Traveling Smarter:
The Future of Transportation Technology in the Treasure Valley

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Subway in the Sky!

Commuters in Los Angeles soon may rush to work by this monorail overhead transit system, unhindered by street level traffic. Super-streamlined 100-passenger cars can travel safely at speeds up to 100 miles an hour. The 44-mile run through metropolitan Los Angeles will cut the present commuting time in half.
“The Digital Revolution”
The “Digital Revolution” challenges our thinking about solutions to our transportation needs.
“The Digital Revolution”
How is the Digital Revolution transforming transportation?
NEW

Infrastructure
Services
Partnerships
Expectations
Possibilities
Information infrastructure has become an integral part of the transportation system.
“Intelligent Transportation Systems”
It’s just a bus – right?
Real-time Passenger Information System – interface to bus dispatch system

On-board GPS antenna tracks vehicle location and adherence to schedule

Passenger automatically counted when entering/existing the bus – data used for planning

On-board fare collection – interface to fare payment system

Bus driver, new training and skills to operate technology – organizational change needed

Passenger with smart phone – accessing real-time information, paying fare, or providing agency feedback

Security systems provide surveillance and can be connected to dispatchers or police in an emergency

Bus communicates with traffic signals to request priority when running behind schedule
Technology has enabling new approaches to actively manage the transportation system.
Incident Management

[Image of a road incident with a sign indicating a crash 6 miles ahead and expect delays.]
Integrated Freeway/Arterial Management
Active Traffic Management
Transit Management
Consumer technology is changing the public’s interactions and expectations regarding transportation
Customer Expectations

- “Seamless” Transportation System
- Real Time Information (and Feedback)
- Expectations of Choice and Availability
- More integrated user experiences
- Willingness to adopt new business models and behaviors
John Hancock Center, Chicago
Via: Kennedy Expy E

ETA
10:38  7.7 mi.

Cancel  Routes  Go

Report
Traffic Jam  Police  Accident
Hazard  Camera  Chit Chat
Map Issue  Gas Prices  Check In

Location and time saved
Technology is creating a “sharing economy” in transportation
Technology is enabling new means of pricing (and paying for) transportation service
My phone is my fare

Mobile ticketing is here!

GET IT ON
Google Play
Available on the
App Store
Technology is improving efficiency of behind-the-scenes transportation system management
Data analytics is providing new insight into transportation system performance
Abidjan, Ivory Coast:

Redrawing bus routes using cell phone data could reduce travel times by an estimated 10%
Technology is improving safety and security of the transportation network
What’s Coming Down the Road?
What’s Coming Down the Road?

• New business models and services offered by new and unconventional players
• “Smart” and connected vehicles and infrastructure
• Highly personalized information integrated into consumer devices
• Increase automation and assistive technologies
• Revolution in data analytics and visualization
What does it all mean for the Treasure Valley?
How Can We Maximize the Potential of Emerging Technology in the Treasure Valley?
A Critical Transportation Challenge in the Treasure Valley

- The transportation network is not growing as fast as population
- Levels of transportation funding are diminished and uncertain
Congestion

The common causes of congestion cannot be practically addressed solely by expanding capacity.
OPPORTUNITY:
Use technology to maximize the performance of the region’s multi-modal transportation system
Operational Vision for the Treasure Valley

“Provide active management of the Treasure valley’s multimodal transportation system through agency partnerships and investment in ITS technology as an essential regional strategy to maximize the performance of the transportation system.”
OPPORTUNITY: Deploy relatively low-cost technology solutions to defer, or possibly eliminate, the need for more costly infrastructure investments
Road Widening

vs.

Advanced Traffic Signal Coordination
OPPORTUNITY:
Create more informed travelers who can make more informed travel decisions
The public interest is served by making accurate, real-time information available to the public through many channels.
OPPORTUNITY:
Use the region’s emerging data infrastructure to transform transportation planning and performance measurement.
Figure 9-1: Treasure Valley CMS Corridor Weekday Peak Hour Rankings (East or Northbound) – 2012
On Northbound State Highway 400 in the PM Peak, the travel time on the worst day of the month would be greater than 2.8 times the free-flow travel time.
OPPORTUNITY:
Develop policies, plans, and partnerships to be prepared to evaluate and respond to new and disruptive technologies
What Will It Take?

• Clear understanding and communication of the business case for new technologies
• Regional approaches to regional needs
• Integration of technology into regional transportation planning, policy, and investment
• Embrace of disruptive business models that may involve difficult institutional changes
• Flexibility to keep pace with evolving technologies
• Funding commitment for technology and operational programs
What is the Potential Payoff?

• Maximum reliability and capacity from the multi-modal transportation system
• Focused and cost-effective investment
• More informed decision making
• Improved safety
• Better decision making and performance measurement
Parting Thoughts
Technology is changing the definition of “Transportation Infrastructure.”
Transportation technology creates new solutions to the Valley’s transportation challenges.
Technological is an enabler.

You still have to know what you want from it to solve a problem.
People, processes, and policies are as important as technology widgets to implement effective change.
Technological uncertainty is certain.
Thank You
For your interest and participation!