210 CONNECTED CORRIDORS PILOT WORK PLAN DISCUSSION
Plan the Pilot
- Define and obtain agreement on the goals, metrics, participants and project management items

Implement Effort
- Implement the processes and systems needed to manage the corridor

Do the Effort
- Manage the corridor to meet institutional, performance and project management goals

Evaluate the Effort
- Determine if goals were met, review processes, make recommendations
Resources to assist us

- **USDOT/Ca System Engineering Process**
  - Used by both SANDAG and DART

- **2012 – ICM Implementation Guide and Lessons Learned**
  - Developed by USDOT

- **Interactions with SANDAG**
  - Documents
  - Advice
  - However while there is overlap in the efforts there are important differences

- **USDOT**
  - ICM Implementation Assistance

- **Others as needed**
The Big Questions – Leadership and Money

**Leadership**

- **I-210 Connected Corridors Pilot**
  - Executive Leadership – D7, LAMetro, HQ,
    - Responsible for ensuring overall stakeholder support, overall feasibility and supplying resources
    - We need discussion on this
  - Project Leadership – Project Manager – D7
    - Schedule meetings to discuss activities, status, action items, and risks;
    - Ensure that guidance is made available to those stakeholders that are not familiar with ICM; and
    - Ensure that all stakeholders understand and are comfortable with the project process.

- **Connected Corridors State Wide Effort**
  - Executive Leadership – HQ
  - Project Leadership – HQ, PATH
Money – I 210 Pilot

Immediate resources
- Planning effort – Can we use current resources

Implementation Phase
- We are not sure yet what we are doing so hard to ask for explicit funding
- Know we will need some money – Grease, sensors/controllers, payroll, other items
- Some resusable components will be provided by HQ/PATH

Sources of money
- LA Metro
- D7 Budget
- HQ Funds
The Role of PATH

- **Planning and implementation of reuseable components of Connected Corridors**
  - Documents, knowledge base
  - Methods and Procedures
  - Decision Support system
  - State wide messaging and communication
  - Monitoring of other ICM efforts to ensure best of breed methods are utilized

- **Assist stakeholders and PM with I 210 Pilot**
  - Education
  - Outreach
  - Systems Engineering
  - Decision Support Systems
  - General support

- **Assist with Evaluation of Pilot**
  - Analysis and recommendations
System Engineering


- **Technical Processes**
  - 11 Steps
  - Done sequentially
  - Each step will have internal iterations and sub steps
  - From requirements definition through system retirement

- **Project Management Processes**
  - 4 activities
  - Done in parallel for the entire project life time
  - Continual refinement and expansion of content
  - Planning, Project Monitoring, Risk Management, Configuration Mgmt
Project Management
- Project Planning
- Project Monitoring and Control
- Risk Management
- Configuration Management

Feasibility Study / Concept Exploration
- Concept of Operations
- System Requirements
- High-Level Design
- Detailed Design

Software / Hardware Development Field Installation
- Unit/Device Testing
- Subsystem Verification
- System Verification & Deployment
- System Validation

Operations and Maintenance
- Changes and Upgrades
- Retire and Replace

Time Line

Decomposition and Definition
Integration and Recomposition
Guidance from USDOT

- 2012 – ICM Implementation Guide and Lessons Learned

- Phases
  - Get Started
  - Establish Goals
  - Plan for Success
  - Specify and Design
  - Build and Test
  - Operate and Maintain
  - Retire/Replace

- For us – Recommend we work on completion of first two phases
Get Started from USDOT

1 Foster Champions and Organize Stakeholders

2 Coordinate with Planning Process

3 Interface with the Regional ITS Architecture
Establish Goals from USDOT

1. Explore the ICM Concept
2. Develop Goal, Measureable Objects and Data Collection Needs
3. Analyze System Problems and Identity System Needs
4. Conduct Feasibility Assessment
5. Identify Development Support Resources
What is a work Plan

- **Tasks**
  - Deliver the Institutional Cooperation
  - Deliver the System Engineering Documents
  - Deliver the ongoing Project Mgmt Processes
  - Additionally deliver education/training

- **Timelines**
  - 1 Year for first release — Aggressive but we should try??

- **Resources**
  - D7, Metro, Cities, HQ, PATH, others
USDOT ICM Initiative

- FY06 - FY07 - FY08 - FY09 - FY10 - FY11 - FY12 - FY13 - FY14 - FY15 - FY16

- Stakeholder working group
  - Phase 1 - Foundational Research
    - ConOps & SyRS
    - Phase 2 - Corridor tools, strategies and integration
      - Analysis, Modeling, and Simulation
      - Demonstration
    - Phase 3 - Pioneer Sites
      - Phase 3 - Evaluation
        - Pre-deployment
        - Post-
  - Phase 4: Knowledge and Technology Transfer
    - Awareness
    - Understanding
    - Equip practitioners
    - Long term
System Engineering Documents

- Using the Regional ITS Architecture
- Feasibility Study/Concept Exploration
Project Management

- **Documents**
  - Project Plan
  - Systems Engineering Management Plan
  - Risk Management Plan
  - Configuration Management Plan

- **Processes**
  - Project Tracking
  - Project Reviews
  - Risk Management
  - Configuration Management
Institutional Cooperation

- Identify the Institutions
- Understand them in detail
- Plan for establishing trust, education and common vocabulary
- Initial meetings, determine additional personnel needing inclusion
- Lots of follow up meetings to build the understanding and trust
- Public announcements where stakeholders all agree to work together
- Internal belief that it really is working
- Transition to actual building of concept of operations
- Continue to maintain proactive communication
Education and Training

- Locate and track other ICM Efforts
- Synthesize and summarize results
- Educate participants on concepts
- Train participants on the methods and tools
- Communicate to external stakeholders (US DOT, industry, etc)
- Maintain website and social media
  - Educational content
  - Outreach related content
One way to organize our teams and efforts

- **Outreach Expertise**
  - Responsible for institutional cooperation

- **System Engineering Expertise**
  - Definition of requirements and metrics
    - Responsible for creation of documents
  - Data gathering and analysis
    - Responsible for providing content and analysis

- **Management Expertise**
  - Responsible for management processes
  - Responsible for funding and resource allocation

- **Education and Training Expertise**
Thank you....

Questions?

Thoughts?