Kevin Leary – Founder/CEO
www.powerhydrant.com

presenting to
Autonomous Vehicle Working Group

PowerHydrant LLC
11 Elkins St., Boston MA 02127, Suite 310
AVs and EVs → The Virtuous Connection

- EV Mandate in Europe/Asia
- EVs in Urban Heavy Transport/Transit
- Electricity is Everywhere
- 30% EV by 2030
- AVs and EVs: Similar Adoption Paths
- AVs need Autonomous Chargers

Sources: PWC, IHS, Navigant, Morgan Stanley, Bloomberg, EPRI, Chunka Mui
EV Infrastructure Challenges

Network Planning
Heavy Cables
- Misuse / Wear -- Non-permanent
- Inconvenient
- Wireless Charging is Self-limiting

Weather Issues

Multiple Vehicle Charging
- Utilization Optimization
- Taxi Bot Warehousing, Ground-drones

Catenary/Pantograph Systems
EV Charging Power Trends

Sources: CCS, Porsche, Tesla, EPRI
SCARA Product

Outdoor, Weatherproof, High-power Shareable, AC, 3-phase, DC → 350 kW+
Kei-cars → LDV → Buses → Trucks
Drive Over Product

Indoor Only, AC, 3-Phase, DC 100 kW
Universality

PLACE
- Any Garage > All-weather Outdoor
- Simple Installation, No Alignment Concerns
- Any Vehicle from Any Installation Management

VEHICLE
- Vehicle HW is Simple, Lightweight, Low-cost
- Trucks > Buses > AVs > EVs > UGV

MODE
- L1/L2 > 350kW and beyond
  - AC or DC, VGI and V2G
  - Highest Efficiency
- Any Vehicle, Any Facility, Any Weather
  - Any Power Level, Low-cost
  - Infrastructure Permanence and Safety

OPERATOR