Lowering the barriers to state wide implementation of Integrated Corridor Management

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Friday, March 8th – Joint ITE Workshop
Connected Corridors State Wide Program

- A state wide program focused on:
  - Bringing ICM to major corridors in California
  - Growing Caltrans leadership in corridor based transportation management
  - Showcasing new technologies and processes
  - Delivering an ICM implementation on the I-210 in LA
  - Providing a solution that is affordable, replicable and scalable

- Lowering the barriers to ICM adoption, operation, and maintenance:
  - Funding and Costs
  - Work force skills
  - Technical Complexity and Risk
How will we do this?

- Help with access to and management of funding
- Provide system engineering documents and process templates
- Provide guidance on workforce skills, training and organization
- Enable the consulting ecosystem
- Provide a cloud based reference implementation architecture with data quality
- Provide a cloud based replicable and scalable intelligent data hub and DSS (Decision Support System)
How will we do this?

- Certify ICM and TCS vendors as enabling plug in play data exchange interfaces
- Ensure Caltrans is actively leading this effort and integrating it with TSM&O
- Prove the viability of our solutions through a pilot on the I-210
- Caltrans and PATH freely sharing our work products through downloadable documents, software and training
Funding

- **State**
  - Worked with legislature to ease approval of “Congested Corridors”
  - Working with legislature to define standards for approval
  - Broadening the SHOPP program

- **Regional**
  - Caltrans, through its work with LA Metro, has established a Caltrans approved method for managing regional funds as part of an ICM

- **Examples of applications for SHOPP and regional funding**
Templates, standards, and processes

- High quality system engineering documents

- These include technical, human and organizational requirements

- Examples of MOUs and charters

- Data Quality Standards

- Model Calibration guidance

- Organized for tailoring by each ICM effort
Workforce skills, training and organization

- KSA (Knowledge, Skills and Abilities) developed by Kimley Horn
- Organizational structures developed by SMG
- ICM Duties and Tasks (Human Requirements) developed by PATH
- Presenting to AASHTO Center of Excellence on workforce
- Wrote a white paper for the Ca legislature on work force skills required for TSM&O
Reference Implementation Architecture
ICM Vendors – TMDD Standard Interfaces

- The following ICM vendors will be participating in the pilot
  - Kapsch – EcoTrafix
  - Parsons – iNET
  - Telegra – topXview

- Each of these vendors will provide software with interfaces built to permit exchange of data through CC defined TMDD standards
The following TCS vendors will participating in the pilot:
- Kimley-Horn – KITS
- McCain – Transparity
- TransCore – TransSuite

Each is developing TMDD data exchange interfaces defined as part of the CC standards.

There will also be a sign vendor (not yet selected) with data exchange.
Mix and Match
Standardized, tested Interfaces

Choose Multiple

Provided by Caltrans

Choose 1

Choose Multiple

KITS

Transparity

TransSuite

Sign Vendor

Caltrans ATMS

Data Hub

TMDD Tested Interface

TSS Model Interface (Optional)

DSS

Kapsch

Parsons

Telegra

TMDD Tested Interface

Provided by

Choose 1

Vendor

Caltrans

ATMS

ATMS

Provided by

Choose 1

Vendor

Caltrans

ATMS
Other software updates and interfaces

- **PEMS** will be updated to permit simpler integration into new corridors based on the CC architecture.

- We are also defining interfaces for:
  - Transit
  - 511
  - Air Quality
  - Travel Time
Caltrans and the PATH Websites

- Website on
  - connected-corridors.Berkeley.edu
  - www.dot.ca.gov

- Please contact
  - Caltrans HQ – Nick Compin
  - Caltrans D7 – Allen Chen
  - Metro – Steve Gota
  - PATH – Joe Butler
Thank You