



Autonomous Vehicle and Ridesharing Background Information



Rapid Transit Implementation Working Group

February 21, 2019



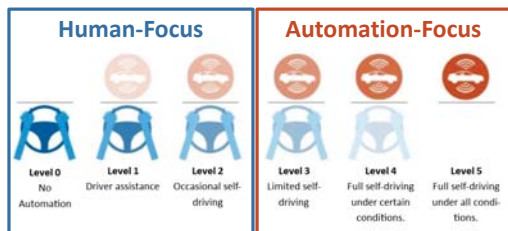
Autonomous Vehicles

- Ideally, **Autonomous Vehicles (AVs)**:
 - Are capable of “**sensing**” the surrounding environment;
 - Use AI, sensors, and GPS to **successfully and safely navigate a transportation system**; and
 - Provide **major improvements to road safety** by eliminating human driver error and distraction.



Automation Levels Defined

- The **Society of Automotive Engineers (SAE)** international standard that classifies vehicles automated driving systems from:
 - **Level 0 = No Automation** to **Level 5 = Full Automation**



Connected Vehicles

- Interrelated with AVs, **Connected Vehicle (CV)** technology provides up-to-date information to vehicles through a **variety of communications channels**.
- Types of CV technology include:
 - **Vehicle-to-Vehicle (V2V)**
 - **Vehicle-to-Infrastructure (V2I)**
 - **Vehicle-to-Everything (V2X)**



Ridesharing and MaaS

- An app that **creates, manages, and pays** for trips.
- Subscribe to **travel packages** tailored to customer needs.
- MaaS include services such as:
 - **Transit integration;**
 - **Ridesharing and taxi integration;**
 - **Car sharing/rental integration;**
 - **Bicycle sharing integration; and**
 - **Other third-party service integration.**



Expert Speakers



Barrie Kirk, B.Sc., P.Eng.
Executive Director,
CAVCOE



Edwin Olson, Ph.D.
CEO, May Mobility



Dr. Amer Shalaby, P.Eng.
Associate Director,
iCity Centre

