RSM Background

• Simon - computational intelligence platform based on fuzzy logic

• Designed to manage urban traffic intersections in real-time, live data gathered at the intersection

• Hardware and data agnostic – leverage many sensors (radar, infrared, etc) and data sources

• Live, comprehensive simulations of intersection environments and transportation zones

• Demonstration projects with public sector – provide open access to data and analytics

• Key Uses:
  o Evaluate intersection efficiency – wasted green signals, etc.
  o Transportation planning
  o Vision Zero – safer environments for pedestrians
  o Data and analytics for connected/autonomous vehicles (C/AVs)
  o Route planning and wayfinding
  o Smart logistics
  o Public transit prioritization
  o Determining signal system performance
  o Platform for intelligent cities
Dashboard View
Current AV Landscape

• Automotive industry in transition
• Extensive investment in auto tech – traditional OEMs and startups
• Assumption these vehicles will not rely on infrastructure long-term, negotiate priority on their own
• What happens now?
  • Integrate with existing traffic environments before C/AV technologies are ubiquitous
• Safe, efficient deployment – not “one company, one technology” solution

• Pathways for collaboration –
  • Comprehensive solutions from multiple private sector partners
  • Public/private partnerships – new avenues for engagement
Importance of Intelligent Infrastructure

- Addresses the gap – now to critical mass of AV’s
- Generate efficiencies and higher levels of safety for all roadway users – add value for everyone
- Negotiate priority for vehicles regardless of connectivity
- Include cities in this transition – very smart vehicles, outdated infrastructure
- Reduce congestion, pollution, address systemic traffic and transportation issues
Role of Cities, Agencies, Legislature

- Ensure that C/AV deployment increases public benefit – proactive stance

- Injection of core values – DOT Smart City Challenge example
  - Increasing equity & connectivity, reducing pollution, enhancing quality of life for all residents

- Policy developers, technology influencers

- Identify how technology can help meet public sector mandates

- Living labs – test zones in existing road networks
Policy Thoughts

• Focus on the important issues – safety
• Broad policy objectives – cannot address all issues now, smart phone analogy
• Pave the way for demonstration – product iteration occurs in a live environment, cities and agencies have a seat at the table
• Re-thinking PPP’s – how can private sector assist with Cap Ex?
• Procurement – new policies to encourage owner/operators to experiment with technology, address risk
• California leadership – stance to encourage innovation
  • Guiding legislation for AV pilots
  • Encouraging individual cities and municipalities – providing policy guidance, avoiding policy ‘patchworks’
Thanks!
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