

# Three Revolutions in Urban Transportation

## Business-as-Usual Scenario

### 20th Century Technology

Through 2050, we continue to use vehicles with internal combustion engines at an increased rate, and use transit and shared vehicles at the current rate, as population and income grow over time.



## 2 Revolutions (2R) Scenario

### Electrification + Automation

We embrace more technology. Electric vehicles become common by 2030, and automated electric vehicles become dominant by 2040. However, we continue our current embrace of single-occupancy vehicles, with even more car travel than in the BAU.



## 3 Revolutions (3R) Scenario

### Electrification + Automation + Sharing

We take the embrace of technology in the 2R scenario and then maximize the use of shared vehicle trips. By 2030, there is widespread ride sharing, increased transit performance—with on-demand availability—and strengthened infrastructure for walking and cycling, allowing maximum energy efficiency.



**Number of Vehicles on the Road by 2050**  = 250 million vehicles



**CO<sub>2</sub> Emissions by 2050**  = 500 megatonnes of CO<sub>2</sub>

