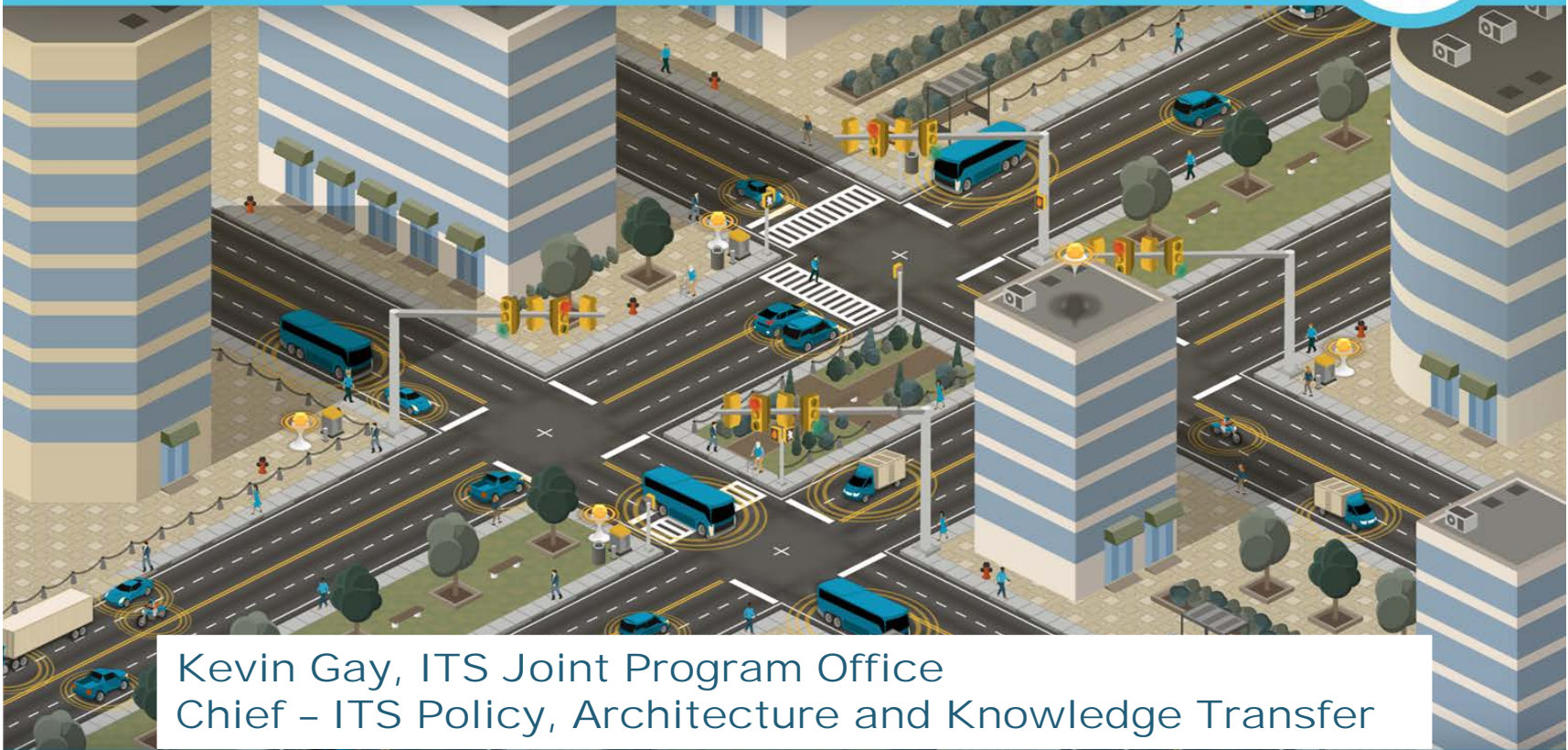




CONNECTED VEHICLE AFFILIATED TEST BED PROGRAM



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ITS Joint Program Office



Agenda



- **Vision**
- **Overview of Test Bed Program**
 - **Charter & Membership**
 - **Progression Towards National Deployment**
- **How To Get Involved**



Vision



- Establishes multiple interoperable locations as part of one connected system
- Moves towards a national deployment
- Supports the development & testing of a common architecture & standards
- Promotes shared resources
- Provides for independent operations



Test Bed Charter & Membership



- **Developed an organizational structure and charter to make membership “official”**
- **Benefits of Membership**
 - Designation of Affiliated Test Bed
 - Access to USDOT support staff and resources
 - Increased access to lessons learned, documentation and other information from peer deploying test beds
 - Test beds serve as a model for future permanent deployments
 - Provides for opportunities for future testing



Test Bed Membership Distribution



- Total Membership
 - 87 Memorandums of Agreement

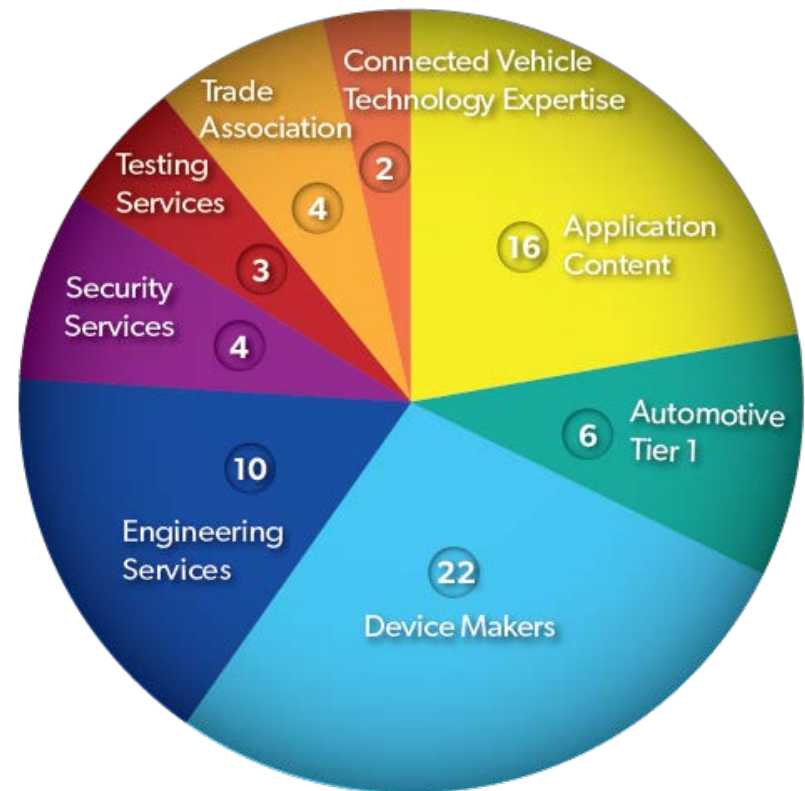
- Organization Types

- Private Enterprise (67)
- Academic (13)
- Local Agencies (7)
- State Agencies (3)

- Membership Information:

http://www.its.dot.gov/research_archives/testbed/testbed_affiliated.htm

Private Enterprise Collaborator Types



Is the Test Bed Right For You?



▪ How Can You Use A Connected Vehicle Test Bed

- Test beds provide cutting-edge technology for users to conduct a variety of tests, including:
 - Developing and testing applications using Signal Phase and Timing (SPaT) & Geometric Intersection Description (GID) data
 - Vehicle awareness devices (VADs), aftermarket safety devices (ASDs), in-vehicle safety devices (ISDs), radios & RSUs
 - Security System Operations
 - Other CV applications, concepts, and equipment
- **Test Beds offer:**
 - Pre-existing agreements with local agencies eliminating the need for complex testing arrangements with roadway operators
 - Highly skilled staff who can help users test a variety of complex scenarios in early deployments



Multiple Locations...One Connected System

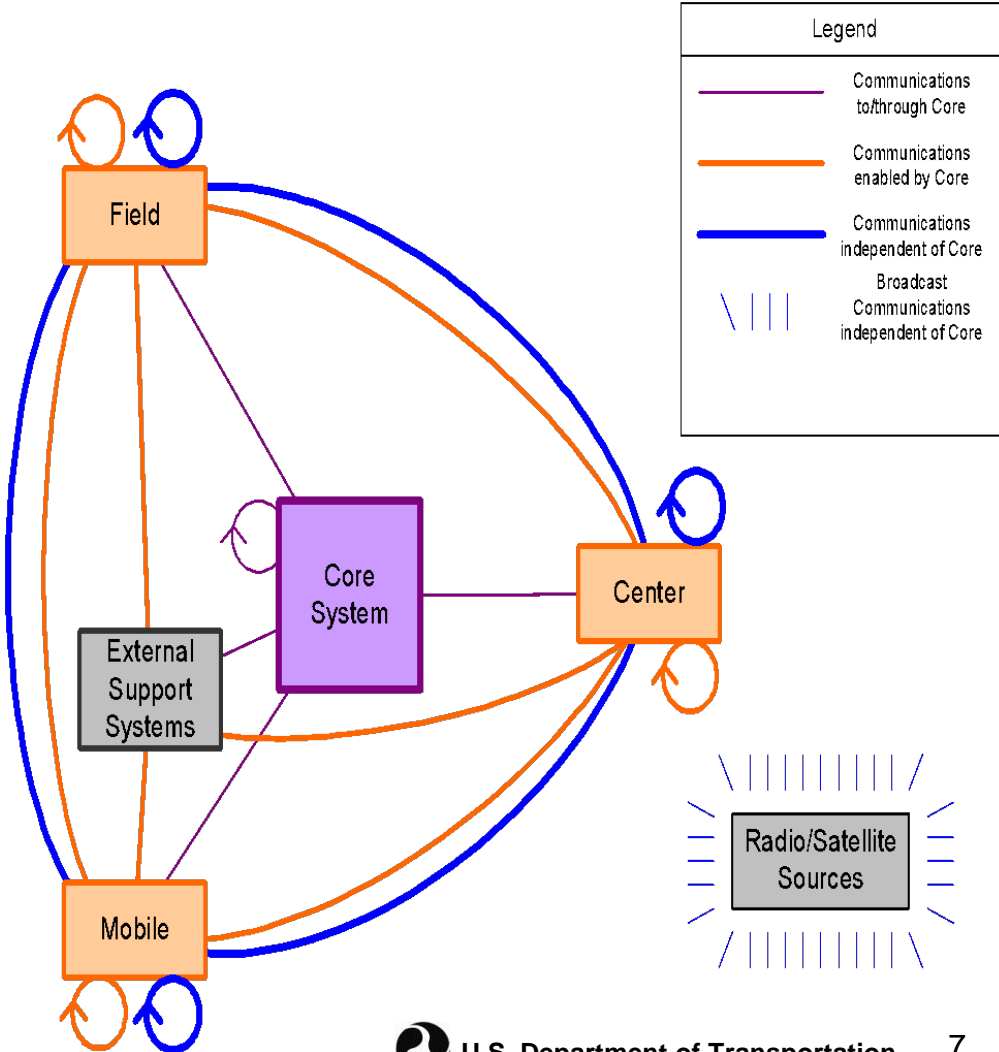


How to become an Affiliated Test Bed

- Have connected vehicle infrastructure deployed
- Use (or willingness to use) current standards where appropriate
- Willingness to share information and participate in on-going discussion

Developing Common Platform

- Common 3rd Generation RSEs (Safety Pilot)
- Use of USDOT's Security Credential Management System for Security
- WSMP & IPv6 Connectivity
- Common Data Repository
- Installation, Operations & Maintenance Guidance



The Evolution Continues...



- **Progression towards national deployment**
 - Growing Number of Test Beds & Users
- **Upgrades & Enhancements Support for:**
 - Security Certificate Management System (SCMS)
 - Local Certificate Distribution System (LCDS)
 - Improved IPv6 Functionality & Capabilities
 - RSU data logging
 - New RSUs supporting improved messaging, logging
 - Future upgrades to support mobility applications
 - Upgrades and Enhancements to Support Evolving User Needs

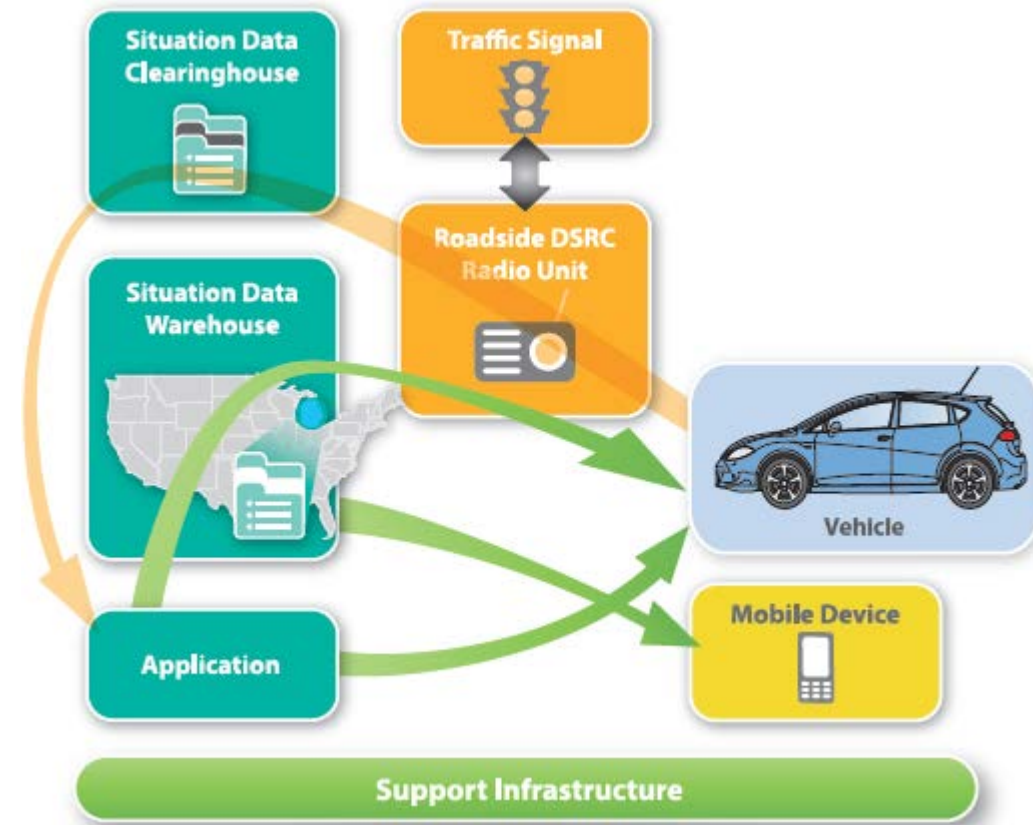


Southeast Michigan Test Bed



■ Test Bed Resources

- 50 locations broadcasting SPaT, MAP, and TIM
- 3 portable RSUs and trailers that allow for private testing
- Data Center running 24-7 and on 99% uptime.
- Test vehicles and drivers, upon request.
- On-site experts with years of experience in intelligent transportation systems and connected vehicle systems.



Affiliated Test Bed Information Repository



- Affiliated Test Bed
 - Project Documents
 - Meeting Information
- SE Michigan Projects
 - Architecture
 - ConOps
 - Design
 - Certification
- Limited Access
 - Affiliated Test Bed Members
 - USDOT contract and grant recipients

The screenshot shows a web browser window with the URL cps-vo.org/SE-Michigan-2014-Project. The page features a navigation menu with options like Home, About, Search, Forums, and Files. A sidebar contains sections for COLLABORATE, SUBGROUPS, and MEMBER INFO. The main content area includes a banner for 'Unified Implementation of the CVRIA - Regional Scale' with a red car on a road. Below the banner, there is a section for 'Unified Implementation of the Connected Vehicle Reference Implementation Architecture - Regional Scale' with a warning: 'DO NOT use any material as the basis of a delivery unless confirmed by your project team leader or Contracting Officer.' There are also buttons for Newsletters, Member Information, Meeting Documents, and Project Documents. At the bottom, there is a section for 'SE Michigan Projects' with buttons for Overview Materials, Arch. Views, ConOps, Design, and Certification.

<http://cps-vo.org/SE-Michigan-2014-Project>

Connected Vehicle Core Systems Service Desk



- All requests for support come through a single service desk
- Sign-up for an account at:
 - <https://cvcs.samanage.com>
- Typical requests
 - Equipment loans
 - In-facility testing support
 - RSU/OBU configuration
 - Schedule a facility tour
- Articles / FAQs

Connected Vehicle Core Systems Service Desk

Business hours are Monday thru Friday, 9:00AM - 5:00PM, Eastern Standard Time.
Toll-free # 1-844-DOT-CVCS (1-844-368-2827)

Briefly describe your question or service request

How can we help you?

My Requests

Active Requests

You have no service requests.

[View all](#)

Popular Services

- Equipment Loan Request
- Equipment Loan Return
- CVCS in-facility testing support
- OBU / RSU configuration support
- Schedule a visit/tour of the CVCS facility (no testing conducted)
- RSU/OBU Certificate Request
- Request the current operational status of CVCS Test Bed Intersections
- Request to use the Connected Vehicle Test Bed's deployed Road Side Units (Telegraph Rd.)
- Request CVCS Webtools Account (Updated 4/25/16)

[View all](#)

Useful Articles

- CVCS Reservation Calendar
- Connected Vehicle Program Resources
- RSU / OBU Certificate Request Forms
- CVCS Intersections in Oakland County with Road Side Units (Current & Planned)
- Interacting with the CVCS Service Desk via email
- CVCS Clearinghouse and Warehouse Tools information (Updated 5/9/16)
- Connected Vehicle Test Bed - Use forms

[View all](#)

Cannot find what you are looking for? [Create A New Service Request](#)

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