



Loop 101 Mobility Project

ASHE MEETING

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PROJECT BACKGROUND

- A joint effort of Advanced Transportation Congestion Management Technology Deployment (ATCMTD) grant application for Integrated Corridor Management (ICM)
- \$6M ATCMTD awarded in August 2018
- GEC consultant selected in March 2019
- Kickoff - August 21, 2019





MOVING INTO THE FUTURE



LOOP 101 Mobility Project



LOOP 101 MOBILITY PARTNERSHIP

Partners

- FHWA (Sponsor)
- ADOT
- MCDOT
- MAG
- AZ DPS
- City of Scottsdale
- City of Phoenix
- City of Glendale
- City of Peoria
- City of Mesa
- City of Tempe
- City of Chandler
- Valley Metro
- Salt River Pima Maricopa Indian Community
- University of Arizona
- Arizona State University



PROJECT FUNDING

- ATCMTD GRANT
- **Advanced Transportation and Congestion Management Technologies Deployment**
- Established by the FAST ACT to improve safety, efficiency, system performance, and infrastructure return on investment.
- Federal Share: 50%
- \$6M dollar grant



PROJECT TRACKING

- Reports for FHWA
 - Quarterly and annual
 - Budget updates
- Tracking partner agency cost match
 - Projects that were identified to support L101 ICM
 - After this project's authorization date of 8/31/18
 - Agency in-kind contributions
 - Reporting on time spent working on L101 development efforts
 - O&M activities in direct support of L101 ICM related projects, activities



PROJECT PURPOSE

- Maximize the efficiency and safety of existing infrastructure using ITS technology
- Facilities and services on a corridor are often independently operated, and efforts to reduce congestion have focused on the optimization of the performance of individual Agency assets
- Integrated Corridor Management (ICM)
 - Uses Multi-Agency infrastructure assets to maximize the system as a whole



PROJECT SCOPE

Implement ICM Using:

- Decision Support System (DSS)
- Connected Vehicle Technology for Transit, Incident Response Vehicles (IRU and REACT)
- Adaptive Ramp Metering
- Adaptive Traffic Signal Control
- ICM Mobile Application Suite



What's Happening Now

- One-on-one agency meetings (9 of 12 already held)
- IGA's with Each Local Agency (8 of 9 executed)
- Partnering Workshop (Late Oct/Early Nov)
- Corridor Inventory – devices, assets, operational processes
- Foundational Systems Engineering Documents
 - Project Management Plan (PMP)
 - Systems Engineering Management Plan (SEMP)
 - Concept of Operations (ConOps)



PROJECT PHASES

**Phase 1
Scoping and
Concept
Development**

Year 1

**Phase 2
Software and
System Design**

Years 2 and 3

**Phase 3
Implementation
and Testing**

Years 3 and 4



PHASE 1 ACTIVITIES

- Corridor asset inventory - GIS
 - Field devices
 - Agency processes for ops and incident management
 - Identify gaps
- Operations Plan
 - Operations needs, priorities, stakeholder roles, responsibilities
- Concept of Operations
 - How systems need interact to support operations priorities
- System Requirements
 - Basis for procurement documents
- Partnering and stakeholder involvement

YEAR 1



PHASE 2 ACTIVITIES

- Detailed system design
- Develop system requirements
- Develop testing plans and protocols
- Develop implementation plan for next phase
- Partnering and stakeholder involvement



YEARS 2 & 3



PHASE 3 ACTIVITIES

- Test and refine systems
- Integrate key systems to share data
- Prepare longer-term operations and management strategies
- Document lessons learned
- Project report
- Partnering and stakeholder involvement



YEARS 3 & 4



CONCERNS FOR ICM

- Potential Resources Sharing
 - Data Sharing
 - Equipment Sharing
 - Personnel Sharing
 - Process Sharing and etc.
- Budget/Funding Short Fall
- Changes may not benefit all Local Agencies
- Sustainability of ICM Approach
- Uncertainty of Future Technology

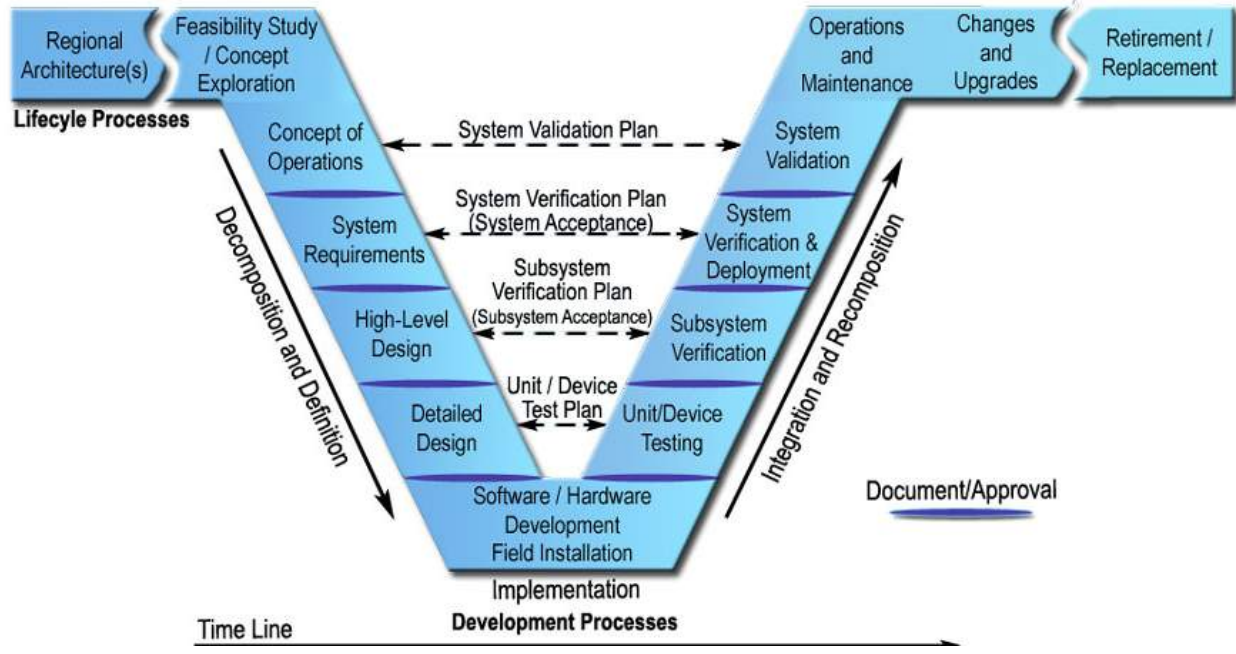


KEEPING A TRANSPARENT PROCESS

- Establish a Platform for All Voices
- Hold 1 on 1 Meetings As Necessary
- Partnering Workshops
- Document All Concerns/Voices
- PM Leads the Process, Team Makes the Decisions
- Scope Process (ConOps) to Identify What Is Needed (Not Just What Can be Implemented at Present)
- Follow the Vee Process



APPLICATION OF SYSTEMS ENGINEERING PROCESS



THANK YOU!

