✓ 50000 lives saved
✓ Twice Access
✓ Electric Vehicle Adoption
✓ Independence
✓ Connectivity
✓ Ubiquitous Mobility
✓ Faster, cheaper delivery
✓ Economic Renaissance
✓ Clean Air; Climate Change Solution
Vote No!

75%
What it feels like to a city official or planner?
Equity, Access, Impact

• Equity— who wins and who loses— how can we tilt the table

• Access to workers and workforce versus job loss and bad skill match

• Impact— costs revenues, congestion, disrupts law enforcement, safety, cyber security
<table>
<thead>
<tr>
<th>01</th>
<th>02</th>
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<th>06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve all/Expand Choice and Build More Robust/Resilient System</td>
<td>Test/Redesign/Clean Up/Upgrade Street Tech</td>
<td>Protect Vulnerable</td>
<td>Plan to pay</td>
<td>Avert Grid Lock</td>
<td>Deal with Job Loss/Create New Jobs</td>
</tr>
</tbody>
</table>

Qs or As?
Transit Applications

1. First and Last Mile
2. Connectivity
3. On demand
4. Shared Mobility shared ownership
5. Dedicated Lane-Fixed Route
6. Micro (Keep it Micro)
Funding and Finance

• Vehicle Miles Travelled (VMT) (???)
• Expanding advertising
• Charging a convenience fee for mobile fares
• Selling subscriptions
• Commuter stores
• Requiring providers National Transit Data (NTD) reporting
• Tax Increment funding
• Value capture
• Monetizing data created by use of the publicly funded infrastructure
• **Congestion pricing road & curbside**

How much will it cost? What revenue sources will work? How does pricing work? Who pays?
Transportation Planning Upended.....

- Cut Planning Cycle
- Align Plans
  - State/Regional/Local
  - CLRTP/RTTP/TDP....
  - Budget
  - Cross Sectors
- Scenario Planning & Modelling
- Testing Varied Assumptions
- New Demand Curve
Fundamentals

- Adoption of tech to meet current objectives of safety, livable communities, innovation hubs, access
- Research and analysis to assess and adjust practices and policies
- Understanding job loss/job shift/preparing the workforce
- Early, effective, sustained community engagement and public education
- Partnerships within public sector agencies, and between the public and private sector to design, plan, fund, and manage mobility services for all
- Adaptive, flexible, planning that cuts across internal and external stakeholders
- Using transportation, land use, and legal tools you have now and creating the ones that you need
Let’s Keep Talking…..

- Kelley Coyner, JD
- Schar School of Policy and Government
- George Mason University
- Mobility E3
- 571-641-9132
- KCoyner2@gmu.edu
• Start with Smart; Plan for Connected Vehicle
• Focus on the Road--- Passenger and Freight
• Shift from Transportation to Mobility Model
• Passenger Vehicles: “Transit” Applications
  Fleets, Shuttles vs. Coaches, Shared Mobility
• Freight/Delivery: Distinguish between Long haul versus First Last Mile
PHASED SHUTTLE DEPLOYMENT

Phase I: Testing & Demo(s)
- Proving Ground(s)
- Local Demo/Pop Up
- Showcase

Phase 2: Pilot(s)
- Private Service Rds & Garages
- Residential Connections w/I CC
- Transitway Services

Phase 3: Service with one site
- Loop in Business District
- Employee Shuttle
- Last/First Mile Connections

Phase 4: Service Connecting Facilities and Jurisdictions
- Transportation Hub Connections
- Connect to other Jurisdictions
nuTonomy/Lyft partnership
Downtowner
NAVYA 2 week pilot Las Vegas
Olli National Harbor, Berlin
ARIBO/Fort Bragg. Six passenger robot-driven carts
EasyMile, based in France opens HQ in Denver
Uber in SF and Pittsburgh
Waymo – minivans (etc) in Arizona
Pittsburgh Uber
10 Proving Grounds
Tampa
Greenville
Disney
Samsung
Robotics Research (retrofits)