



# CONNECTED CORRIDORS & SOCIAL MEDIA

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ITSICA Intelligent Transportation Society of California

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### **Connected Corridors**

#### Connected Corridors in its broadest sense is about:

- Connected People Travelers, businesses, government working together to improve system performance
- Connected Infrastructure Measuring system performance, reacting to local conditions, guiding vehicles, informing people, and providing corridor managers the ability to control and tune the system in real time
- Connected Vehicles Improving the safety and performance of the transportation system



### Integrated Corridor Management

- Existing management efforts, particularly ITS applications, support the ICM concept
  - <u>Active Transportation and Demand Management (ATDM)</u> is the dynamic management, control, and influence of travel demand, traffic demand, and traffic flow
  - <u>Advanced Public Transportation Systems (APTS</u>), such as automated vehicle tracking, dynamic schedule adjustments, bus rapid transit
  - <u>Advanced Traffic Management Systems (ATMS</u>), such as traffic-responsive and real-time signal control systems
  - Advanced Traveler Information Systems (ATIS), such as real-time traveler information systems, dynamic navigation systems
- The key to ICM is integrating existing systems and management efforts with new relationships to develop a coherent multi-modal, multijurisdictional, corridor-wide transportation management system



### **Connected Corridors Program**

- Comprised of a <u>number of efforts</u> in <u>partnership</u> with various agencies and industry
- Tasked with:
  - Developing *methods and tools* for managing California's transportation corridors (Connected Corridors templates)
  - Advancing and integrating technologies needed for corridor management
  - Planning for Caltrans district-level organizational support for ICM
  - Identifying and securing funding
  - Providing strategic and tactical education on corridor management
  - Implementing a *pilot* showcasing the elements above
  - Facilitating the implementation of ICM in multiple corridors in California



### Pilot Corridor: I-210







### I-210 Pilot Status

#### Initial Planning Funding Secured

#### Outreach, Communication, Cooperation

- Meetings held with County of LA, Pasadena, Arcadia, Duarte
- Meeting planned with Monrovia

#### System Engineering

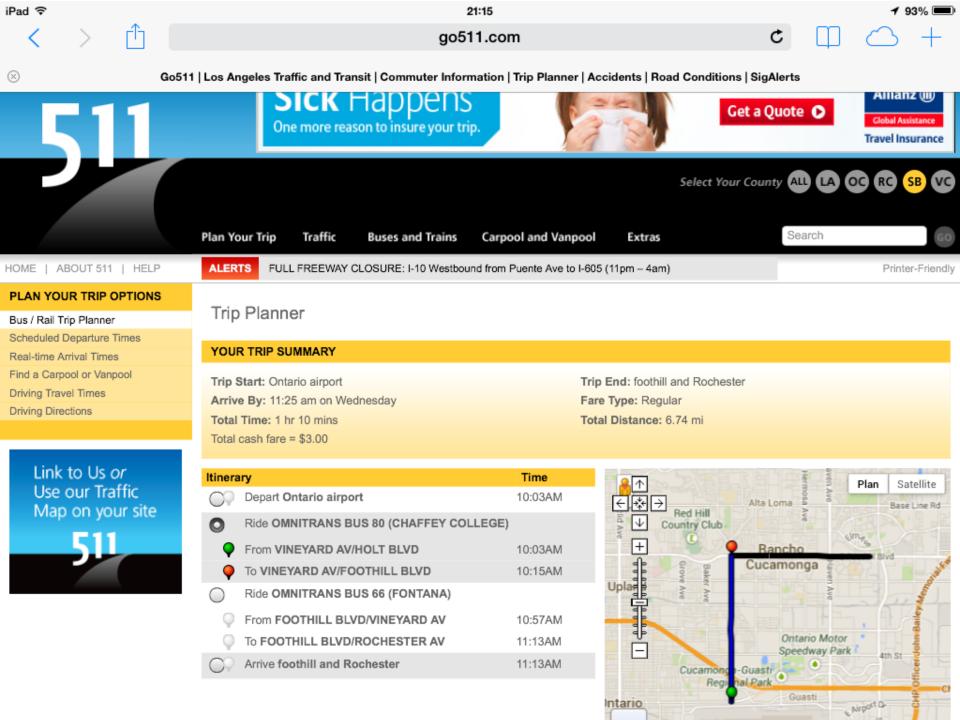
- Preliminary work plan completed
- First stakeholder workshops in February

#### Synergizing with Traffic Management Projects in LA Region





**Evolution and Opportunity** 



…enables the push of information from agencies to travelers





- …enables the push of information from agencies to travelers
- …enables travelers to self-organize to share information





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14h

3d

13h



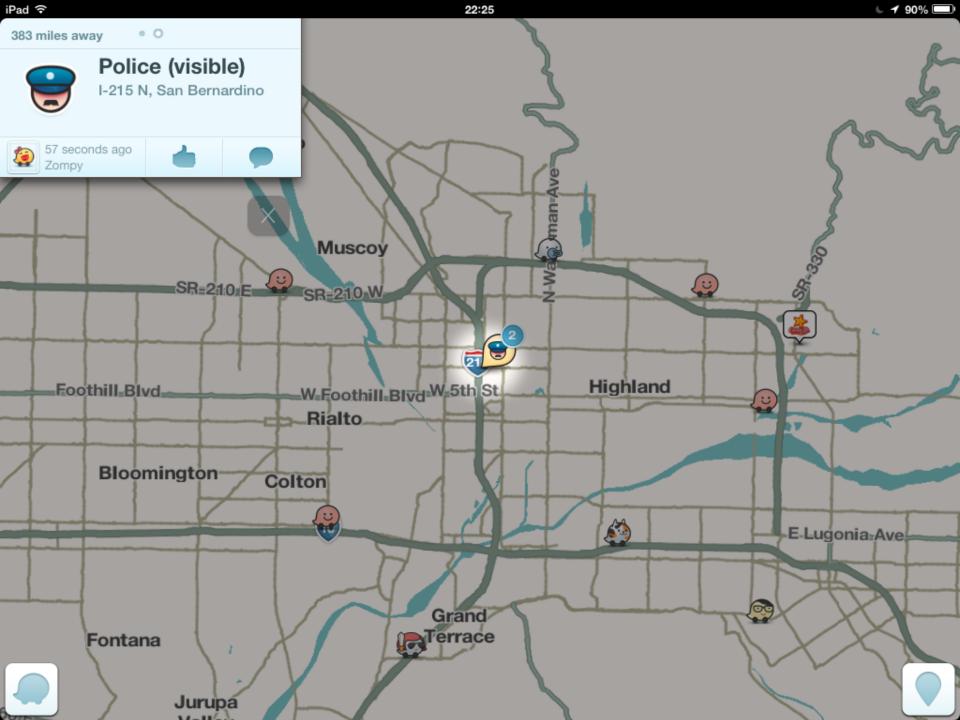
caltrain @caltrain SB 268 lead car with defective doors will be cut out. Train is SRO at PA. Left PA 10 mins late. T17:46

#### View more Tweets

>

- …enables the push of information from agencies to travelers
- …enables travelers to self-organize to share information
- …enables third parties to engage travelers



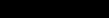


- …enables the push of information from agencies to travelers
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- …enables third parties to engage travelers
- …offers rich, new, big data





#### 0 1 Â Infos Google earth ROUTE LINK POINT vehicle no: SoHx0s0EBJ0JRICU+fSdatBE route link no: 8 route spot no: 82 route spot type: mm route spot: PifPathSpot(127831052,1,113.22947703425 tille, route spot coordinate: (-122.417278607738, 37.76987840266543) 22<sub>21</sub> 20 9 45 age Landsat







19:34

reporttype: 3positive: 1negative: -4localhour:...

19mph reporttype: 3positive: 1negative: -1localhour:...

3 fire trucks car accident traf... reporttype: 2positive: 1negative: -4localhour:...

Ahhh Iol reporttype: 3positive: 3negative: -1localhour:...>

At a complete standstill! reporttype: 3positive: 1negative: -4localhour:...

Car between ramp to 85 & 101 reporttype: 5positive: 1negative: -1localhour:...

Car sitting on It shoulder reporttype: 5positive: 1negative: -1localhour:...

don't get there reporttype: 3positive: 1negative: -1localhour:...

Don't take the carpool ramp f... reporttype: 3positive: 1negative: -1localhour:...

Had to drive North before goi... reporttype: 7positive: 4negative: -2localhour:...

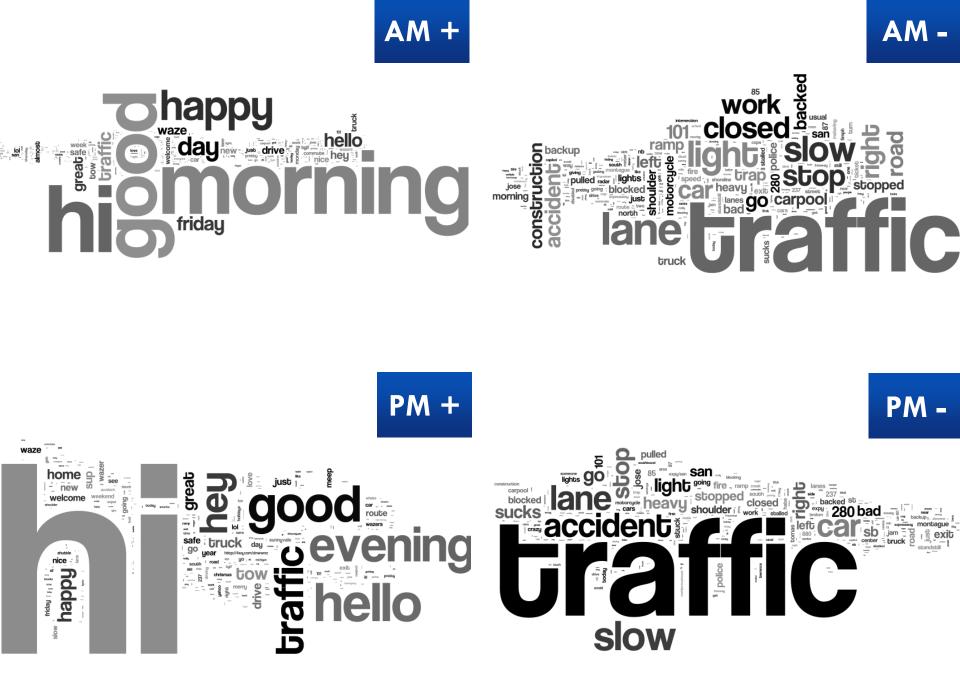
Heavy traffic nb 101 reporttype: 3positive: 1negative: -4localhour:...

Heavy traffic on 101 north st... reporttype: 3positive: 1negative: -4localhour:...

Heavy traffic today. Stopped reporttype: 3positive: 1negative: -4localhour:...

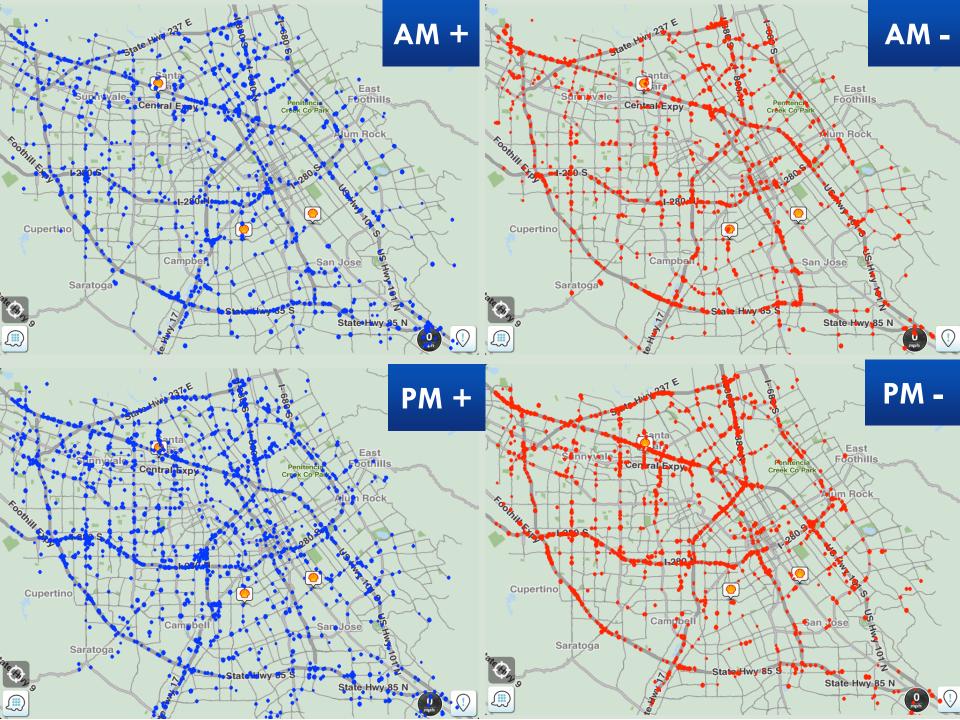
. Hello reporttype: 0positive: 3negative: -1localhour:...





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- □ ...offers big, rich, new data
- …helps us to act locally at the corridor level

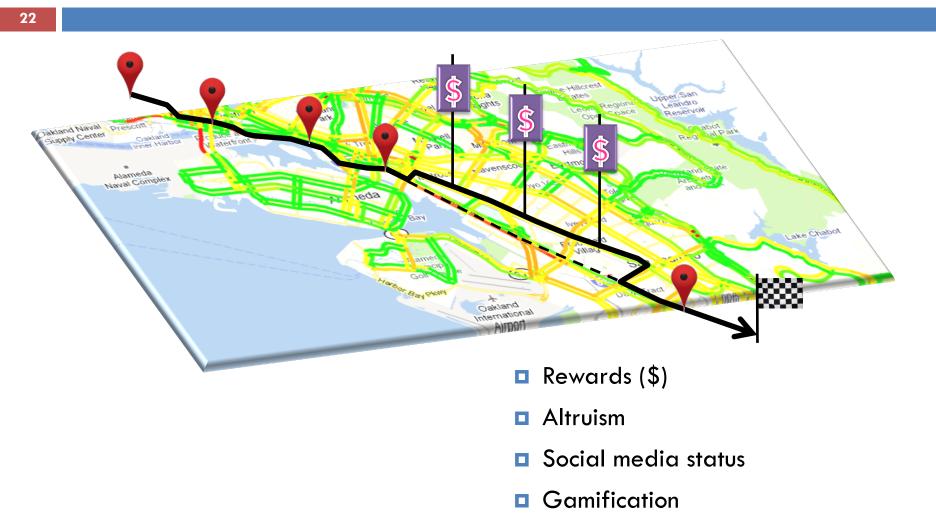




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- …helps us to act locally at the corridor level
- ...offers an enormous potential for behavioral change to improve system performance



## Incentivization





### Review

#### Connected Corridors Program

- Connecting people, infrastructure, and vehicles
- Partnerships; initial efforts going well
- I-210 Pilot
- Caltrans responsible for corridor-level management

#### Social Media Evolution and Opportunity

- Already influences mobility
- Multiple, uncoordinated actors (agencies, travelers, third parties)
- Opportunities for big, rich, new data
- Opportunities to improve system performance through coordination and incentivization





#### D PATH@TRB

#### Washington Marriott Wardman Park Hotel Exhibit Hall, #3208

- Sunday, January 12 4:00 p.m.-7:00 p.m. (Opening Reception)
- Monday, January 13 9:30 a.m.-4:00 p.m.
- Tuesday, January 14 9:30 a.m.-4:00 p.m.



### Supplemental Resources

#### Connected Corridors Web Site

- <u>http://connected-corridors.berkeley.edu/</u>
- Acquiring and Integrating Probe Data
  - Hybrid Traffic Data Collection Roadmap: Objectives and Methods, A. Bayen, M. Sharafsaleh, A. Patire, PATH Research Report, UCB-ITS-PRR-2013-2, 2013.
  - Hybrid Traffic Data Collection Roadmap: Pilot Procurement of Third-party <u>Traffic Data</u>, A. Bayen, M. Sharafsaleh, A. Patire, PATH Research Report, UCB-ITS-PRR-2013-1, 2013.

#### Social Media Sentiment Analysis

<u>http://www.newcitiesfoundation.org/wp-</u> <u>content/uploads/UCBerkeley\_NCF\_Report\_Final.pdf</u>

