



**SENSYS**  
**Networks**

## Transforming Transportation

*An Integrated Approach to  
Regional Transportation Strategies for the Puget Sound*

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## *Integrated strategy for transportation management*

- **People**
  - Improving the quality of life through better mobility
- **Prosperity**
  - Funding for infrastructure projects boosts local economies
- **Planet**
  - Optimizing mobility mitigates congestion and reduces greenhouse gases



# Who is Sensys Networks?



*Leading provider of wireless detection and integrated traffic data systems*



- Top technology choice for the world's largest implementers of traffic data systems
- Patented technology in production since 2005
- Record adoption rate with rapidly accelerating global deployments
- Worldwide distribution network
- Recent expansion into China
- Winner - ITS America "Best Innovative Technology for 2008"
- 2010 Inc. Magazine top 500 - 80<sup>th</sup> fastest growing private companies in the US
- ISO 9001:2008 certified



# 150+ Customers in 40 States



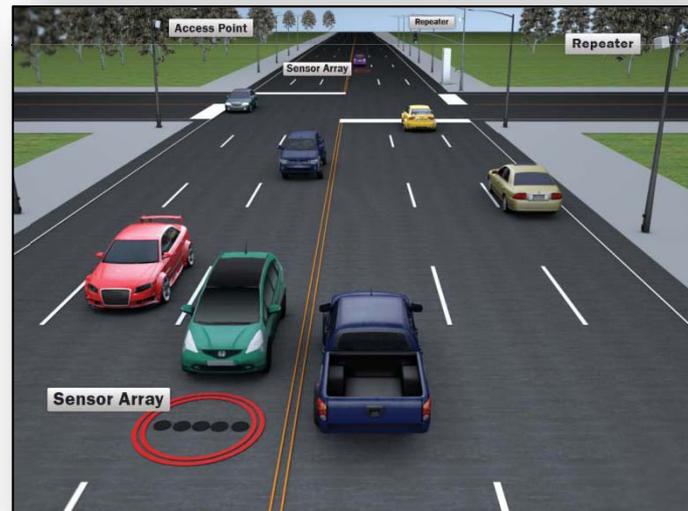
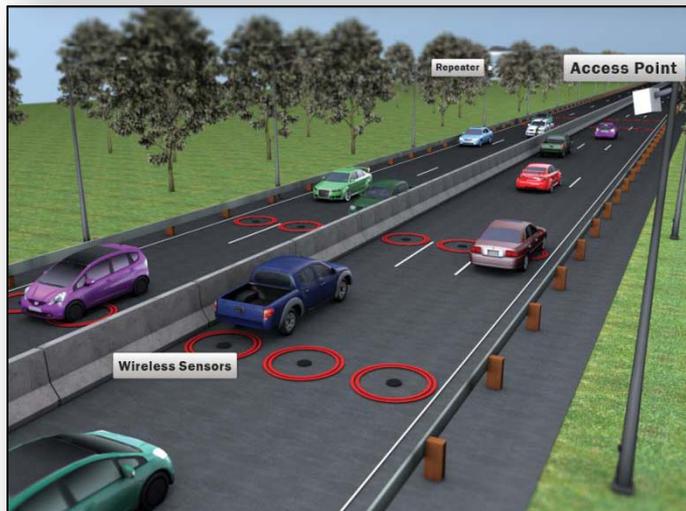
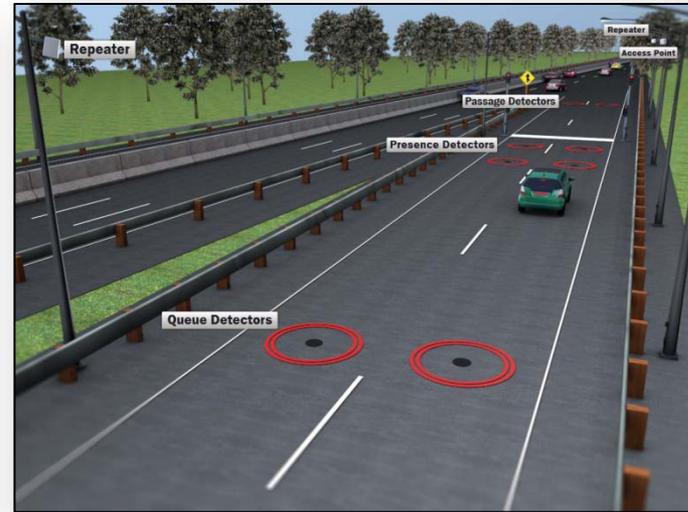
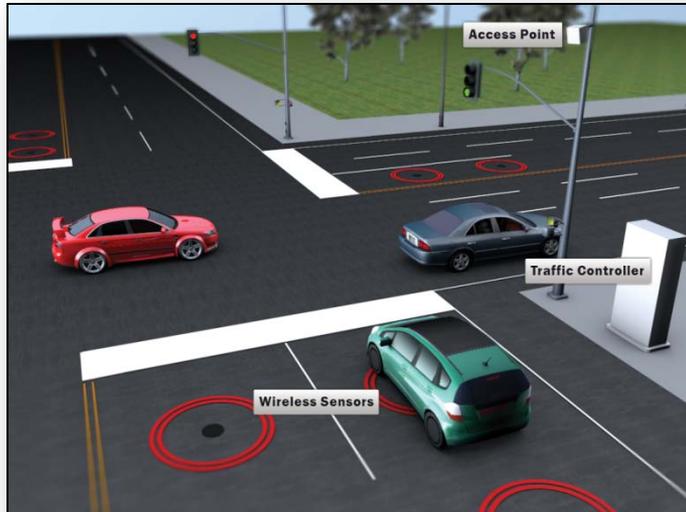
# A New Era in Data Collection

*Virtually maintenance free, rugged, in-ground wireless sensor*



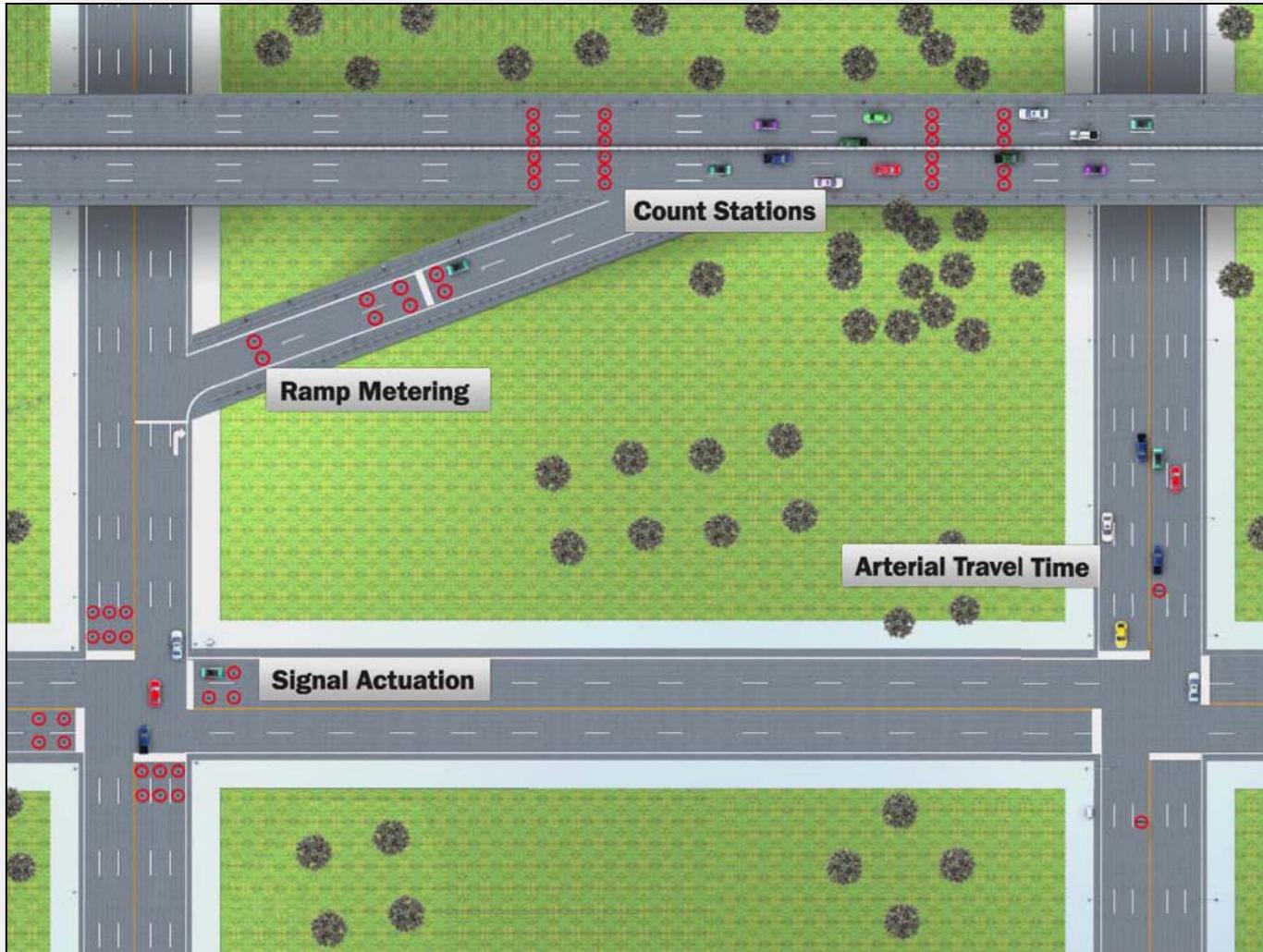
- Unprecedented 10+ year battery life
- Installs in minutes, deploys in hours
- Universal loop replacement sensor
- Remote management, configuration and diagnostics
- Re-usable
- Upgradable firmware
- Weather independent
- 50,000+ deployed worldwide

*Flexible, dependable, low-cost, universal platform for all detection applications*



# One Set of Tools — Multiple Solutions

*Eliminates need for disparate technologies*





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## Urban Traffic Data Systems

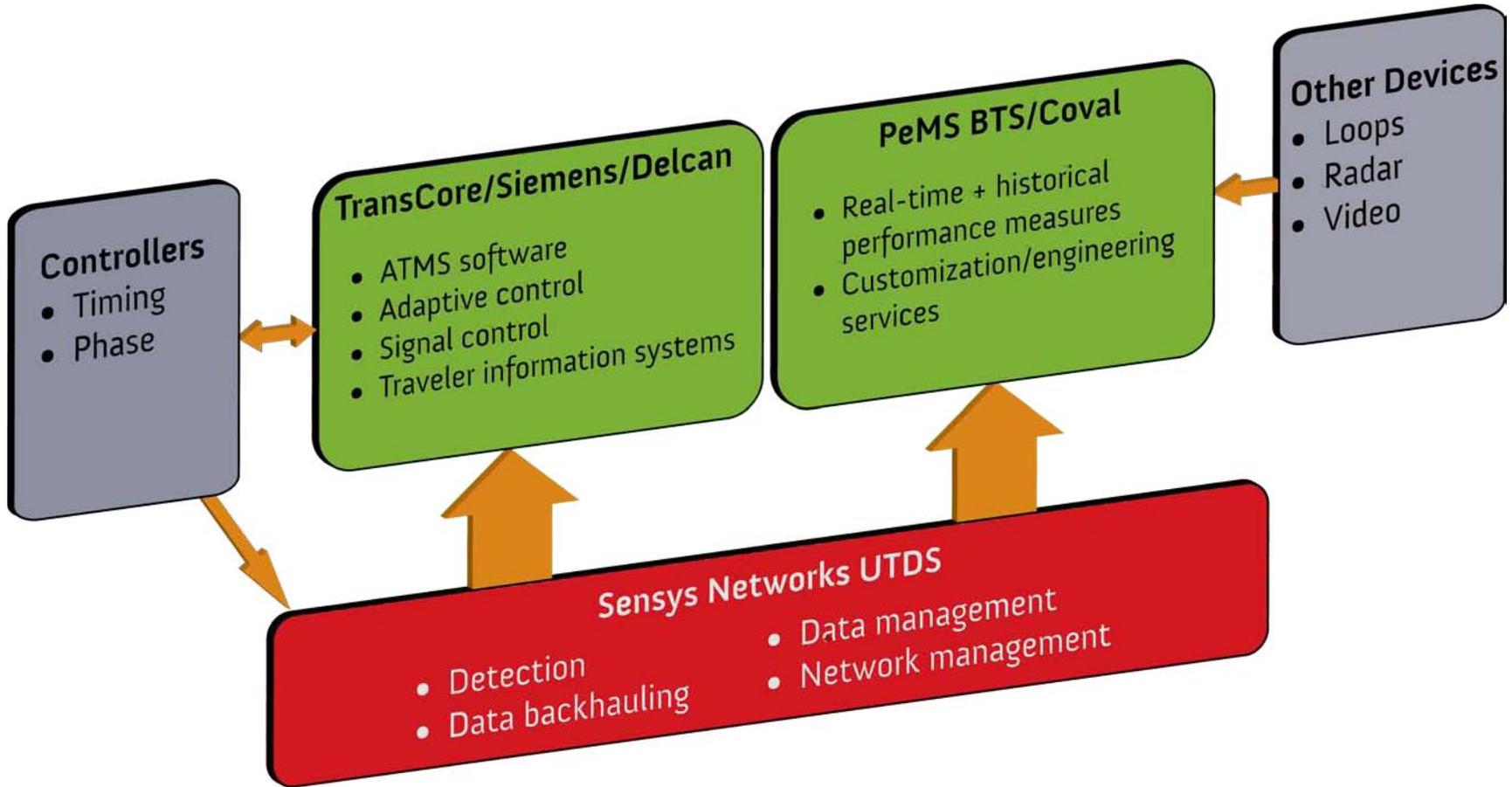
*Data Infrastructure for Smarter Cities*



## *Real-time performance measurement provides baseline for:*

- Informed decision making
- Real-time traffic and infrastructure monitoring for optimized mobility and safety
- Enhanced incident response
- Accurate and reliable traveler information systems – with no privacy concerns
- Performance measures to guide policy and investment decisions

*Working with partners to provide complete solutions*



Enabler for  
New Market

Wireless sensor networks enable the large scale  
deployment of traffic information infrastructure

- Dependability
- Universality
- Flexibility
- Maintainability (low operating cost)

# Dependability Index

*Sensys Networks consistently outperforms loops and video detection*

(% Accuracy) X (% of Functional Time)

Technology	% Accuracy	% Available	Dependability Index
Sensys Networks VDS240	98%	98%	96%
Video	93%	80%	74%
Inductive Loops	98%	70%	69%

# Lowest Total Cost of Ownership

## *Sensys Networks vs. Inductive Loops vs. Video Detection*



Technology	Avg. Install	Avg. Maint.	Avg. Total Cost of Ownership
Sensys Networks VDS240	\$7500	\$75	\$7,575
Inductive Loops	\$5600	\$5600	\$11,200
Video	\$16,000	\$7000	\$23,000

# Easiest Installation

*Eliminates prolonged road closure, in-street hours, and toxic waste clean up*



*Inductive loop installation*

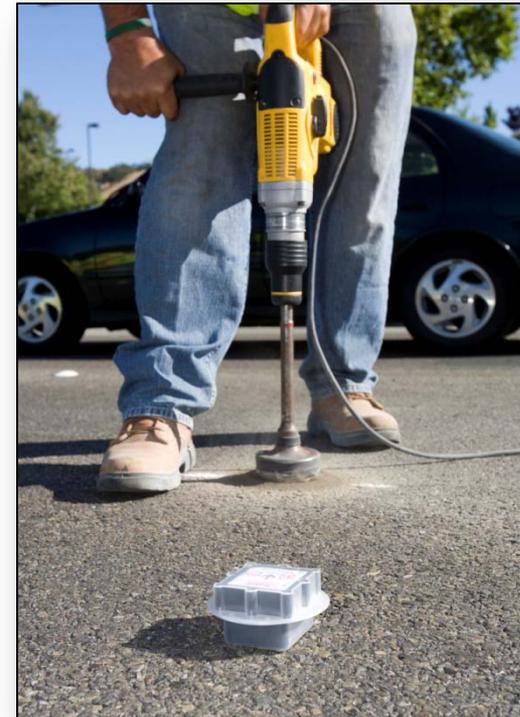
*Sensys Networks sensor installation*



# Preserves Existing Roadways

*Installable in any roadway regardless of condition*

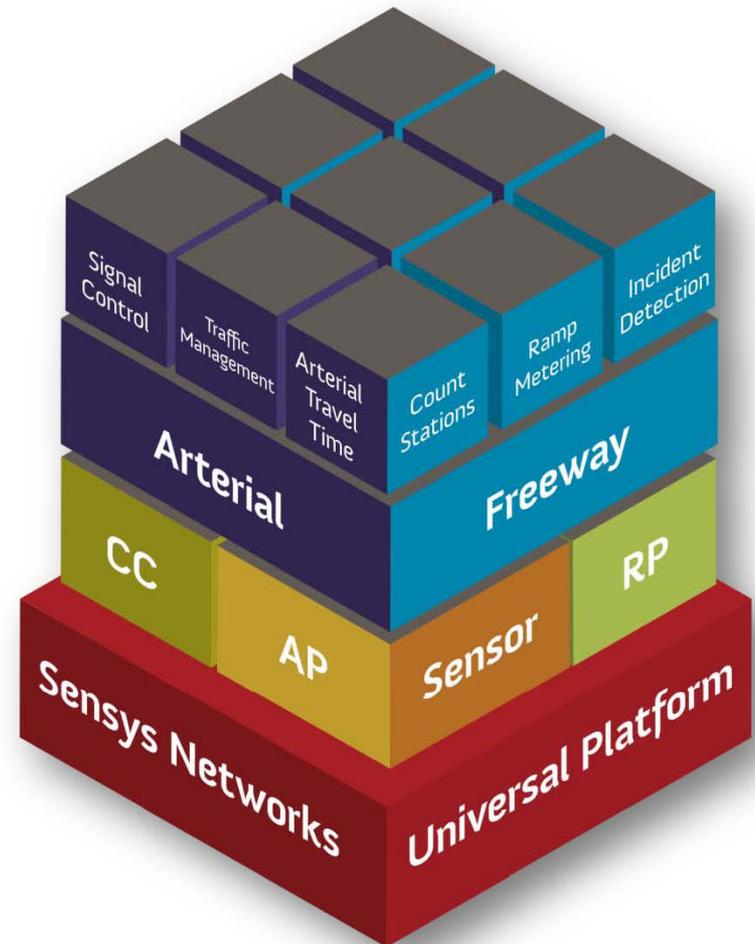
- Inductive loops cause long-term degradation to roadways, require significant maintenance, and are routinely non-functional
- Wireless sensors are minimally invasive, re-usable, and install in under 10 minutes



# Doing More with Less

*Universal platform maximizes infrastructure for optimal region-wide mobility*

- Technology standardization provides cross-jurisdictional benefits
- Virtually maintenance-free system significantly reduces maintenance spending
- Re-usable hardware reduces waste and spending





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## Success Stories

*Transforming Transportation  
with Wireless Sensor Networks*



## Integrated Corridor Management

Wireless sensor networks provided accurate, real-time data for efficient load balancing between major arterials and freeway during extensive roadway re-construction, improving alternate route diversions and preventing extended closures along 1-15 in Provo, Utah.

## Real-time alternate route travel time



- 14 video message signs enabled with accurate, real-time travel times between Lehi and Provo, Utah
- Successful integration with TransCore's TransSuite ATMS
- Mitigated congestion during major Interstate construction

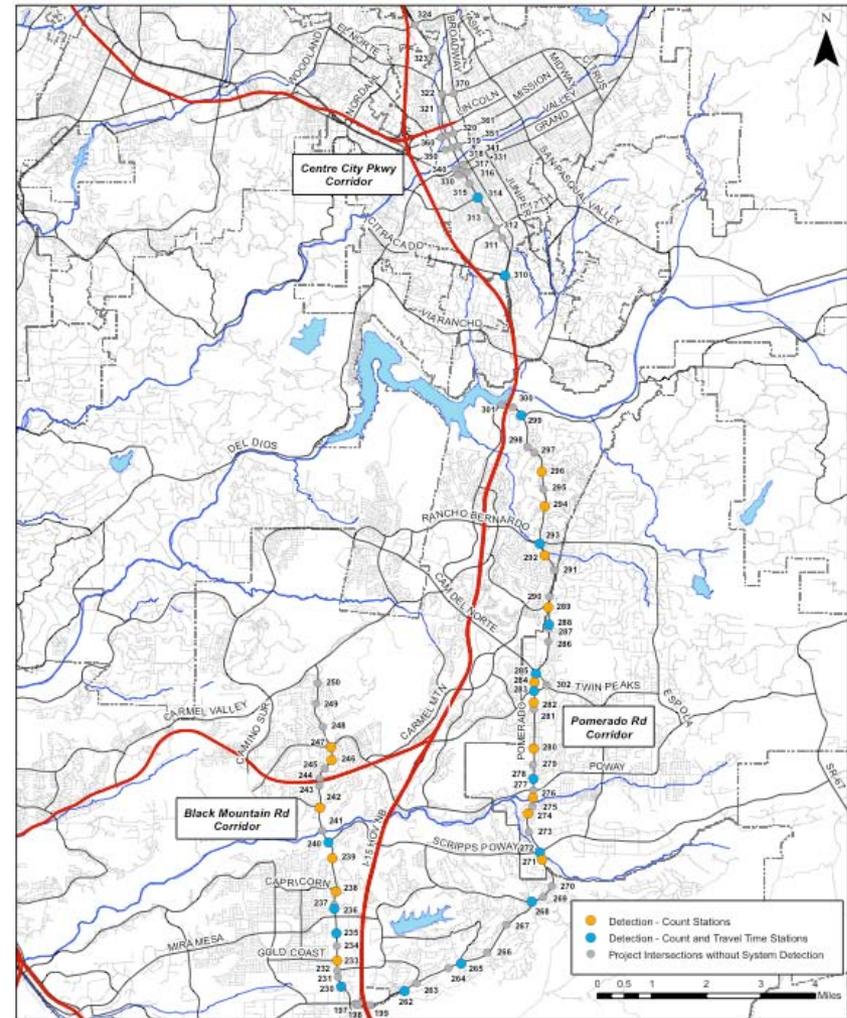
## Integrated Corridor Management & Traffic Light Synchronization

A night-time photograph of the San Diego skyline, with numerous skyscrapers illuminated. A large, semi-transparent blue SENSYS logo is overlaid on the right side of the image. The background is a dark blue gradient.

Wireless sensor networks provide accurate, real-time performance measures, arterial travel time, and traffic light synchronization optimization for federally funded Integrated Corridor Management project along San Diego-area I-15 corridor.

- Traffic responsive system to improve traffic signal synchronization
- Travel Time along I-15 corridor part of ICM
- Chula Vista arterial travel time in operation for two years- I-15 corridor travel time in construction
- Slated for expansion to Downtown San Diego Q2 2011

I-15 Corridor Traffic Light Synchronization Program



July 2010

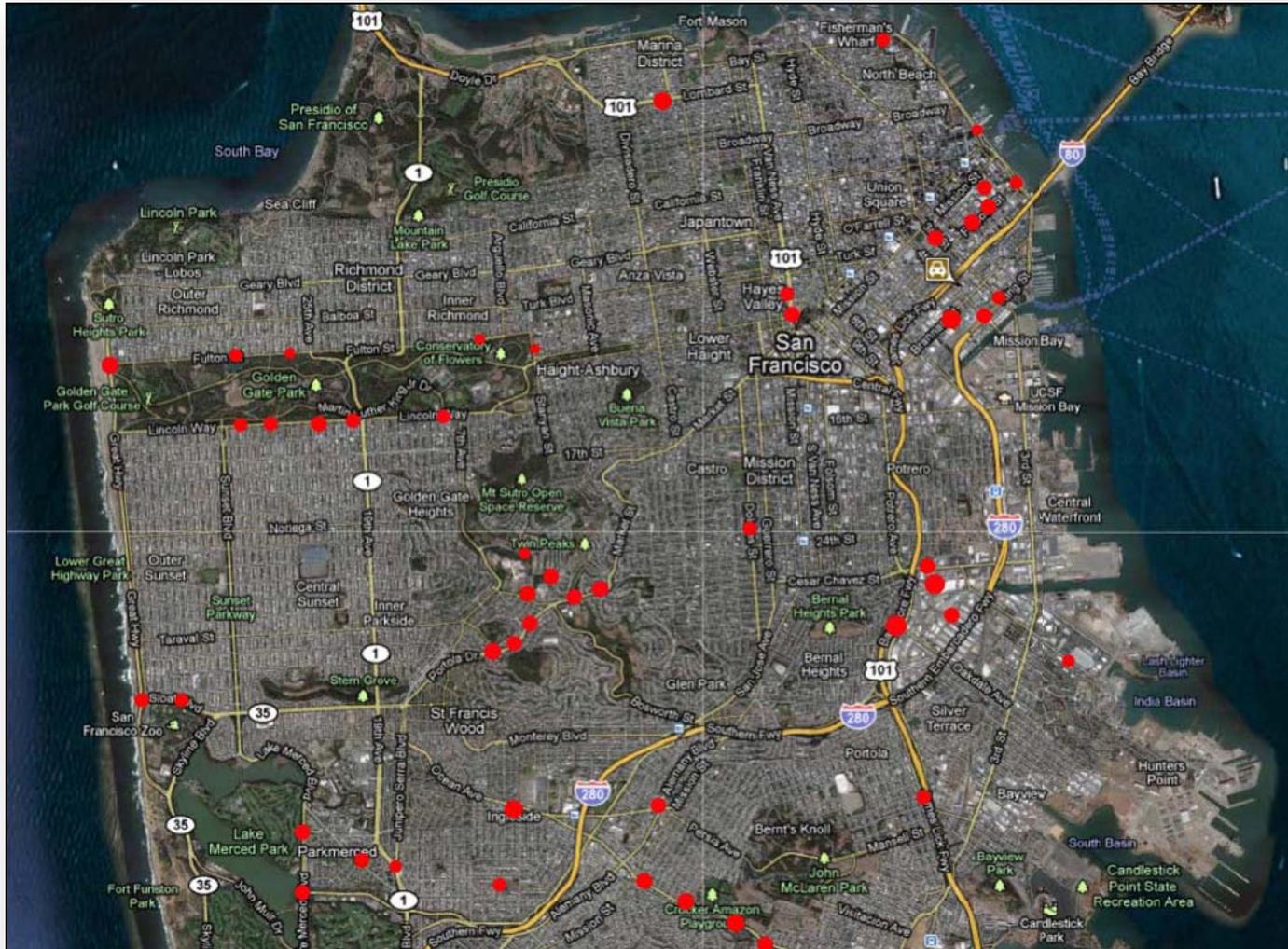


## Universal Loop Replacement

A photograph of the San Francisco skyline, including the Golden Gate Bridge and the Transamerica Pyramid, with a semi-transparent dark blue overlay at the bottom. A white graphic of concentric circles with a central antenna symbol is overlaid on the city skyline, representing a wireless sensor network.

Ease of installation and deployment — regardless of weather, geography or roadway conditions, enabled the city of San Francisco to standardize their vehicle detection needs with wireless sensor networks.

**58 actuated intersections**

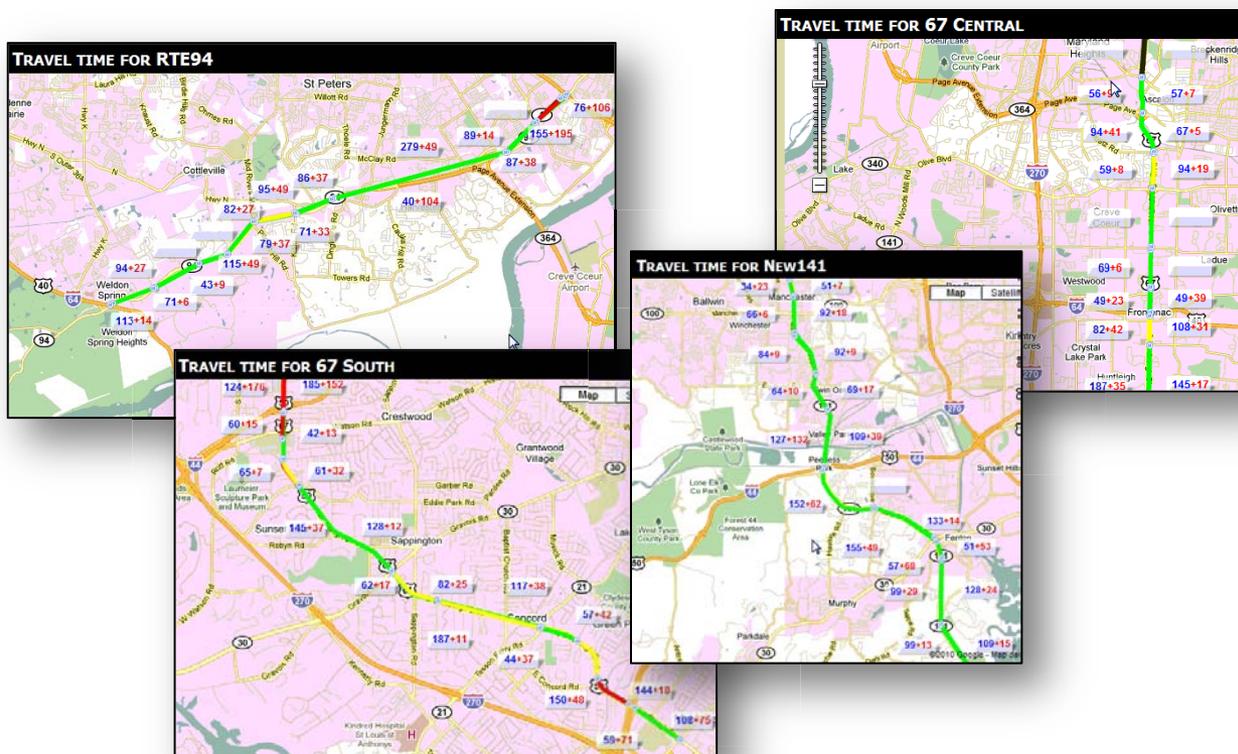


## Accurate Performance Measures & Traveler Information Systems

Wireless sensor networks enable 64 re-identification stations delivering accurate performance measure, providing real-time data for Dynamic Message Signs throughout the state of Missouri.

## One of the largest deployments of arterial performance measurement in the US

- 50 miles of major arterials instrumented
- Installation took less than 6 weeks
- Network management and diagnostics
- Provides:
  - Real time travel times
  - Volumes, speeds and density
  - Complete traffic statistics



## Freeway Operations & Adaptive Lane Management

Wireless sensor networks enables large-scale vehicle detection solutions providing accurate, real-time data for driver information systems, adaptive lane control, and ramp metering along 75 kilometers of Monash Freeway in Melbourne, Australia.

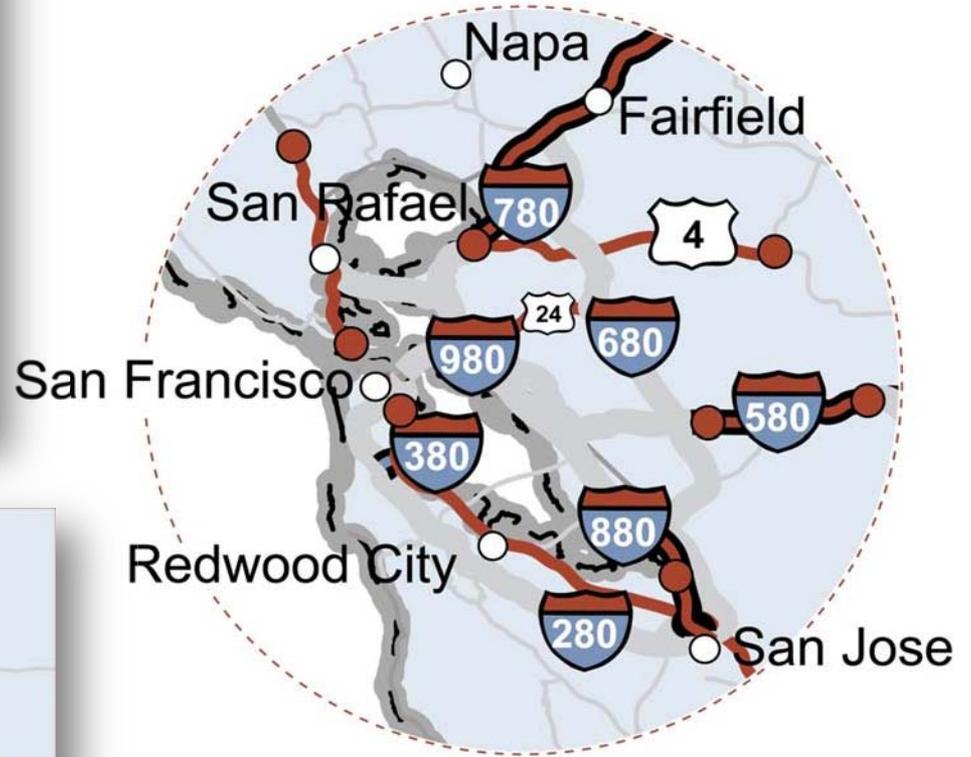
## 75 kilometers of Monash Freeway



## Traveler Information Systems & Operations Management

A graphic of concentric white circles representing a wireless signal, overlaid on the background image of a highway interchange.

Wireless sensor networks deployed throughout the state of California—in record time—enable over 800 traffic monitoring stations to support freeway operations, adaptive ramp metering, and accurate traveler information systems.



Caltrans District 4



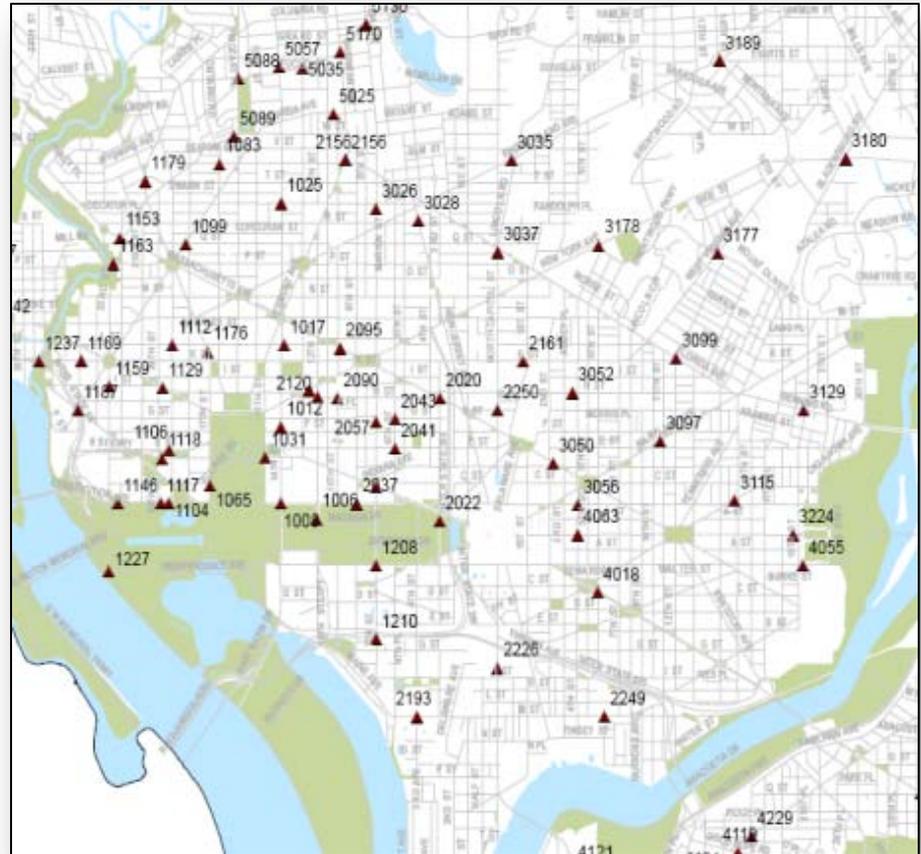
## Moving the Nation

A nighttime photograph of the United States Capitol building in Washington, DC. The building is illuminated, and its dome is prominent. Overlaid on the right side of the image are several concentric red circles, representing wireless sensor network signal waves. In the foreground, there are blurred lights from traffic and streetlights, suggesting a busy urban environment.

Wireless sensor networks deployed throughout the metro D.C. region provides accurate, real-time “snapshots” of traffic conditions—greatly improving congestion, incident / response management, and motorcade diversions.

# Washington, DC — UTDS

- **Wireless traffic data collection system at 122 major intersections**
- **Traffic volume, speeds, & delay**
- **Foundation for a citywide traffic data collection system for:**
  - **congestion management**
  - **traffic information**
  - **incident management and response**
- **Advanced traffic management and 511**
- **Multi-modal integrated traffic**



- **Sensys Networks wireless vehicle detection and traffic data platform is transforming traffic management and ITS**
- **Ease of installation coupled with near-zero maintenance is enabling signal actuation and traffic data collection on an unprecedented scale**
- **150+ customers in 40 states and 10 countries are improving mobility, reducing congestion and emissions, and measuring system performance with the Sensys Networks wireless solutions**