

ADVANCED TECHNOLOGIES & CHALLENGES TO PUBLIC TRANSPORTATION AGENCIES


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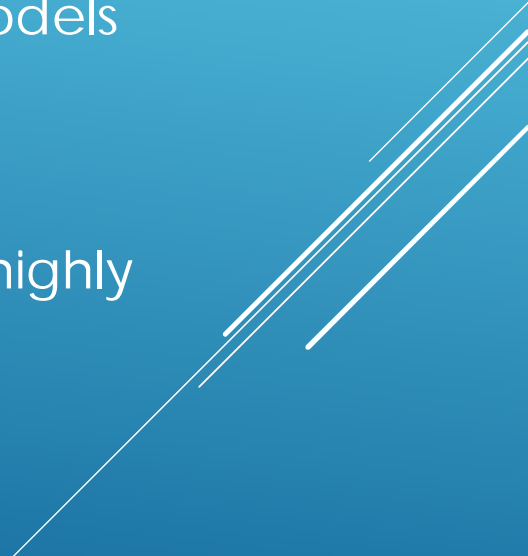
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Problem Statement

- Flooded with Information about how technology is changing our world
 - Huge transportation problems but solutions addressing a sliver of the problem
 - What does it mean to my organization.
 - Most organizations in the same boat
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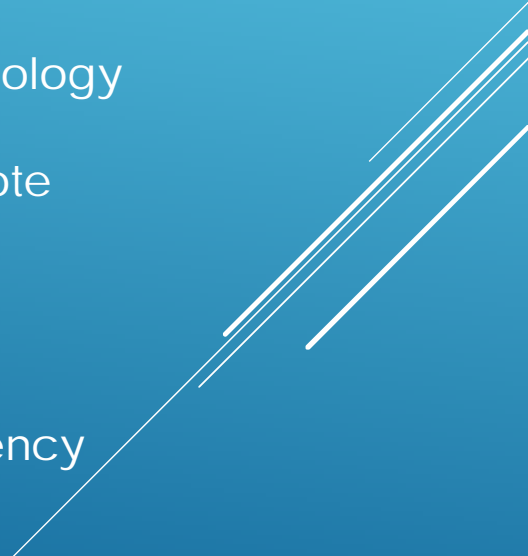
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Major Disruption of these Advancements for public agencies

- Change in mobility and vehicle ownerships models
 - Erosion of revenue and funding sources
 - Make public agencies more transparent and highly accountable
 - Provide exponentially more data
 - Require radical change in the workforce
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Guidelines for Public Transportation Agencies

- Principle 1: Change the organizational mindset
 - Principle 2: Pay close attention to current trends in technology
 - Principle 3: Focus on legislation & regulations and promote standards development
 - Principle 4: Strategically plan and invest
 - Principle 5: Increase organizational transparency, efficiency and accountability
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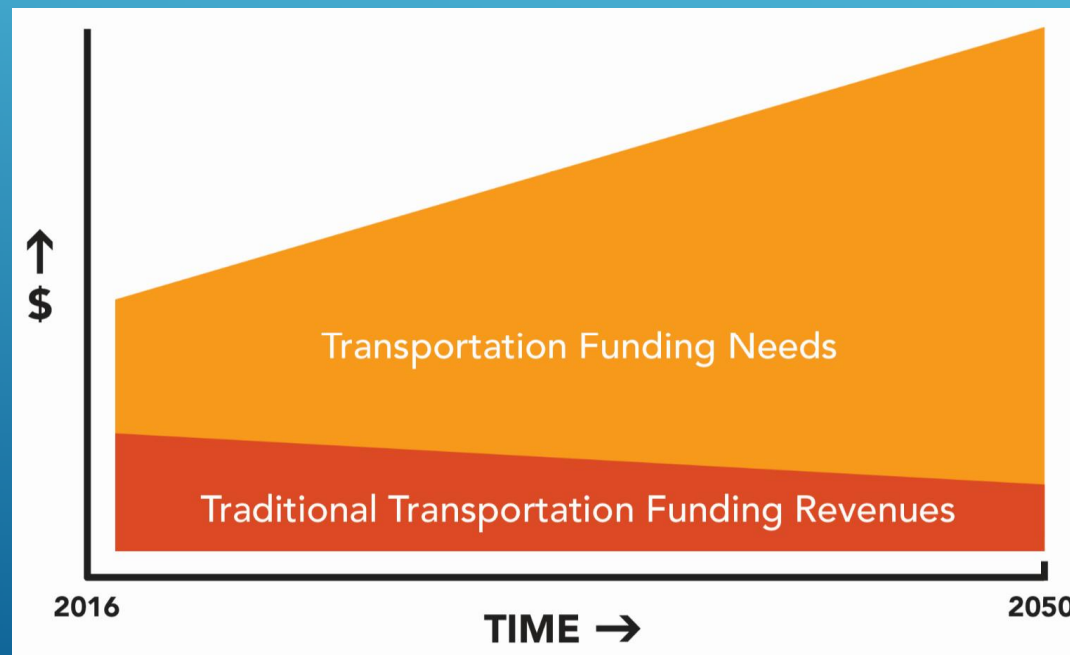
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Principle 1: Change the organizational mindset

- Public agencies should focus on two areas:
 1. How we look at resources
 2. How we look at problems

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Principle 1: Change the organizational mindset – How we look at resources



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Principle 1: Change the organizational mindset – How we look at problems

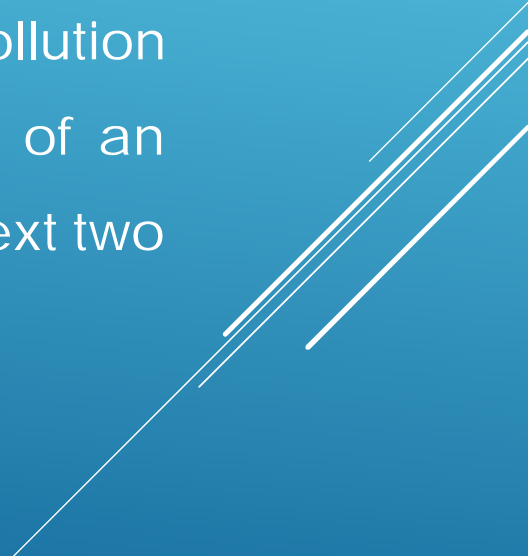
Fundamental transportation problems

- Traffic crashes and associated loss of life, injury and property damage
 - 33,000 fatalities in the US, 25,000 fatalities in Europe
- Congestion and associated delay
 - Billions of hours in congestion and Billions more in higher costs
- Pollution from vehicles
 - Thousands of metric tonnes
- Lack of Freedom to travel regardless of mode or type of user

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Principle 1: Change the organizational mindset – How we look at problems

A society that is crash free, delay free and pollution free, with freedom to travel anywhere is more of an achievable reality and can happen within the next two decades.

A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against the blue background.

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Principle 2: Pay close attention to current trends in technology

1. Safety features in new vehicles
2. Communications technology
3. Electrical vehicle technology
4. Software centric vehicles
5. Mobility As A Service (MaaS)
6. **Data As A Service (DaaS)**
7. **Drones**
8. **Artificial intelligence**
9. **Autonomous vehicles**
10. **Specialized expertise & reduction in work force**

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Principle 3: Focus on legislation & regulations and promote standards

- Passing legislation and regulations regarding including safety features into all vehicles
- Providing incentives to accelerate the development and deployment of aftermarket technologies
- Passing legislation and regulations regarding building transparency and accountability mechanisms and measures for security, privacy and data mining.

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Principle 4: Strategically plan and invest

- Planning horizons
 - ITS infrastructure investment
 - Data collection, storage & analytics services
 - Specialized operations and maintenance services
 - Capacity modification services
 - Recruiting, training and development
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Principle 5: Increase organizational transparency, efficiency and accountability

- Technology impacts every aspect of an organization
- Public, vendors, media etc., will expect to have quicker turnaround times given the power of technology.
- More emphasis on accountability
- More fiercer competition for funding and resources

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Pitfalls for Public Transportation Agencies

- Chasing new technologies instead of solving the transportation problems
 - Accepting assumptions and blindly following
 - Having an exaggerated sense about our relevancy
 - Regulating the power of technology instead of unleashing it
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Here's What I want to Leave you With

- There is not one individual, firm or organization that knows everything or has answers to all of the questions.
- We all need to work together collaboratively & challenge our thinking
- Technological advancements are very real and will happen.

Individuals & organizations of the 21st Century need to be flexible to change. Don't bet on your strategy, bet on your ability to recognize the need for change and to change quickly and effectively
- Navin

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