




2050 Metropolitan Transportation Plan

# Ohio-Kentucky-Indiana Regional Council of Governments

November 2019

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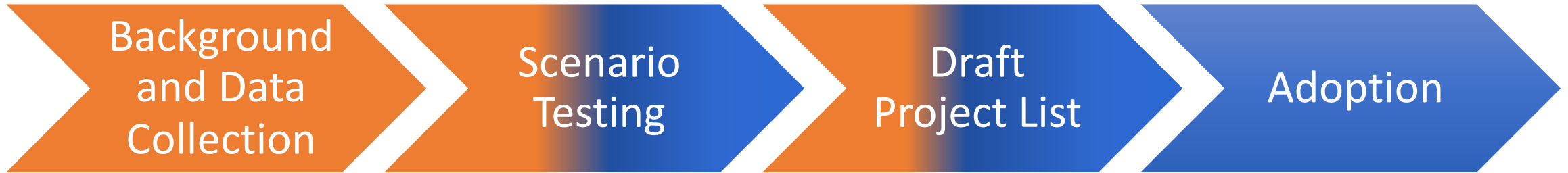
# Schedule

Summer 2019

Fall 2019

Feb. 2020

June 2020



# Today's Agenda

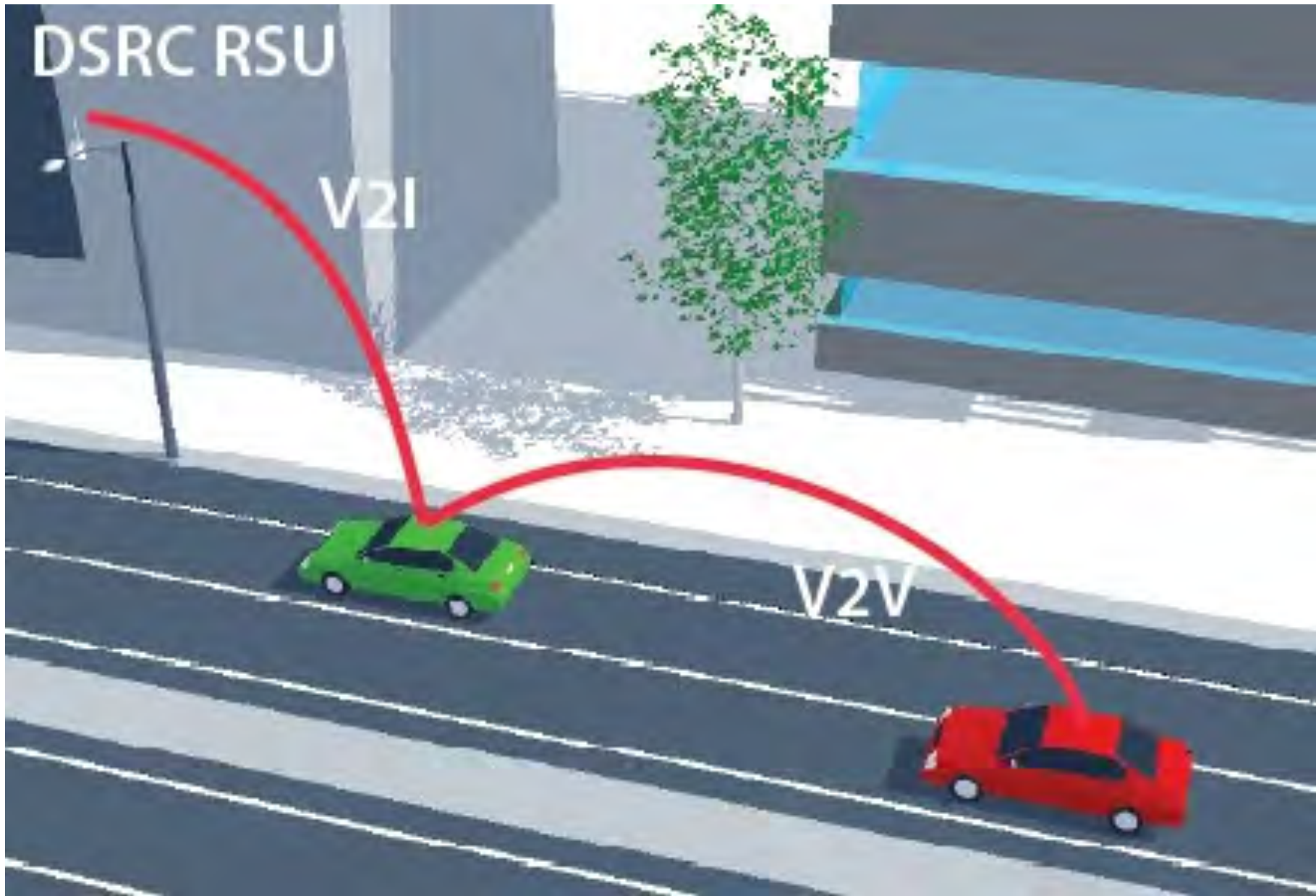
- ❖ Emerging Technologies
- ❖ Plan Scenarios

# DSRC vs Cellular

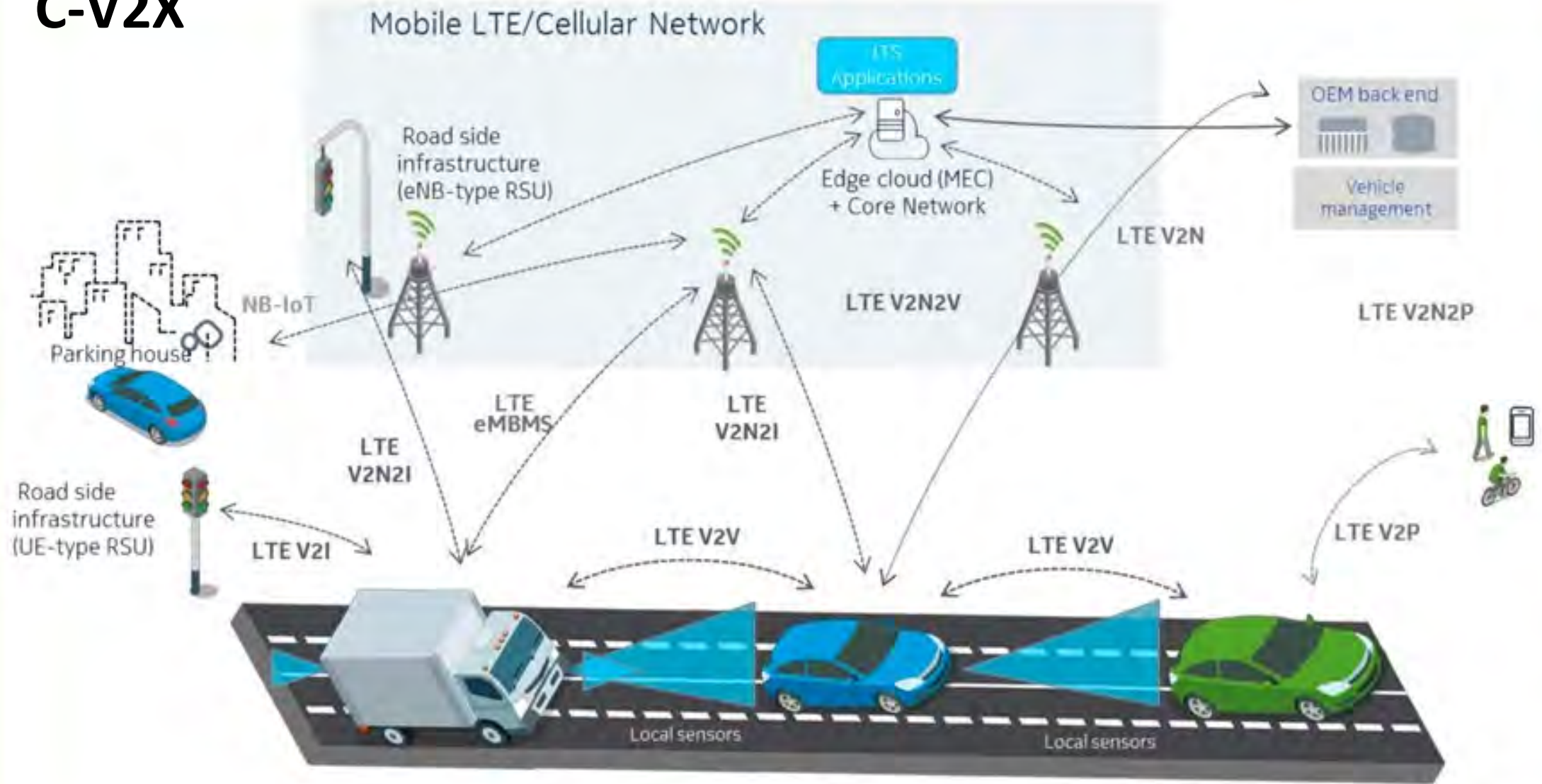


Source: Auto Talks





# C-V2X







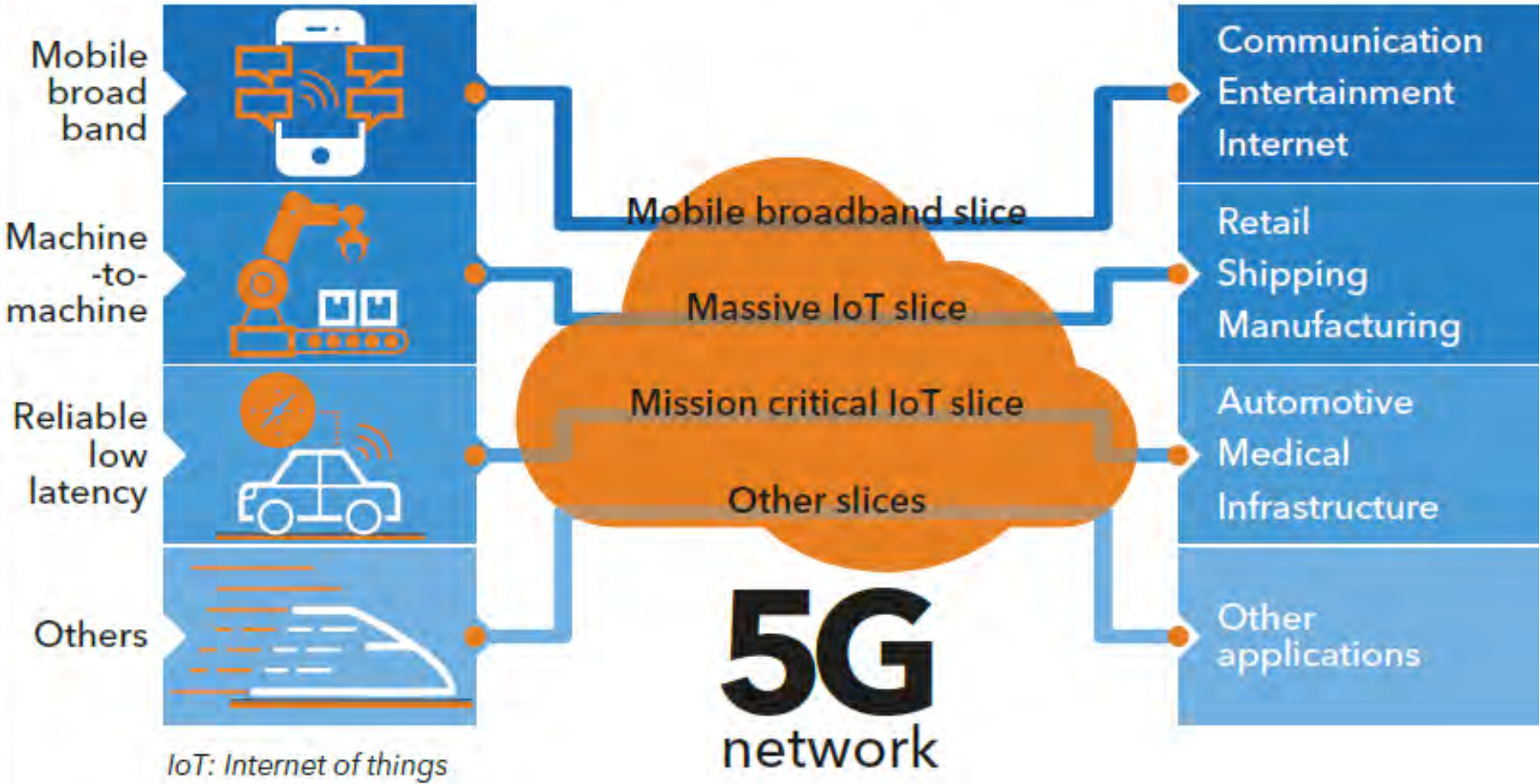
# 5G network slicing

5G network slicing enables service providers to build virtual end-to-end networks tailored to application requirements.



4G networks do not enable the range of services that the future requires. 5G will be faster and more flexible.

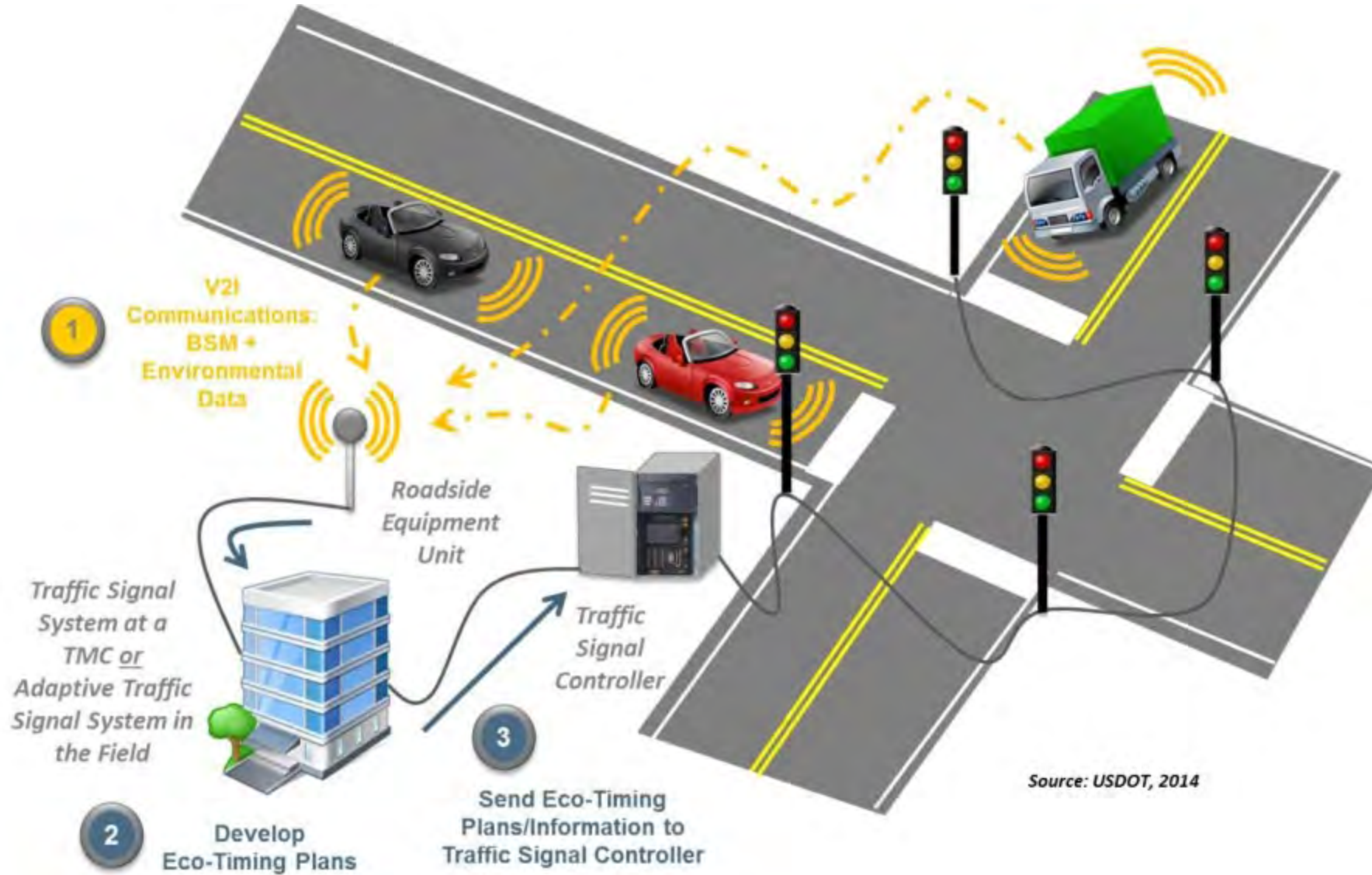
**4G**  
network







# Adaptive Traffic Signals



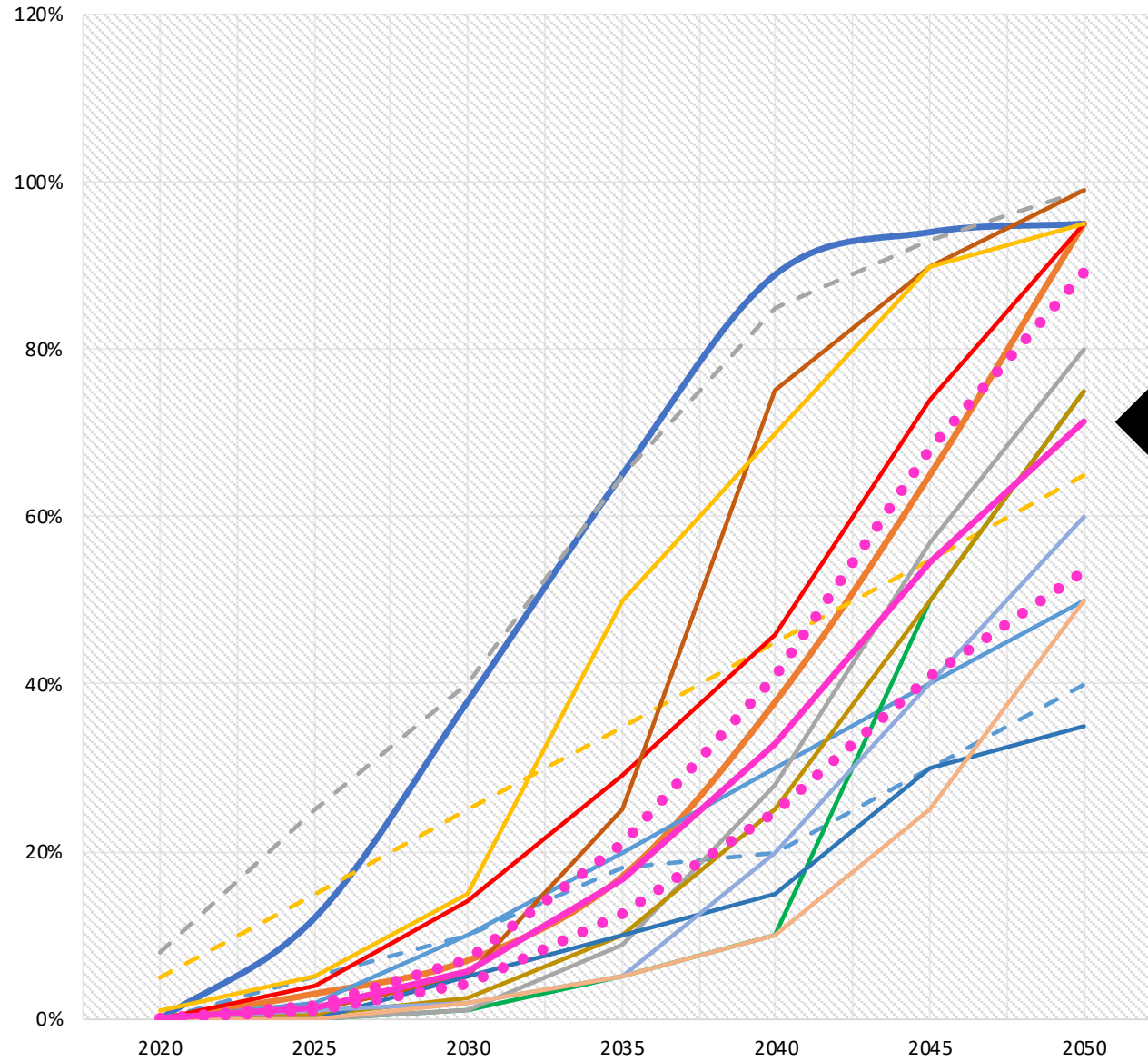
# Plan Scenarios

Key Variables that will impact future surface transportation:

- ❖ Proportion of fully autonomous vehicles in the traffic stream
- ❖ Amount of ridesharing
- ❖ Trip Generation



# CAV Saturation Rates by Year



70%

## Model Runs\*

1	2020 Base	Existing System	AV = 0%
2	2050 E+C	Include existing plus TIP	AV = 0%
3	2050 A	Ridesharing decreases	AV = 70%
4	2050 B	Ridesharing increases	AV = 70%

\*Additional intermediate years 2030 and 2040 will be evaluated for AQ conformity

# Potential Changes in Investment Mix

## Traditional Projects

Multimodal Capacity (road, transit, bike, ped, freight)  
Maintenance

## Transportation System Management and Operations (TSMO)

New system and corridor approaches to optimizing mobility

- Active Traffic Demand Management enabled by traditional technologies and emerging technologies
- Hard shoulder running, variable speed limits, ramp metering, V2X technologies enabled by DSRC and 5G and autonomous vehicles
- Adaptive traffic signals with detection, preemption, etc.
- Infrastructure to support CAVs.





# Thank you



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