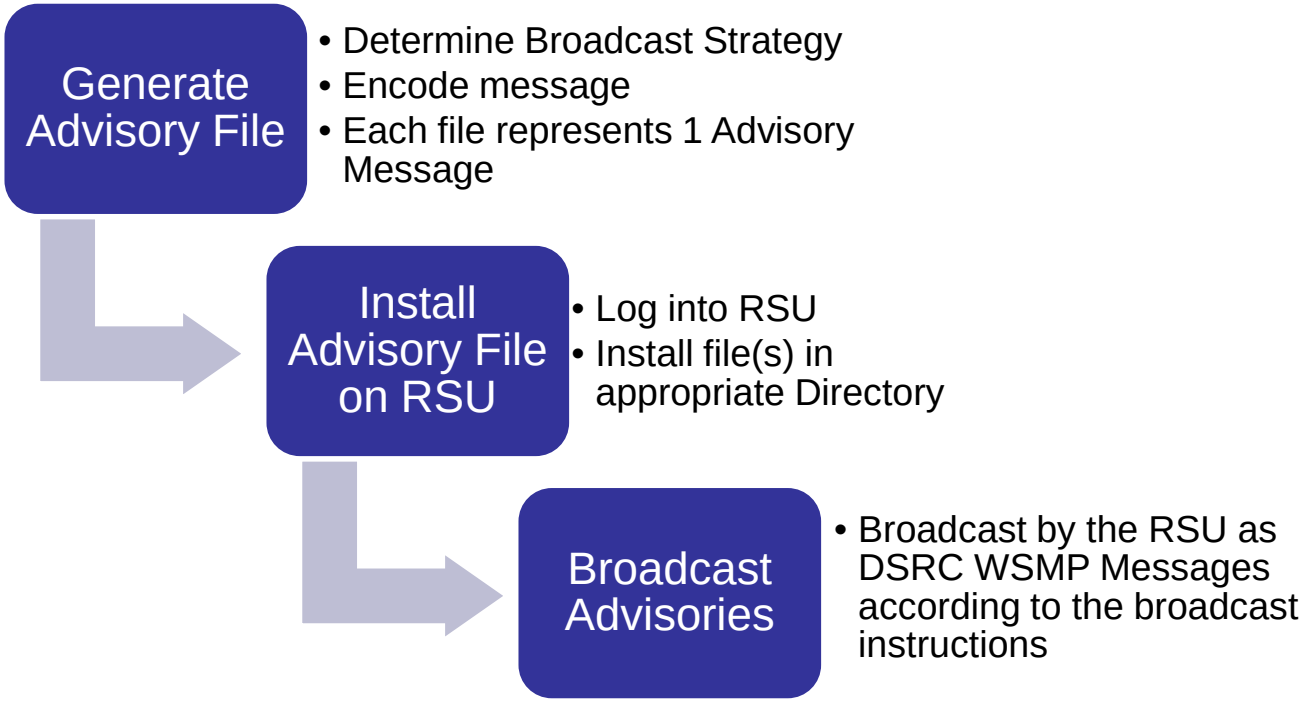
Getting to Something Big
Tools and Support

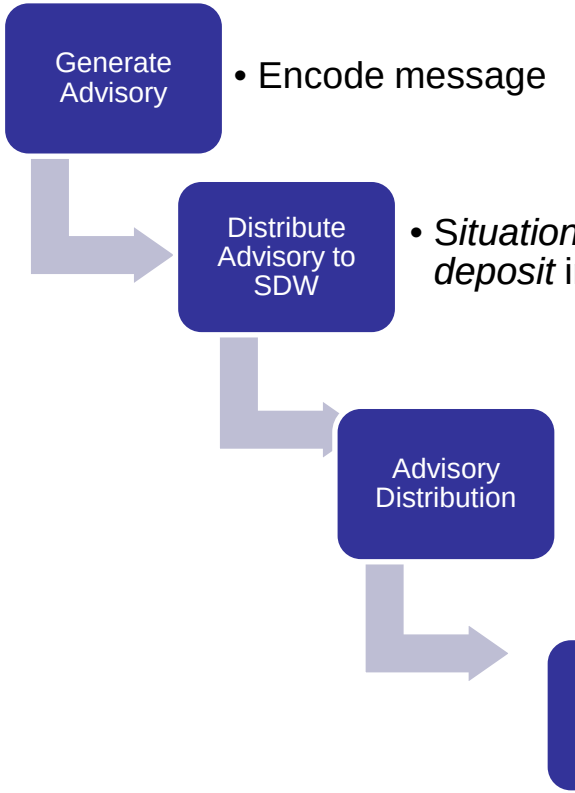
Unified Implementation of the CVRIA – Regional Scale
Design Details, Tools to Assist Interoperable Implementations

RSE 3.0



- Requires operations personnel to determine\understand the broadcast strategy (i.e. PSID, DSRC Channel, Transmit Mode (Continuous or Alternating), message priority, signature, encryption, etc.)
- Requires operations personnel to have direct access to all RSUs and be knowledgeable in the operations of RSUs from multiple vendors.

2014 Architecture



- Encode message
- *Situation data deposit* interface
- *Situation data distribution* interface for broadcast by RSU
- *Situation data delivery* interface for IP distribution directly to vehicles
- D*ata delivery* interface for broadcast by RSU as DSRC WSMP Messages
- Vehicles request bundles via IP

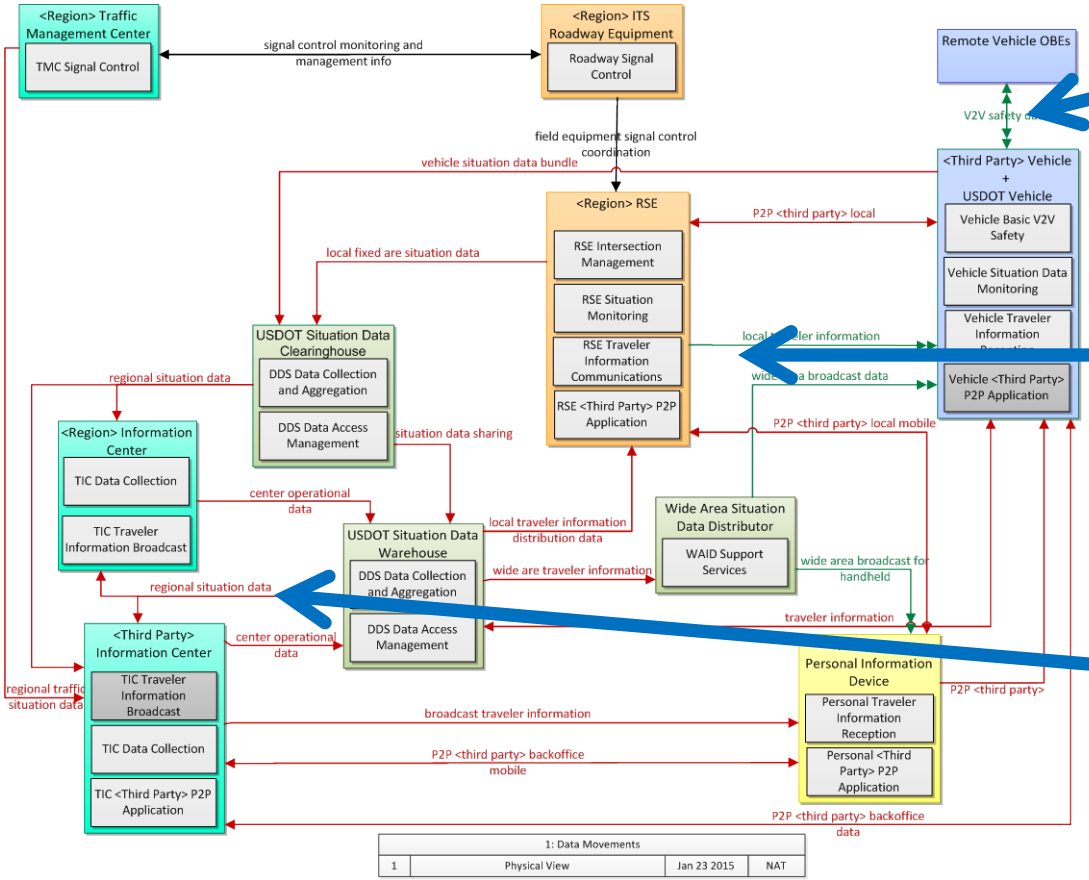
- Automates the message distribution process
- Situation Data Warehouse (SDW) assigns broadcast instructions\strategy based on message type
- Reduces knowledge base requirement of operations personnel
- Requires personnel to only have access to a single location (SDW)

Focus on Key Interfaces

Promote Interoperability by forcing -

- All BSM's **meet performance requirements** (Vehicle Situation Data)
- All MAP's and SPaT's **created using the same interpretation** (Field Situation Data)
- All Traveler Situation Data **distributed using the USDOT Warehouse** (Travel Situation Data)

2014 Architecture



- Vehicle Situation Data
- Field Situation Data
- Traveler Situation Data

CPS – VO example

CPS-VO » TRANSPORTATION » AUTOMOTIVE » UNIFIED IMPLEMENTATION OF THE CVRIA - REGIONAL SCALE » FILES

Files

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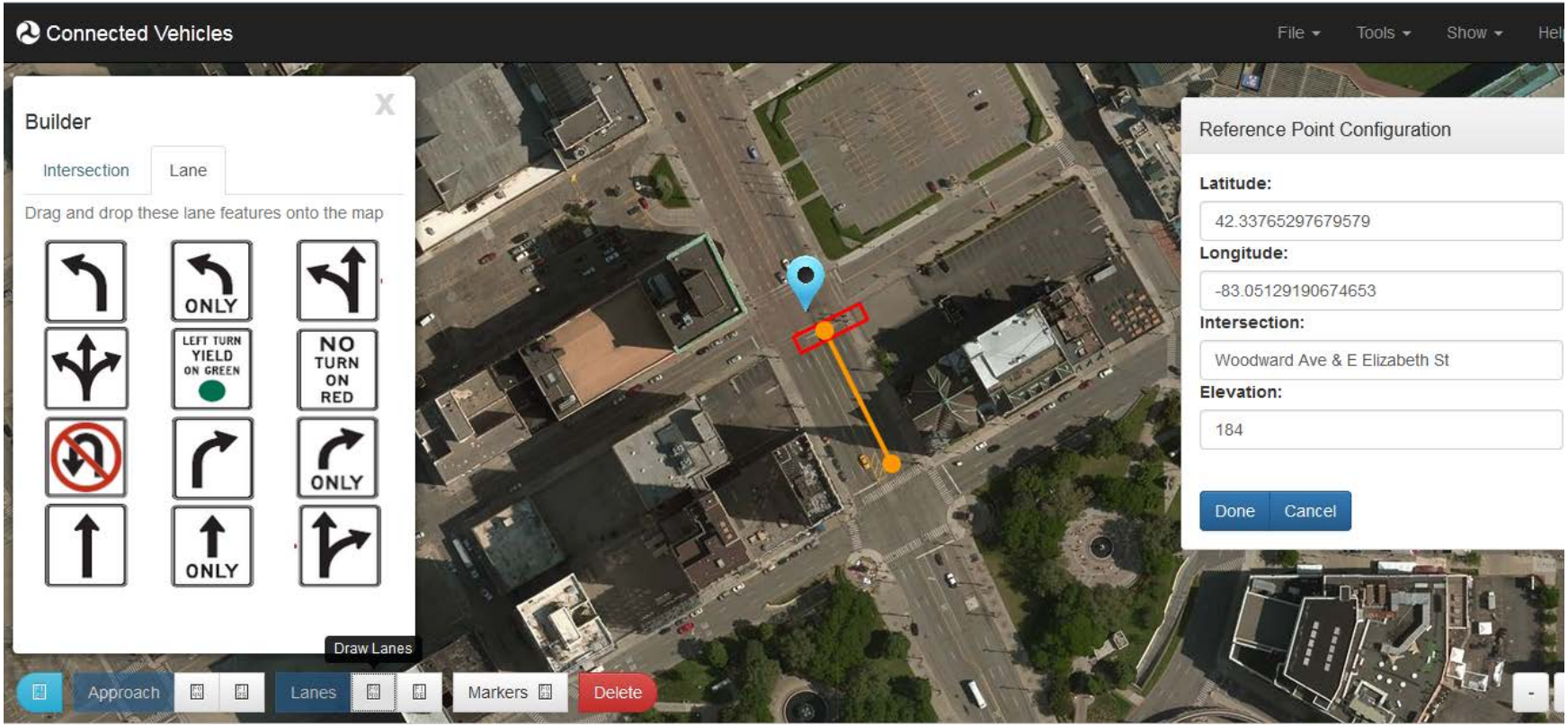
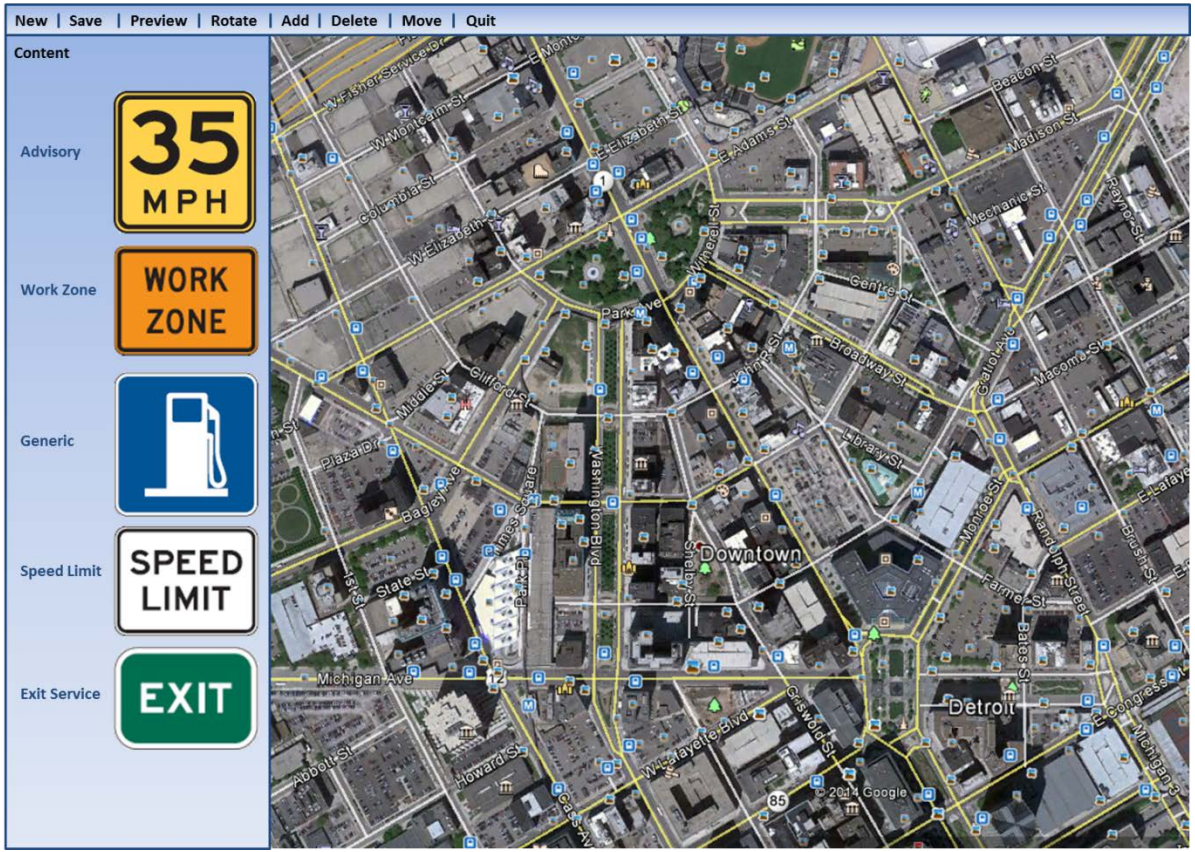
EDIT GROUP | TRACK | TAXONOMY | BROADCAST | PANELS | GROUP STATS

SE Michigan Projects	77.65 MB	115
Data Distribution	0 bytes	0
Overview Material	28.22 MB	18
Arch. Views	1.79 MB	7
ConOps	2.65 MB	2
Design	35.08 MB	83
Certification	9.91 MB	5
Affiliated Test Beds	13.32 MB	24

MAP Tool Example

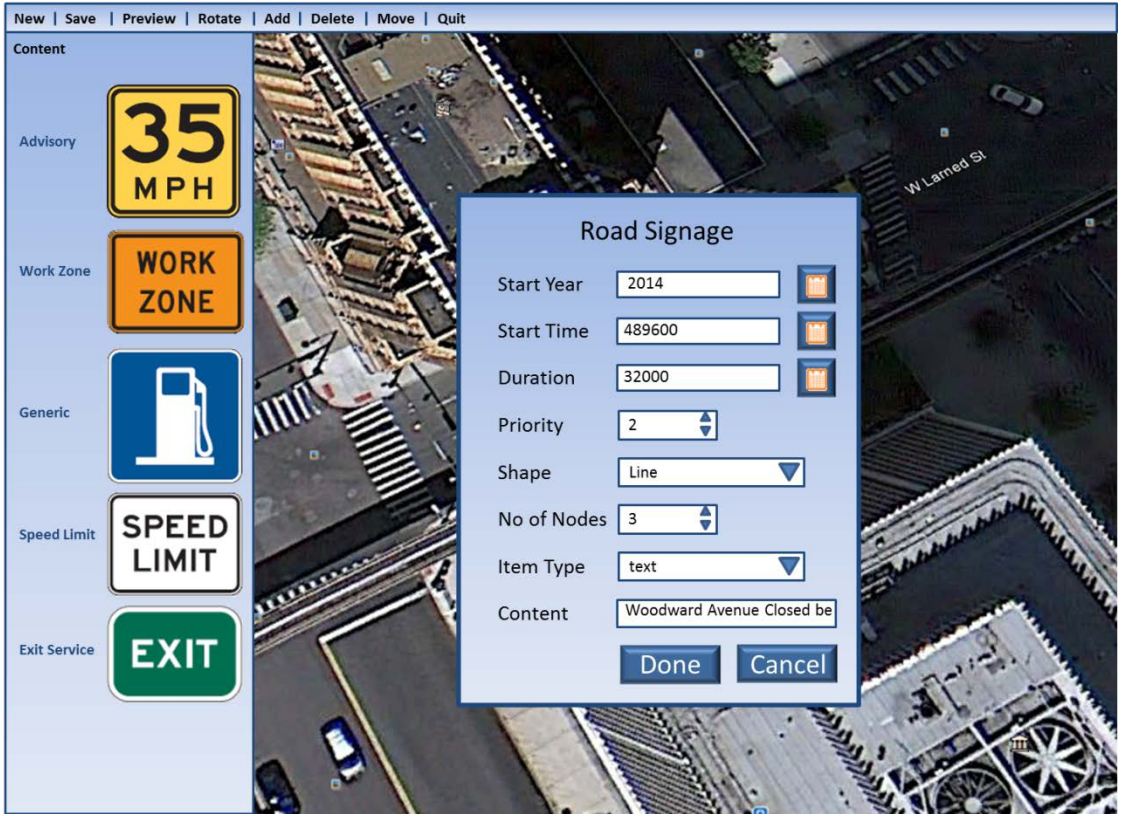


Traveler Situation Data Tool



- Objective
  - Provide less tedious and more user friendly way of creating Traveler Situation Data Messages (TIMs)
  - Common cases are easy and general case is possible
- Approach
  - Allow data entry via icon library drag and drop
  - Allow geo information to be provided from a map
  - Detect elevation from a geo point

Traveler Situation Data Tool, cont.



Coming Soon

Organization to our efforts

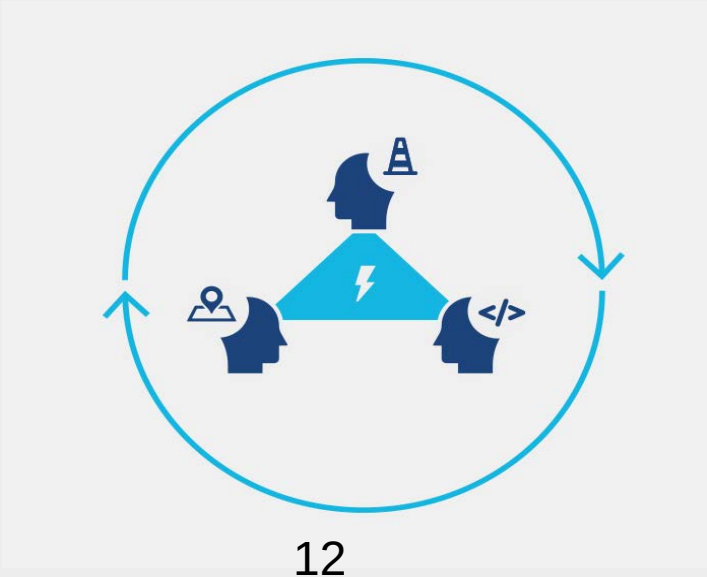
- Architecture
- Tools
- Support
- Community

Coming Soon

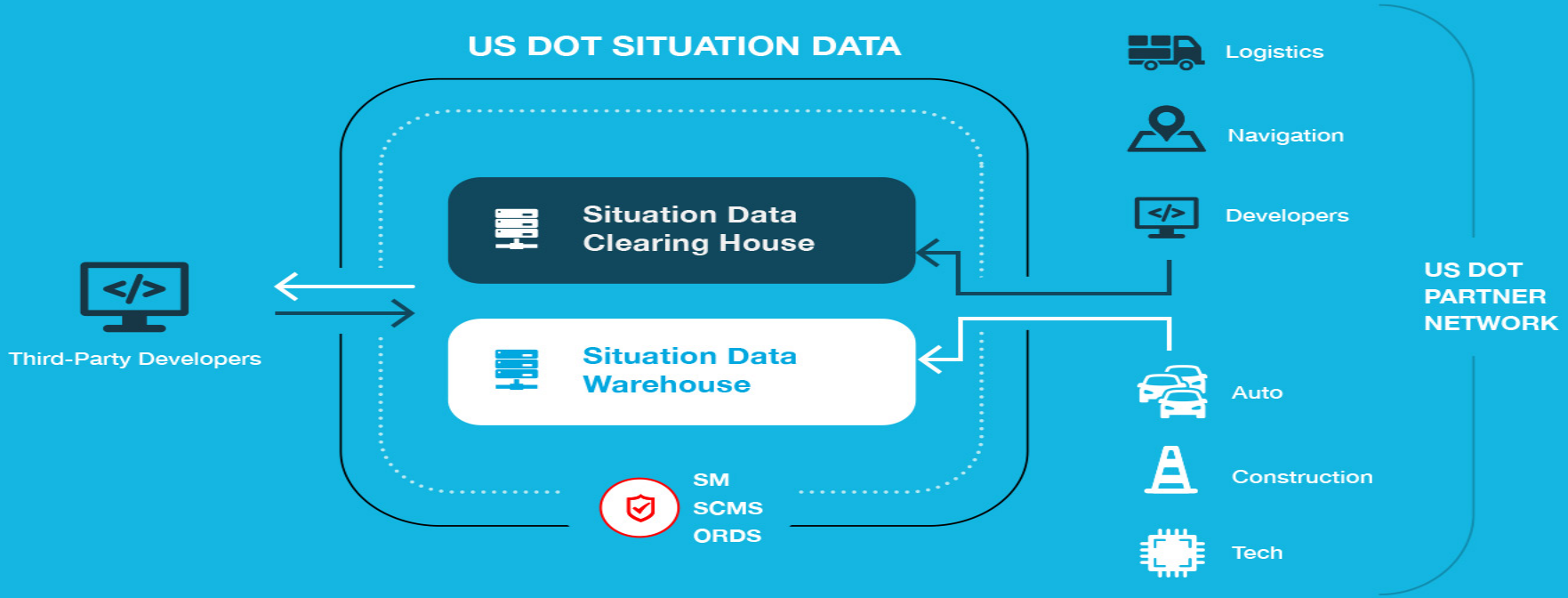
Organization to our efforts to support

Platform
Tools
Community

U.S. DOT has established an open and evolving ecosystem for 3rd party developers to create new innovation.

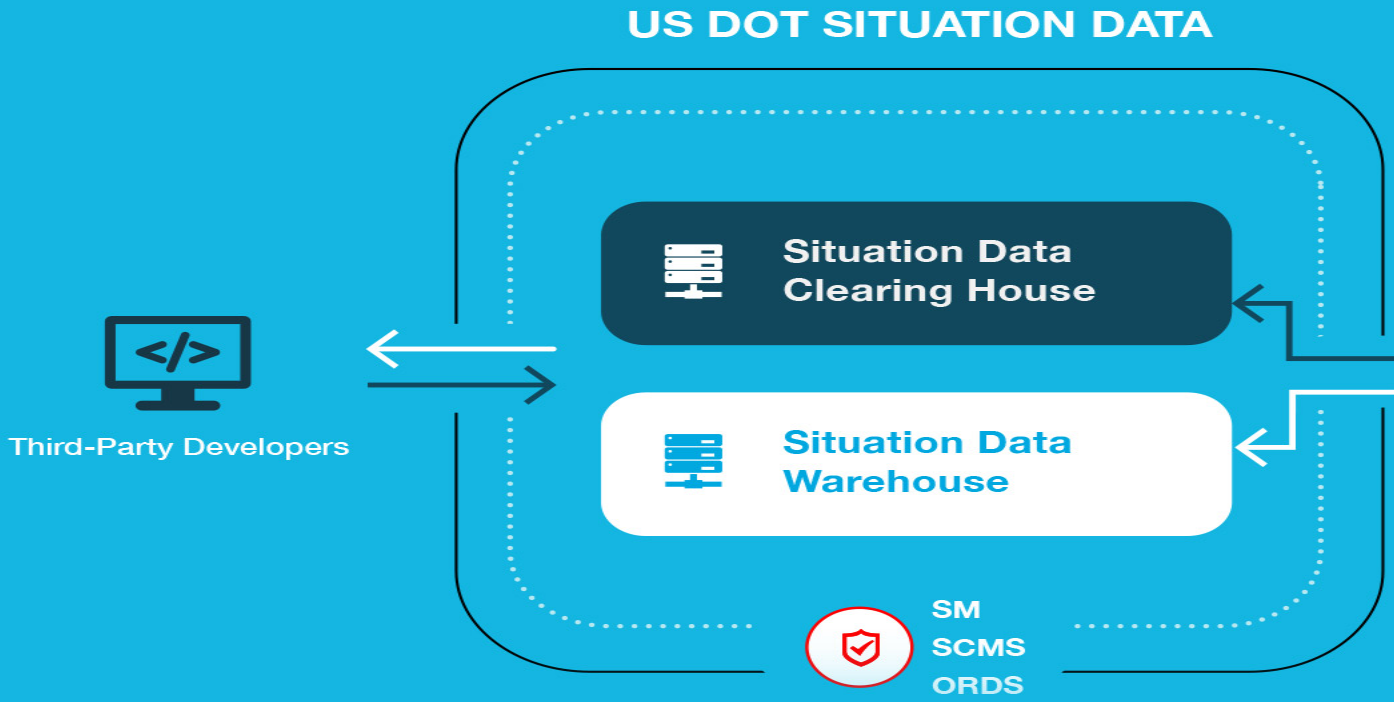


THE PLATFORM [Overview]



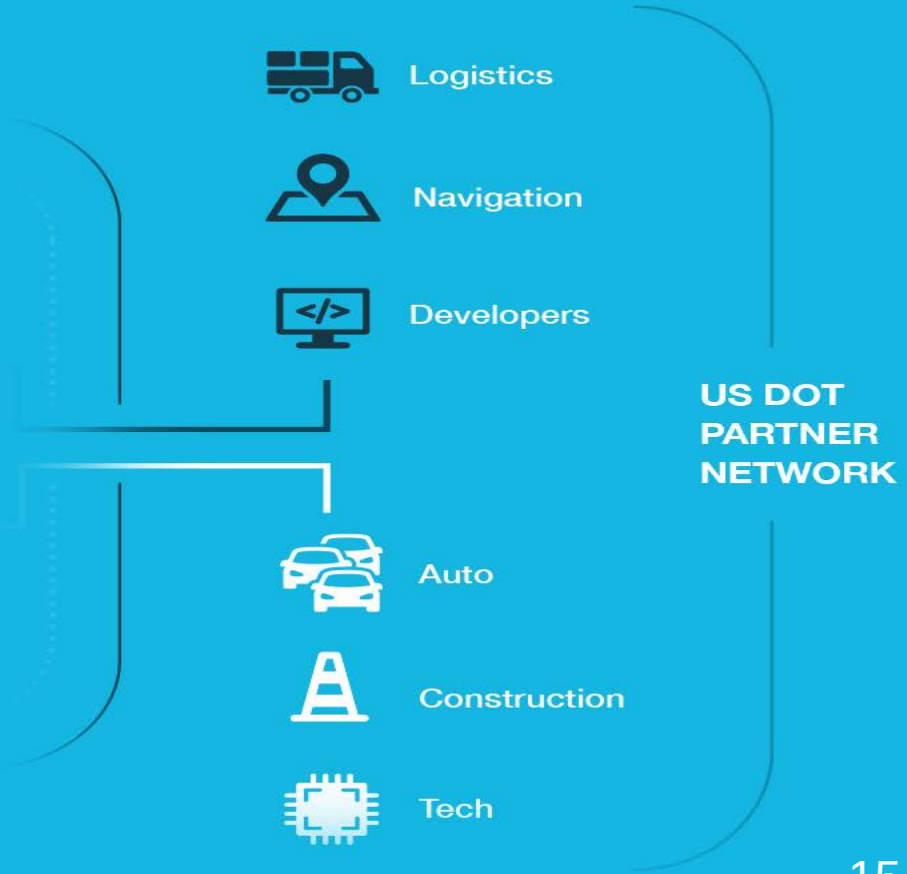
THE PLATFORM [Developers]

Focus on 3rd party developers



THE PLATFORM [Network]

Focus on partners

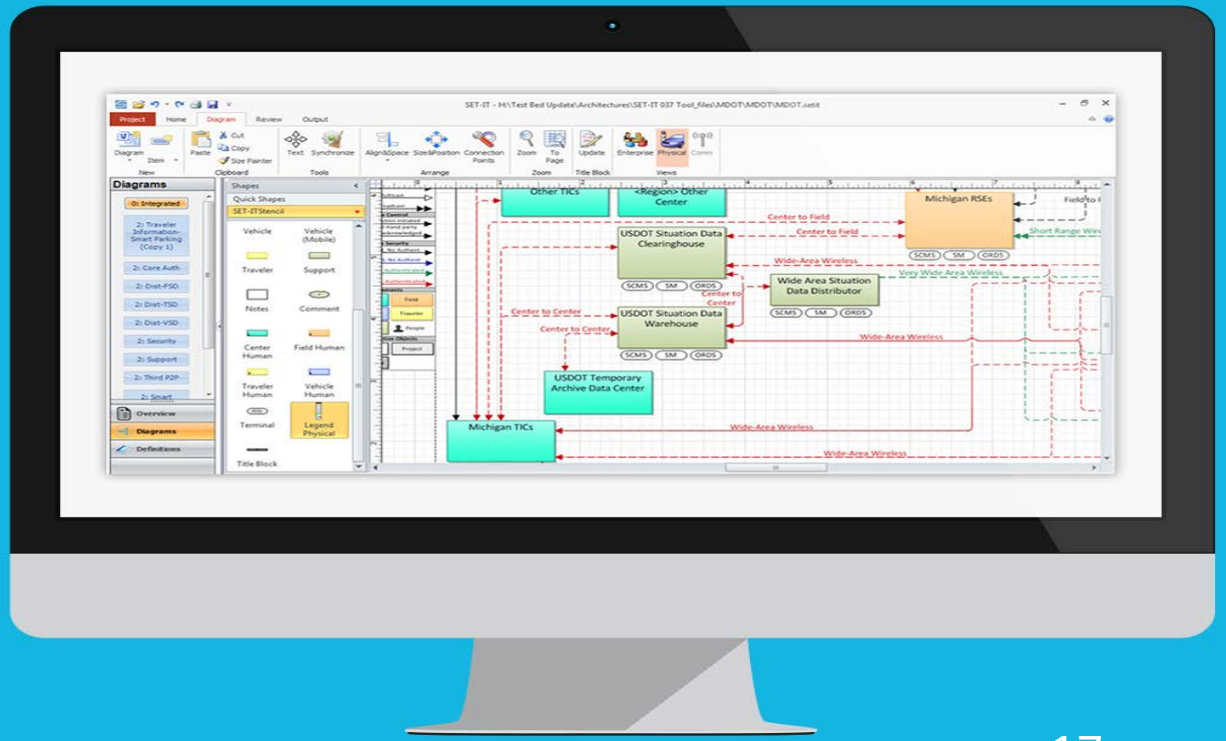


We have the tools…

We’ve been working hard to provide 3rd party developers everything they need to work efficiently, and effectively.

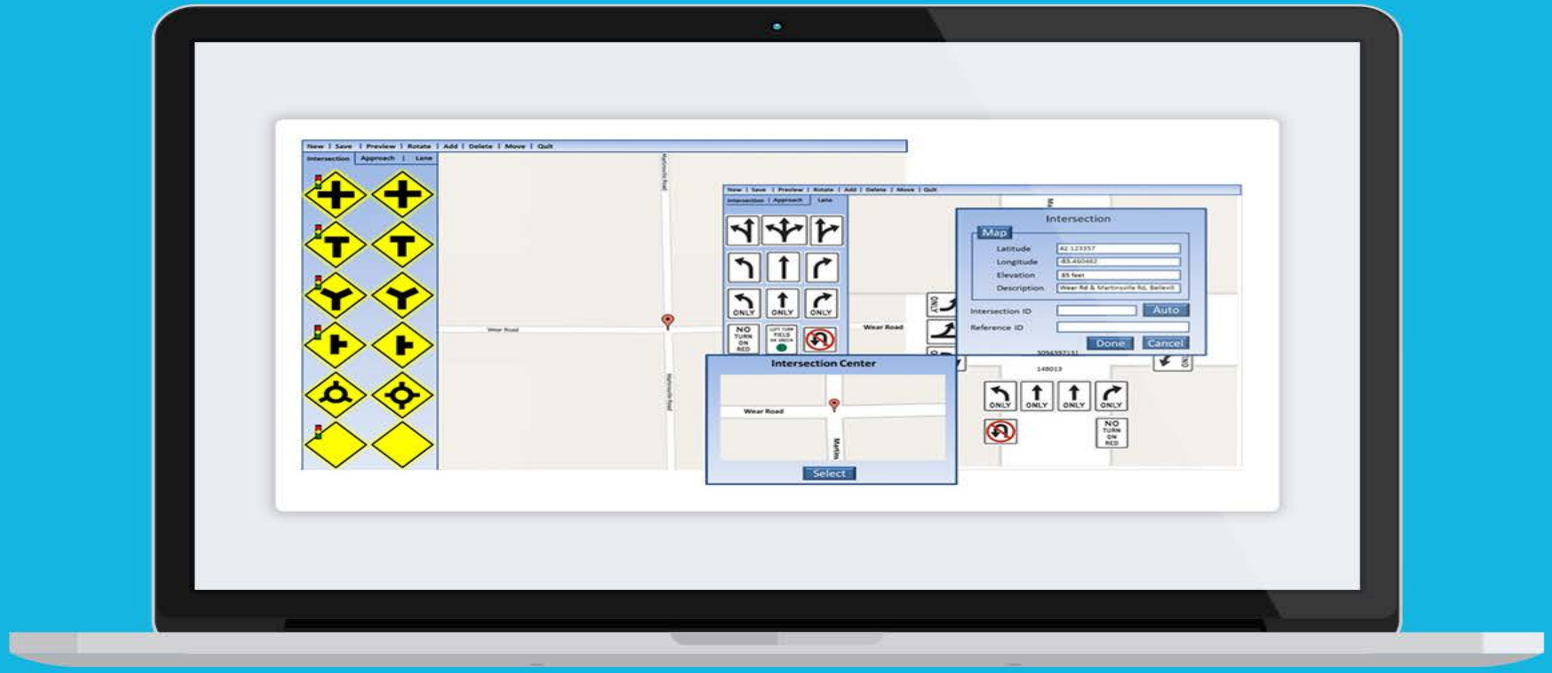
SET-IT

A network design tool, with guaranteed compliant designs to assist in development.

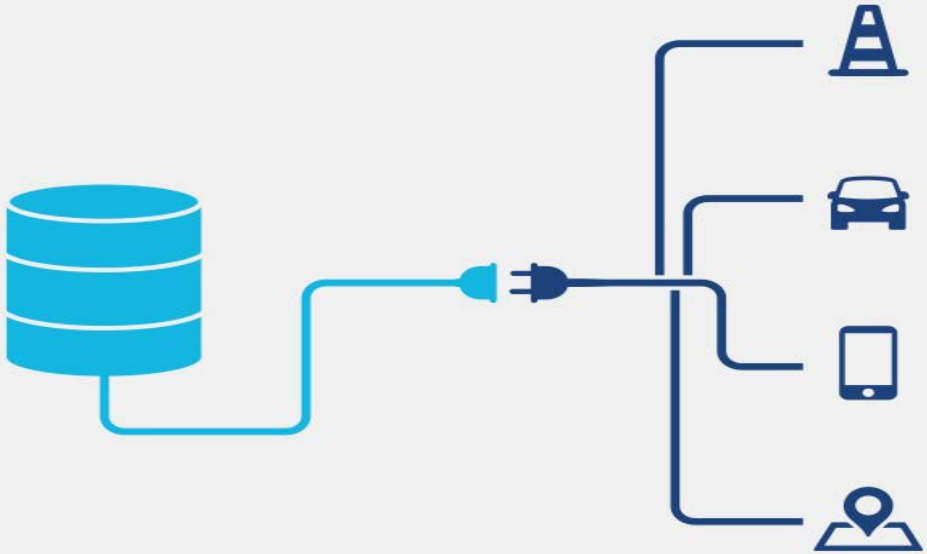


TEST HARNESS

A tool for 3rd party developers to functionally complete, test, and validate their code.

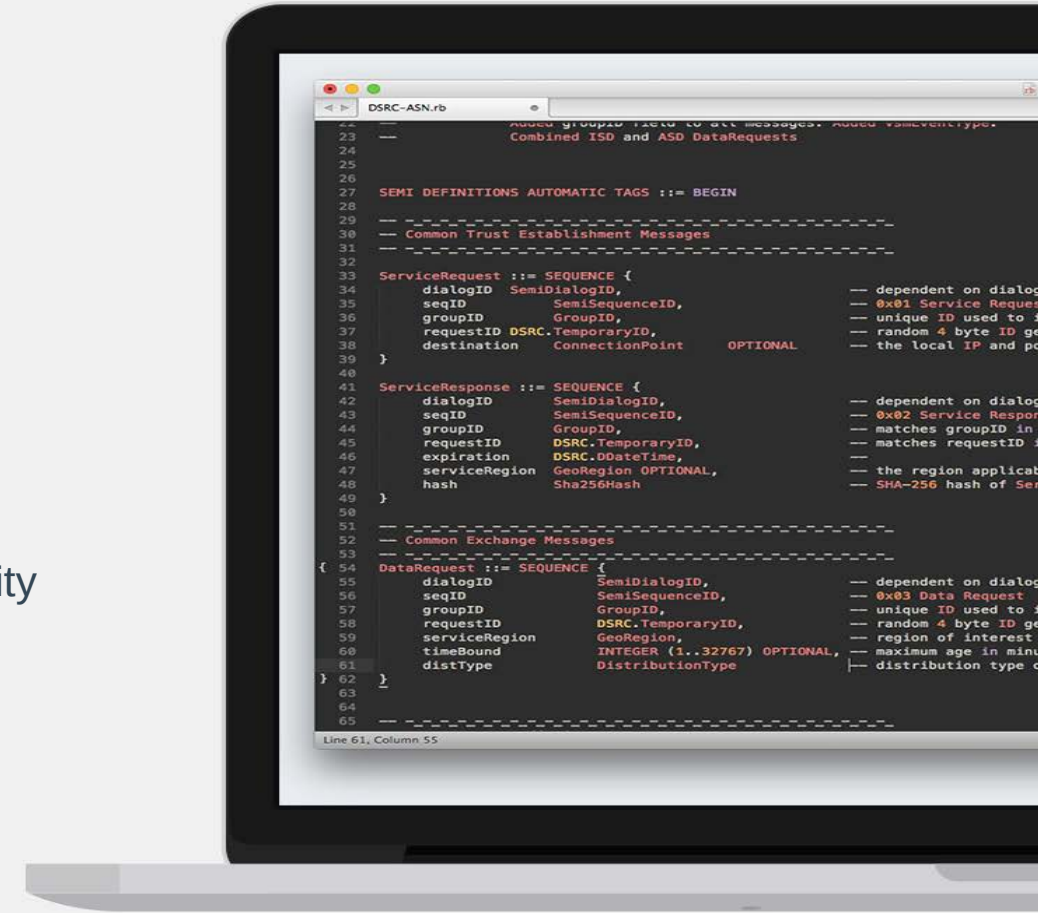


We have the APIs…

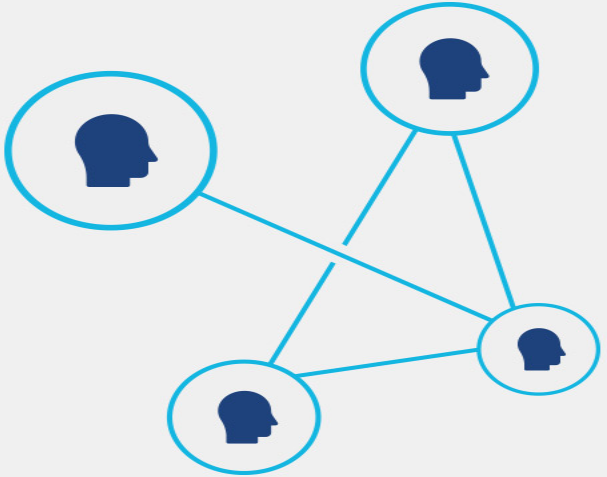


API – Live Data Exchange

API - Live Data Exchange
Proper subset implementation of J2735
SDW - Data Warehouse
SDC - Data Clearinghouse
SCMS.v1 - Certificate Management/Security



We have the community…



Our PlugFests are a place to solve problems and find new opportunities together.

We have the tools, APIs, and the people to build and test in the connected vehicle ecosystem.

The future should be built together.
Come and code with us.

GET STARTED TODAY

Design with SET-IT
Trial with Virtual Code
Live Support

Booth 912

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Test Beds: http://www.its.dot.gov/testbed.htm