Future Powertrain Systems

Energy Diversity
- electrification, natural gas, gasoline

Powertrain Integration

Connected Systems

Intelligent Transportation System

Safety
Possible Future Variants to Commercial Freight Transportation

- Electrification trolleys
- Highly autonomous driving
- Large truck trains
- Independent UBER-model truck cargo operations
- Cargo to consumer transported without LH trucks
- Traditional large dedicated fleets
Tailwinds and Headwinds

**Opportunities**
- Renewable
- Criteria emissions
- Low GHG Fuel
- On site production
- Perception

**Barriers**
- Infrastructure
- System Costs
- Renewable Energy
- HC price
- Uncertainty