

# Program Advisory Committee

## January 12, 2011



# Overview

- Transit Ridership Trends
- ITS Strategic Research Plan
- Technology Applications
- ITS Benefits
- The Future of Transit



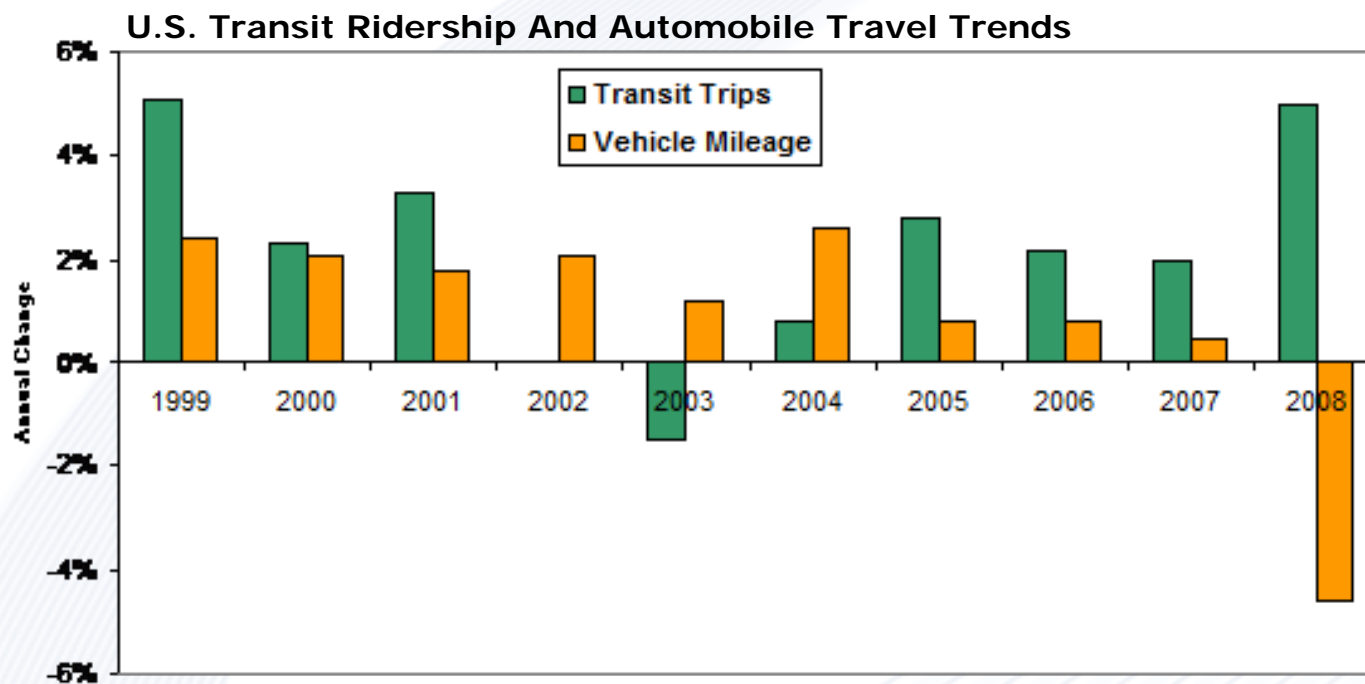
## Transit ITS

- The transit industry in the United States consists of over 140,000 vehicles, 48 billion passenger miles of travel, and \$8.5 billion in passenger fares. Over the past 15 years, transit ridership has grown by 31 percent—faster than either highway or air travel.
- Transit ITS services include a number of ITS applications that can help transit agencies increase safety and security, as well as enhance the operational efficiency of the Nation's transit systems.





## Transit Ridership Trends

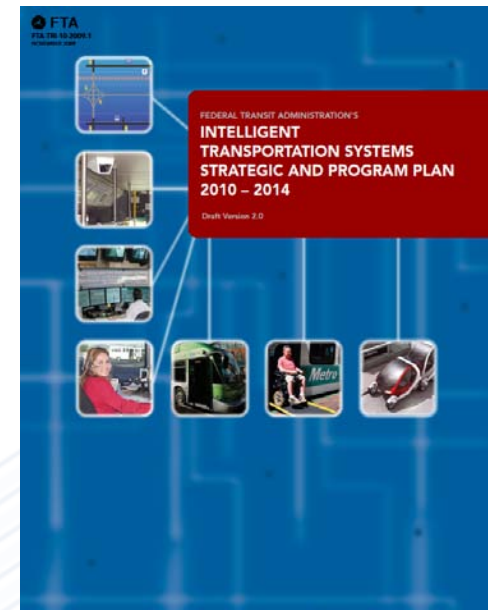


SOURCE: Victoria Transport Policy Institute, Todd Litman - 2009



# ITS Strategic Research Plan

- Purpose:
  - Define a solid ITS research agenda
  - Build accountability by agreeing on targets
  - Provide roadmaps to guide oversight
- Offer a 20-Year Vision for transit and ITS
- Document a 5-Year Plan of Investments and Metrics for measuring success





# ITS Strategic Research Plan

- 5-Year Research Agenda based on FTA Strategic Goals
- FTA Investments divided among goal areas *and* research functions
- Plan focuses on achieving outcomes without being rigid about specific project definitions



## 5-Year Goals

Modern 21st Century Transit Systems, achieved through:

<b>DOT/FTA Strategic Goal</b>	<b>FTA ITS Goal</b>
<ul style="list-style-type: none"><li>• Safe and Secure Operations</li></ul>	<ul style="list-style-type: none"><li>• Safety</li></ul>
<ul style="list-style-type: none"><li>• Connected and Integrated Systems</li></ul>	<ul style="list-style-type: none"><li>• State of Good Repair and Livability</li></ul>
<ul style="list-style-type: none"><li>• Effective and Efficient Operations</li></ul>	<ul style="list-style-type: none"><li>• State of Good Repair and Economic Competitiveness</li></ul>
<ul style="list-style-type: none"><li>• Informed Agencies with Empowered Workforces</li></ul>	<ul style="list-style-type: none"><li>• State of Good Repair</li></ul>
<ul style="list-style-type: none"><li>• Environmentally-Sustainable Strategies</li></ul>	<ul style="list-style-type: none"><li>• Livability and Environmental Sustainability</li></ul>
<ul style="list-style-type: none"><li>• Accessible Services for All Populations</li></ul>	<ul style="list-style-type: none"><li>• Livability</li></ul>
<ul style="list-style-type: none"><li>• Customized Services that Expand Ridership</li></ul>	<ul style="list-style-type: none"><li>• Livability</li></ul>





## Transit ITS Applications

- Universal Electronic Payment



- Park-and-Ride Improvements

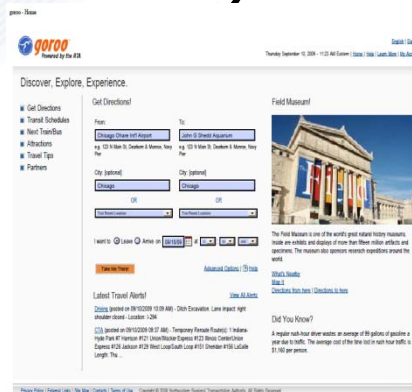






## Transit ITS Applications

- Traveler Information Systems



- Human Services



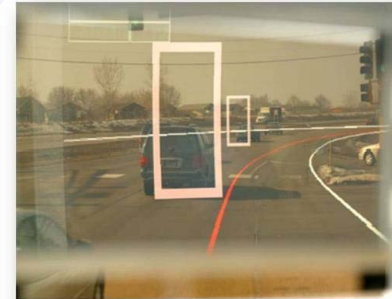
Embarcadero Area	Departing at	Arriving at
Daily City	5, 11, 19 min	BART Platform
Dublin/Pleasanton	9, 23 min	BART Platform
Fremont	3, 15, 30 min	BART Platform
Milbrae	+2, 15, 26 min	BART Platform
Pittsburg/Bay Point	8, 10, 22 min	BART Platform
Richmond	5, 20, 35 min	BART Platform
SF Airport	7, 22, 37 min	BART Platform
F to Castro and Market	6, 22 min	Market & Drumm
J to Fishermans Wharf	6, 9, 19 min	Main & Market
K to Balboa Park	7, 13 min	Muni Platform
L to San Francisco Zoo	+2, 4, 13 min	Muni Platform
	+2, 3, 20 min	Muni Platform

Page 1 of 3 Call 511 for free MUNI departure times. 6:01 p.m.



## Transit ITS Applications

- Active Safety Systems



- Transit Operations

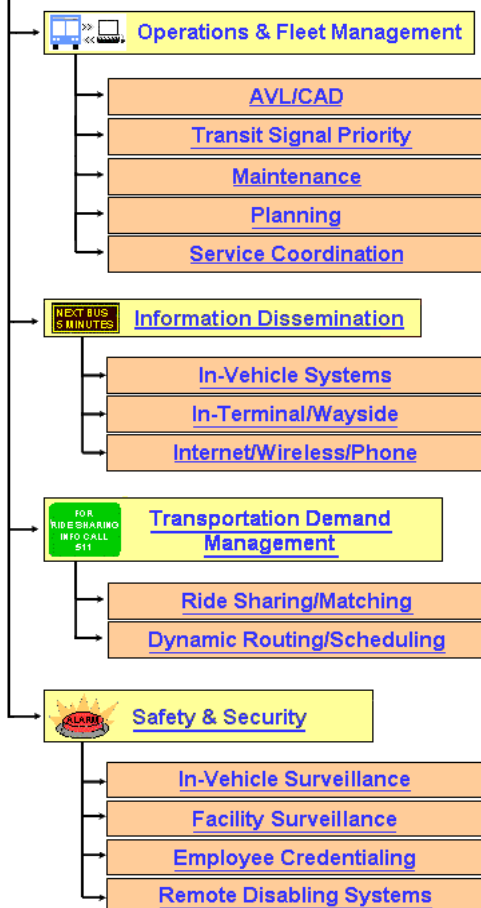




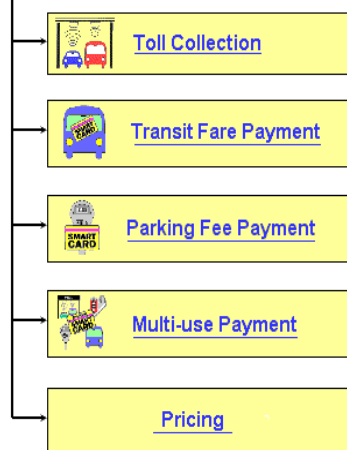


## ITS Benefits Taxonomy

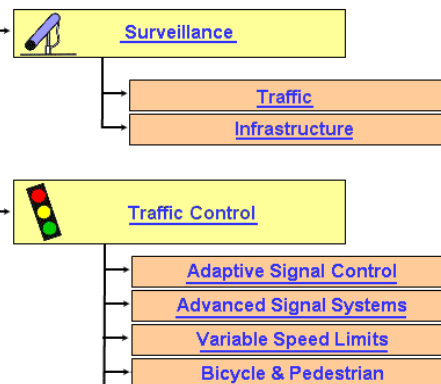
### Transit Management



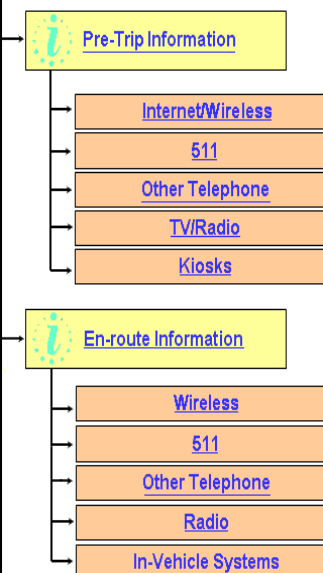
### Electronic Payment & Pricing



### Arterial Management



### Traveler Information







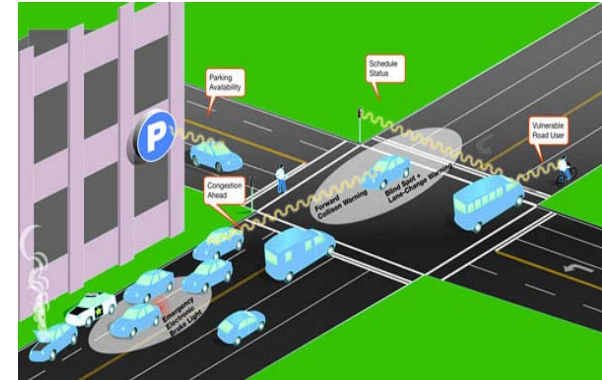
## Transit ITS Benefits

- Fleet requirements ↓ 2% to 5%
- Schedule adherence ↑ 9% to 23%
- Boarding time with AFC ↓ 38%
- Transit travel times after TSP ↑ 1.5% to 15%
- Customer satisfaction with 511 ↑ 68% to 92%
- Operating cost per transit VMT ↓ 8.5%
- Large transit agencies:
  - 43% employ in-vehicle video surveillance
  - 64% employ magnetic stripe payment systems
  - 31% employ smart card technology
  - 60% employ AVL on fixed-route buses



## Future of ITS in Transit

- BRT and IntelliDrive



- Increased demand/ridership







## It's All About Connectivity

