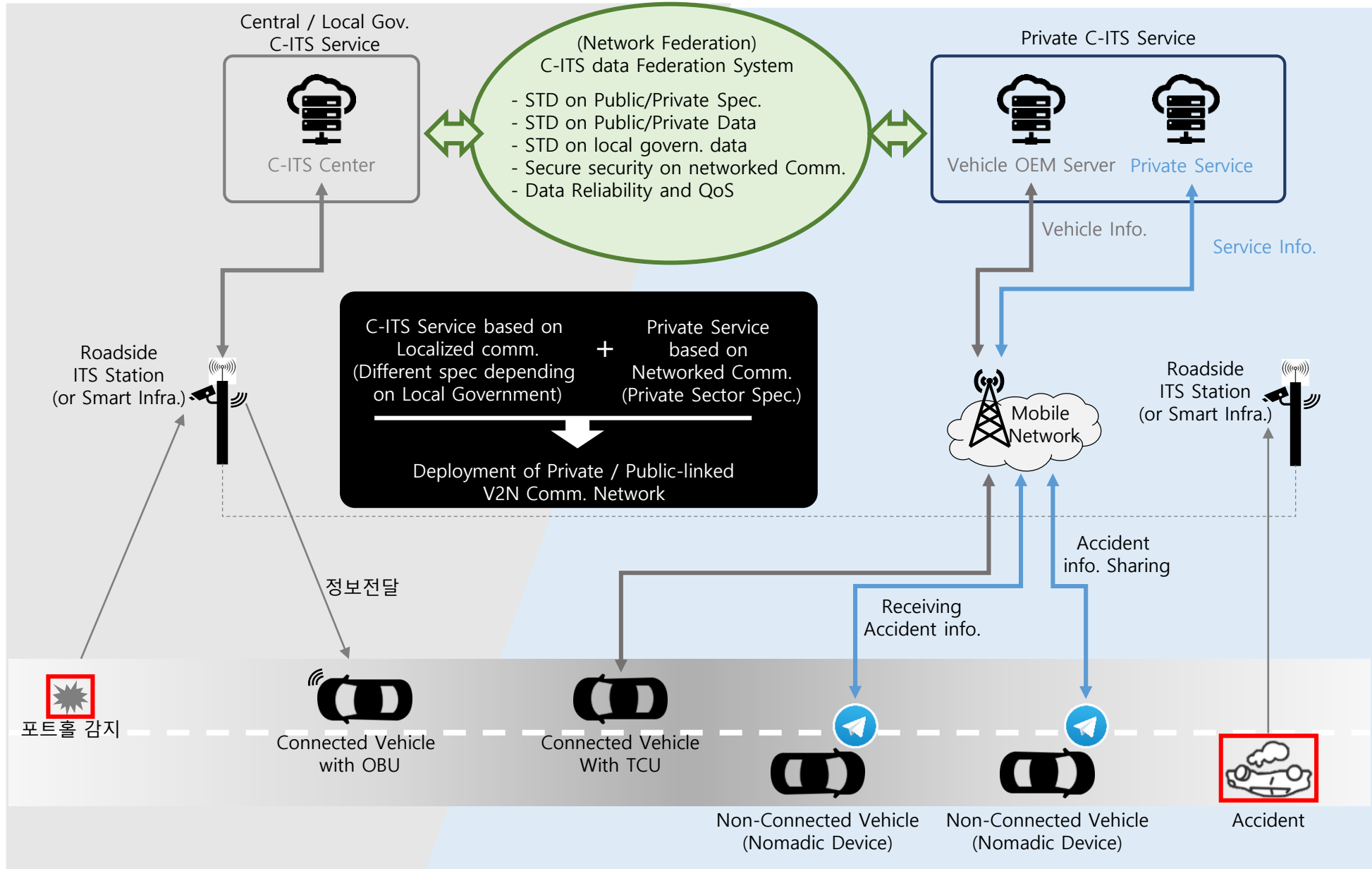


Images courtesy of LGE



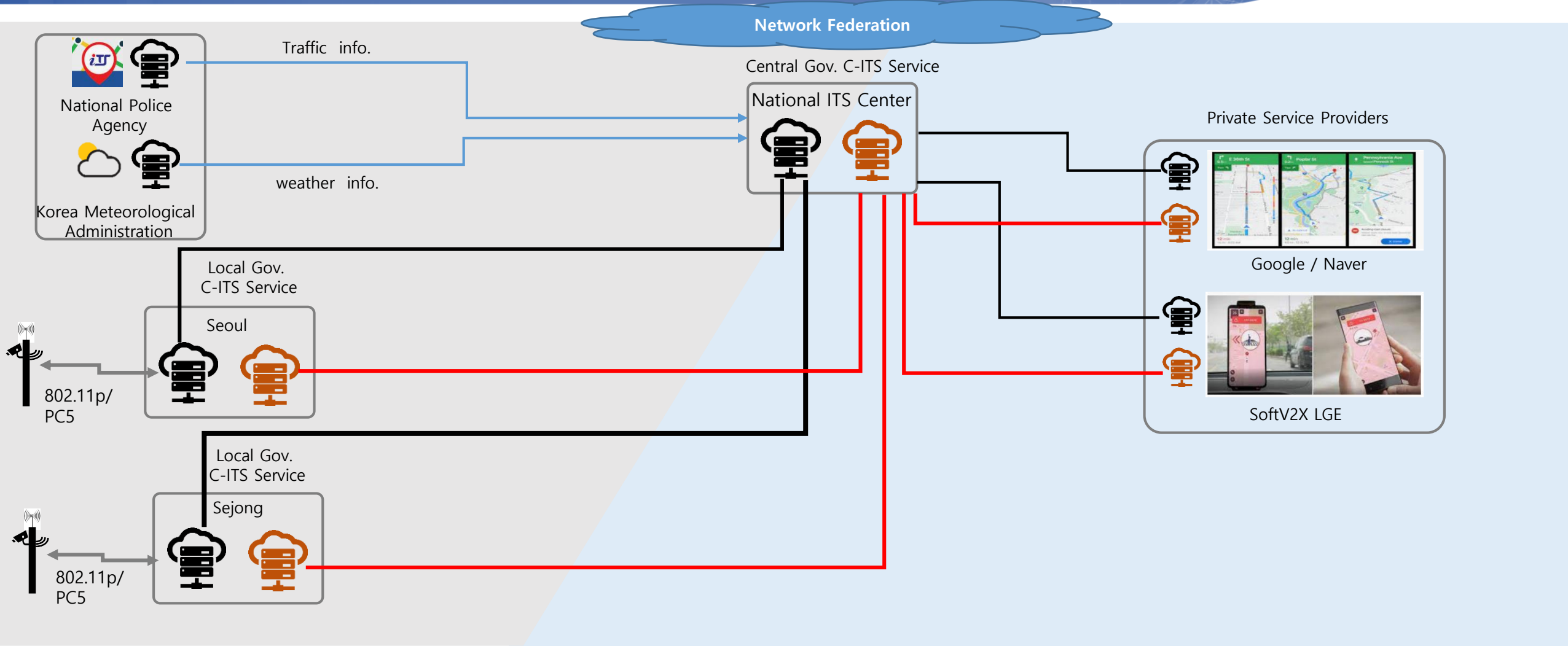



# How to federate C-ITS service between public and private sector






# C-ITS service between public and private sector



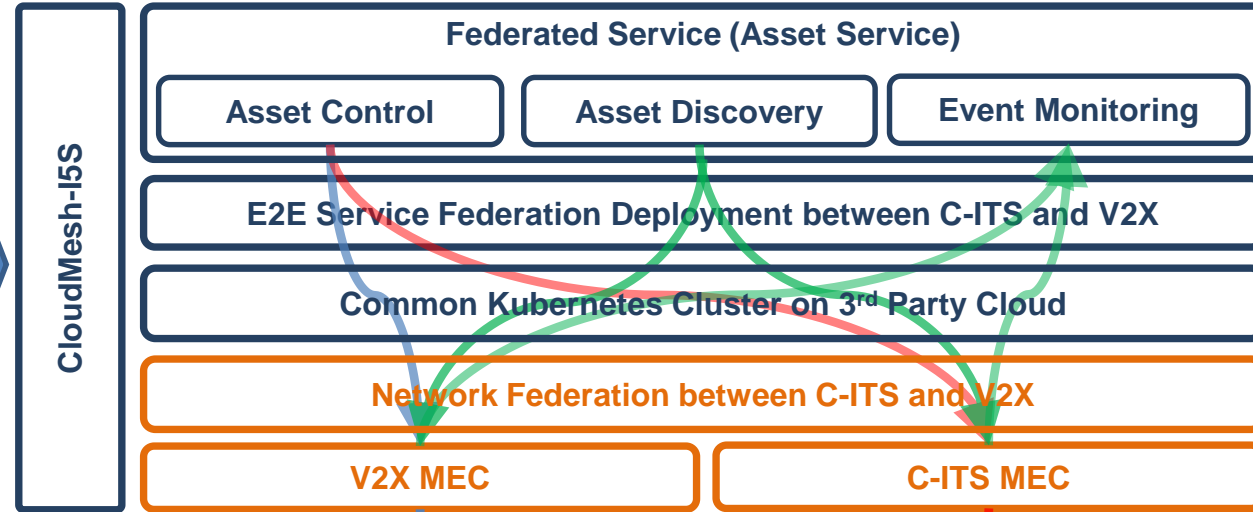
 Newly Added C-ITS center for the Federation

 Conventional C-ITS center

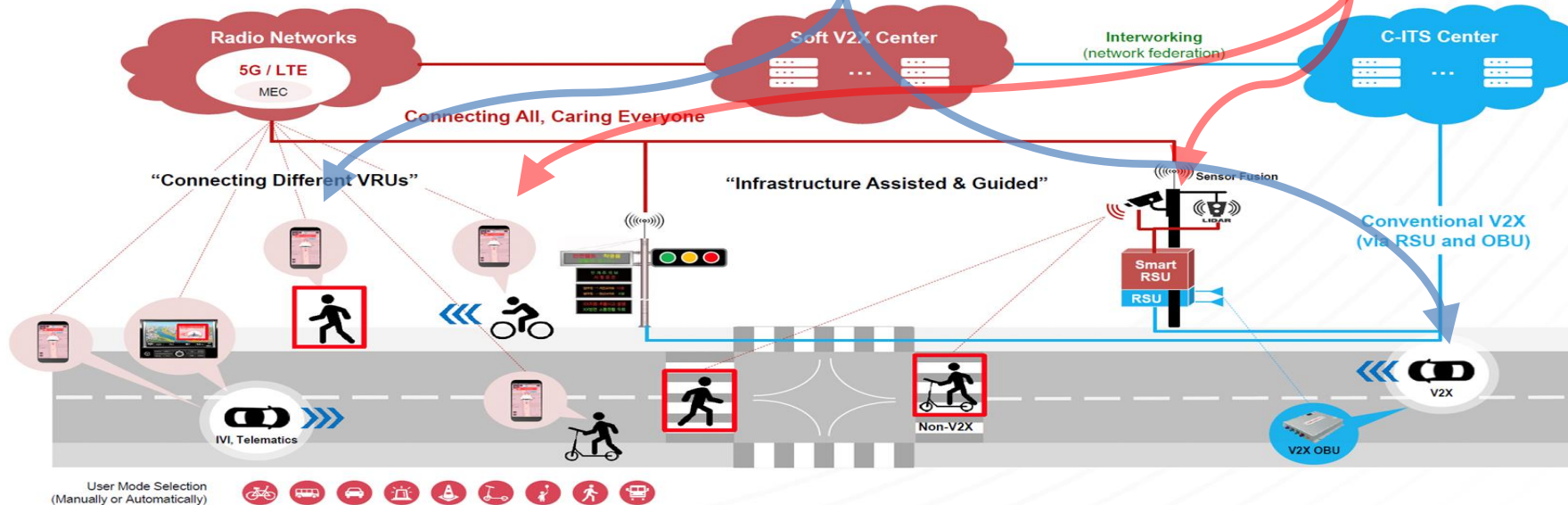
### 3. Disaster Response Service (PoC) based on C-ITS , V2X



Deployment of disaster response services



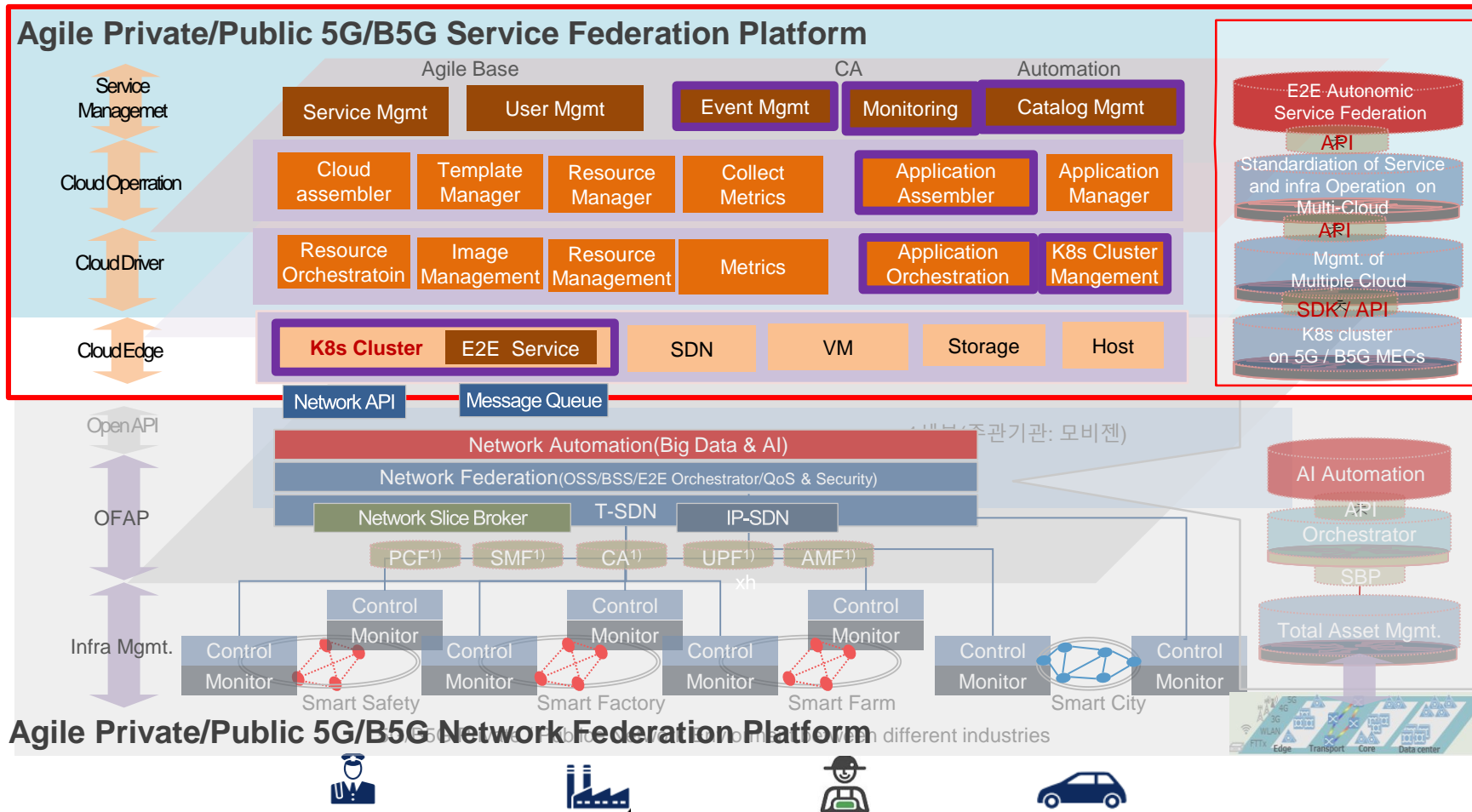
- Notification
- Asset Control
- Data / Event



# 1. 「 Cloud-based Open Autonomic Federation Platform – CloudMesh-I5S 」

- Provides a cross-industry E2E service federation in the 5G & Beyond Era, and a multi-cloud integrated operation platform for
- integrated management of multi-cloud resources.

## CloudMesh I5S Architecture



## Main Capabilities

- Orchestration of multi-cloud infrastructure (SDC, SDN, SDS on MEC), kubernetes cluster and application for a cross-industry E2E service federation in the 5G & Beyond Era.
- Design and build Service Federation Template and standard API for multi-cloud-based a cross-industry E2E service federation in the 5G & Beyond Era.
- Provides advanced user interface for lifecycle management of multi-cloud service
- Auto-Discovery of Assets (CCTV, drone, etc...) connected to the 5G Private Cloud