

First and Last Mile

Transit Oriented Development works well for communities within ½ mile of transportation hub, the walking distance for an able bodied person in 10minutes. Autonomus Low Speed electric vehicles offer an environmentally friendly, economically viable, and scalable approach to expand this to 2miles in 10 minutes. (12½ Sq miles), servicing a community of 12½ square miles.



Vehicle Selection

Autonomus System Selection

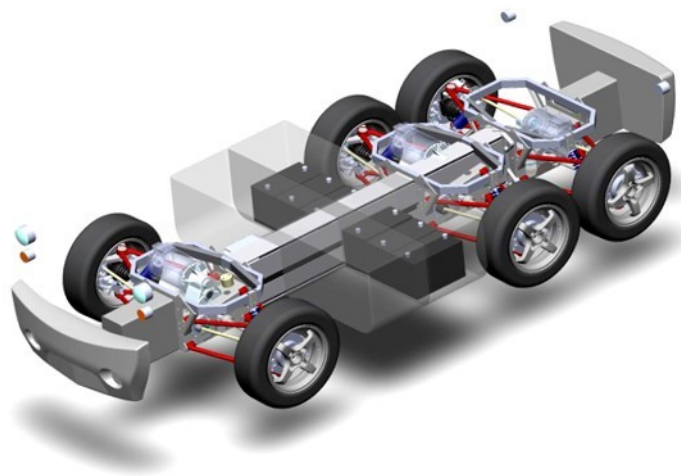
Benifits of Deployment

Affordability

A major benefit of a fully autonomus vehicle is the reduction in cost achieved by eliminating the operator and all onboard equipment necessary for human operation (steering wheel, pedals, gauges, and others).

Modularity

Further, by incorporating an electric AV, the complexity of the vehicle propulsion system is further simplified, potentially reducing maintenance costs.



Charging and Maintenance

The PEV charging market is in an early stage and therefore highly volatile. There is uncertainty regarding which technical standards and business models will succeed.

Using contactless inductive charging system will minimize human intervention. These charging stations can be placed near transit hubs where the vehicles can also be stored and serviced.

Challenges to Deployment

Payment System

Common payment platform.

Civic Engagement and Education

Barriers to consumer adoption of EAVs include lack of education about the cars and their capabilities.

Operational Models

Public or Private

Deployment

Demonstration, Pilot, testing and deployment

Connectivity V2X

Vehicle-to-everything (V2X) communication is the passing of information from a vehicle to any entity that may affect the vehicle, and vice versa. It is a vehicular communication system that incorporates other more specific types of communication as V2I (Vehicle-to-Infrastructure), V2V (Vehicle-to-vehicle), V2P (Vehicle-to-Pedestrian), V2D (Vehicle-to-device) and V2G (Vehicle-to-grid).

Bicycles

Columbus, OH: 30 July 2013, CoGo Bike Share started. It opened with 300 bikes and 30 docking stations in downtown and surrounding areas.

Portland, OR: 19 July 2016 Portland launched Biketown with 1,000 GPS-enabled smart bikes sold by Social Bicycles and operated by Motivate with five-year naming sponsorship by Nike. With 100 stations covering 8.1 square miles concentrated in downtown Portland, the Pearl and Northwest Districts.

Walking

Open Sidewalks: <https://www.opensidewalks.com/>

Other Vehicles

Wheelchair, segway, etc.

Next Steps and Conclusions