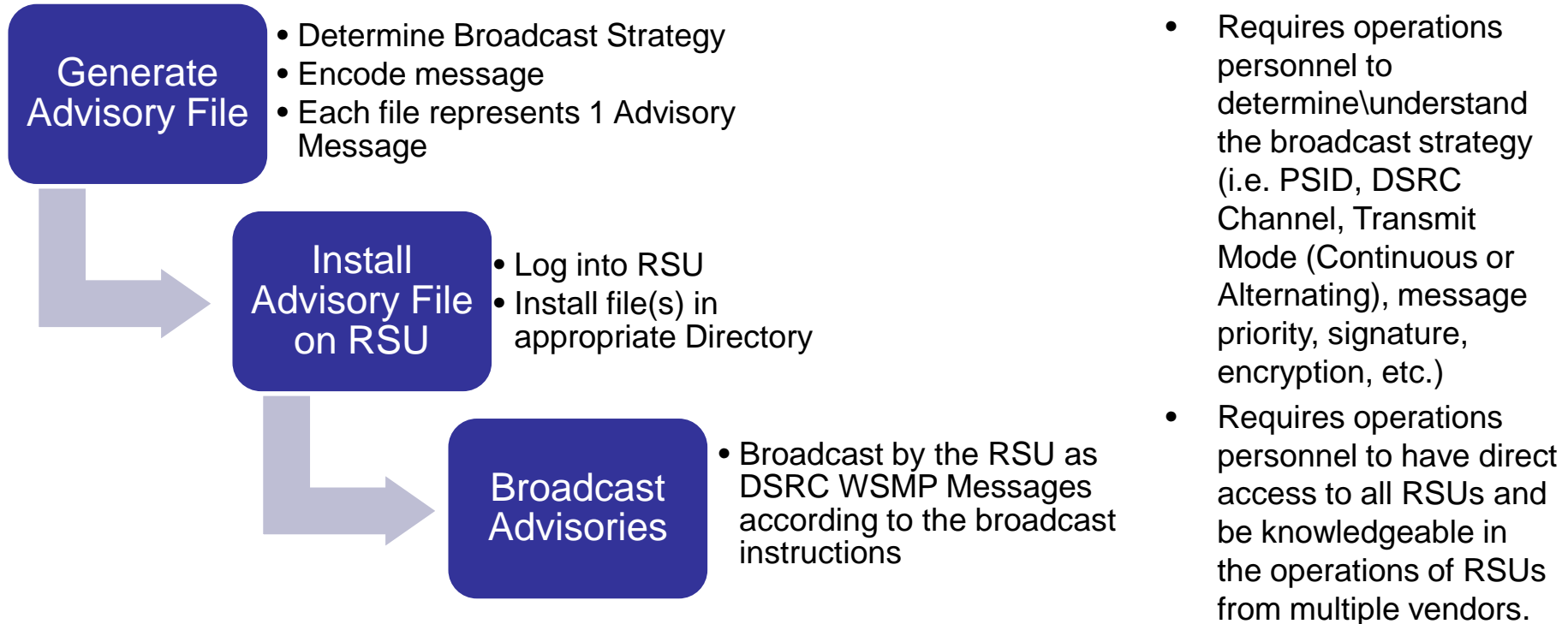

Getting to Something Big Tools and Support

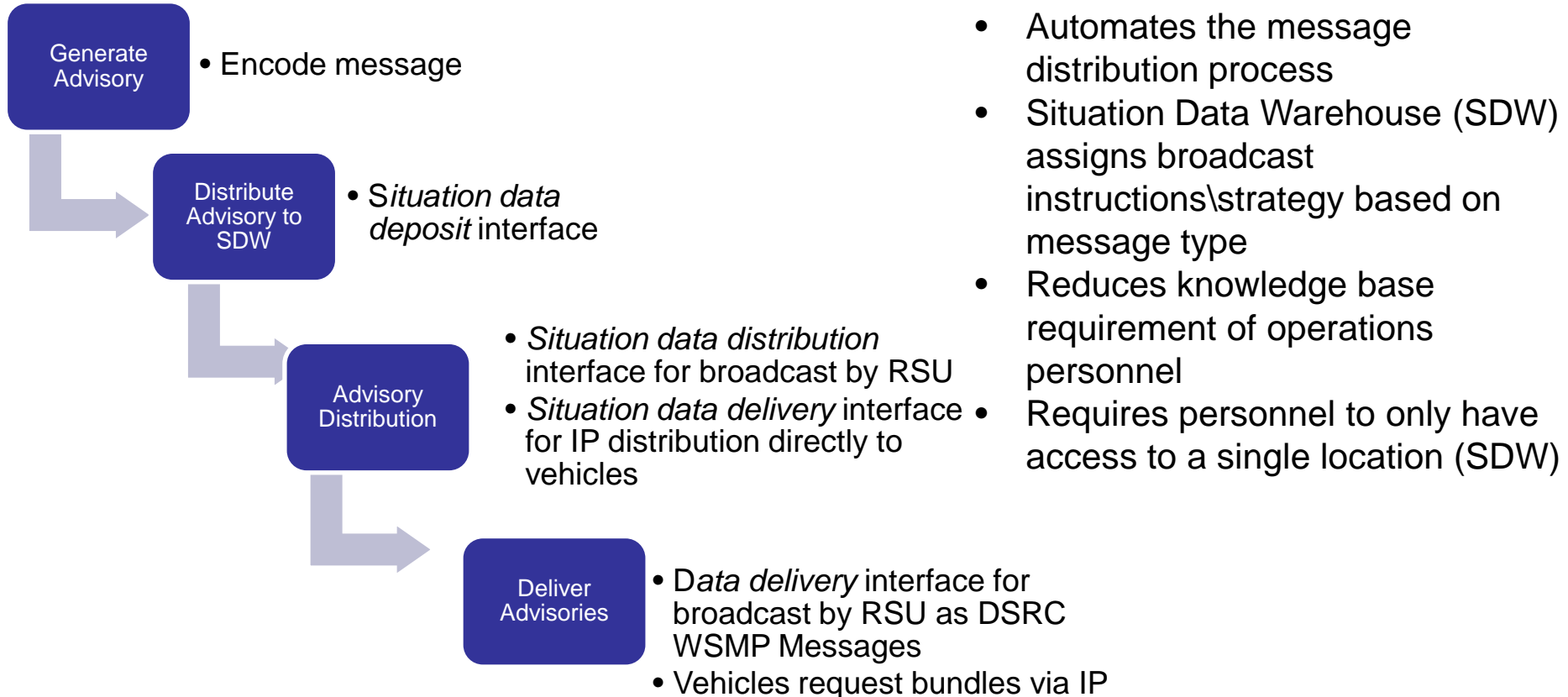
**Unified Implementation of the CVRIA – Regional Scale
Design Details, Tools to Assist Interoperable Implementations**



RSE 3.0



2014 Architecture



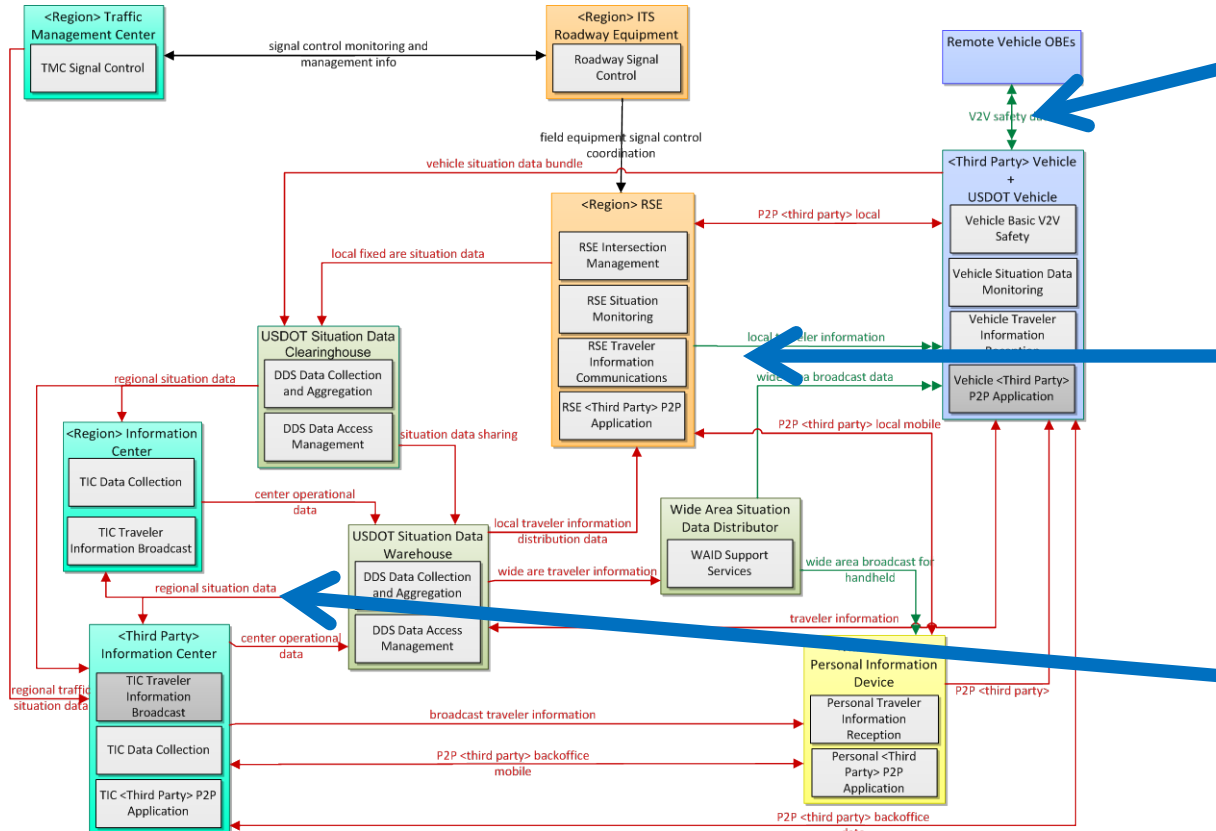
Focus on Key Interfaces

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

1: Data Movements			
1	Physical View	Jan 23 2015	NAT

Intersection Situation Data Tool

The screenshot displays the Intersection Situation Data Tool interface. On the left is a sign selection panel with a menu bar (New | Save | Preview | Rotate | Add | Delete | Move | Quit) and tabs for Intersection, Approach, and Lane. The panel contains a grid of 20 yellow diamond-shaped signs, including various T-junction, Y-junction, and intersection signs, as well as a blank sign. The main map area shows an intersection of Wear Road and Martinsville Road. A red location pin is placed at the intersection. A secondary window titled 'Intersection Center' provides a zoomed-in view of the intersection with a 'Select' button. A third window titled 'Intersection' contains a 'Map' tab with input fields for Latitude (42.123357), Longitude (-83.460462), Elevation (85 feet), and Description (Wear Rd & Martinsville Rd, Bellevill). It also includes fields for Intersection ID and Reference ID, and buttons for 'Auto', 'Done', and 'Cancel'. The map area also shows various traffic signs such as 'ONLY' directional signs, 'NO TURN ON RED', and 'LEFT TURN YIELD ON GREEN' signs.

MAP Tool Example

- <https://ec2-54-146-168-120.compute-1.amazonaws.com/isd/>




Traveler Situation Data Tool


New | Save | Preview | Rotate | Add | Delete | Move | Quit

Content


Advisory




Work Zone



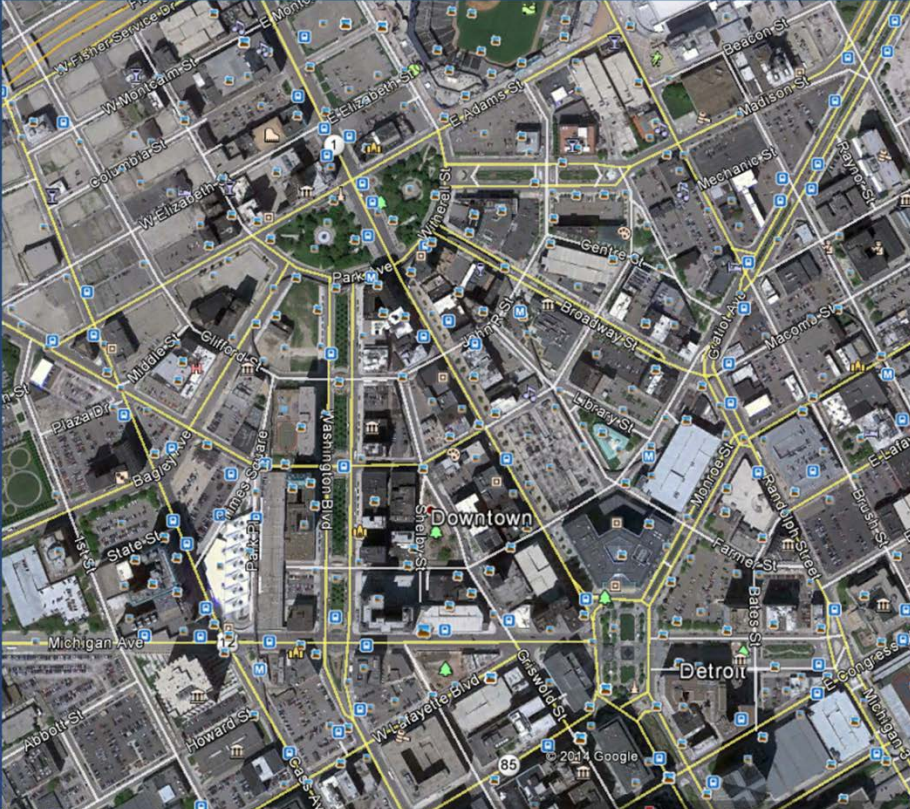

Generic



Speed Limit



Exit Service



- 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.


New | Save | Preview | Rotate | Add | Delete | Move | Quit

Content


Advisory




Work Zone




Generic



Speed Limit



Exit Service



Road Signage

Start Year

Start Time

Duration

Priority

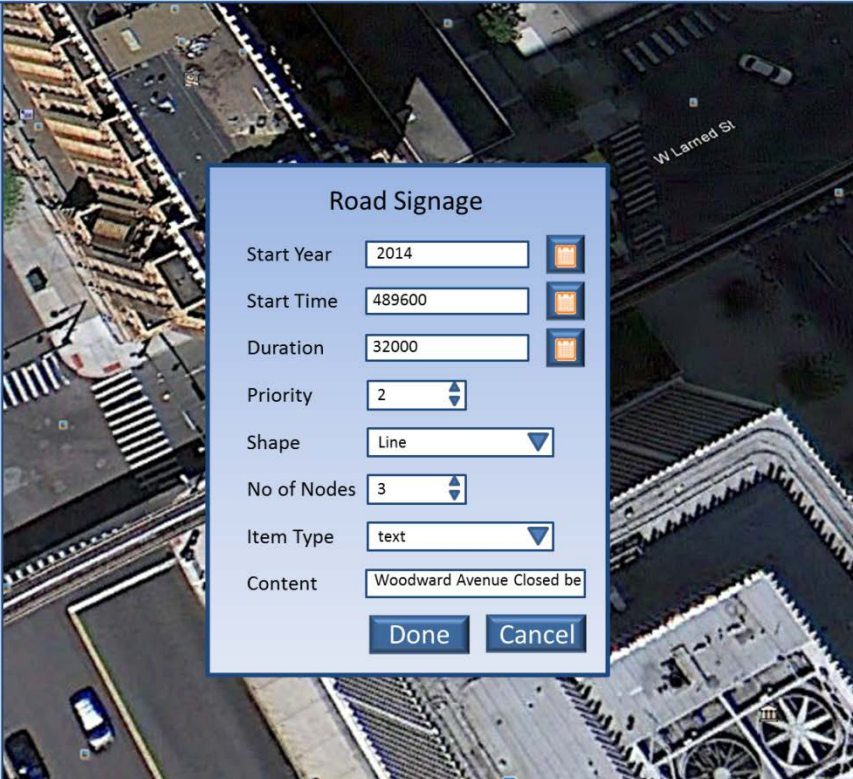
Shape

No of Nodes

Item Type

Content

Done Cancel



Preview

Hex String

```
3081CD80011081090000000000009021401A481B8308185800102A11BA119A0108004193AEAB68104CE8033DC820200B88102000C820102820207DE830307788084027D00850102A6108004193AEDB68104CE803AF2820200B78702016E880100A9213
```

Pretty print

```
value TravelerInformation ::=
{
  msgID travelerInformation,
  packetID '000000000009021401'H,
  dataFrames
  {
    {
      frameType roadSignage,
      msgID roadSignID :
      {
        position
        {
          lat 423291575,
          long -830458916,
          elevation '00B8'H
        },
        viewAngle '000C'H,
        mutcdCode warning
      },
      startTime 489600,
    }
  }
}
```

Save Close



Coming Soon

Organization to our efforts

- Architecture
- Tools
- Support
- Community



Coming Soon

Organization to our efforts to support

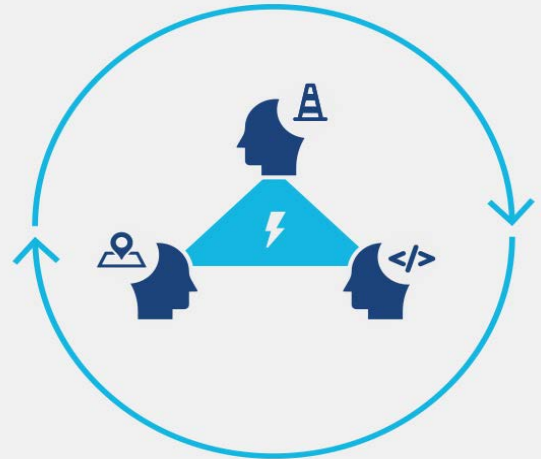
Platform

Tools

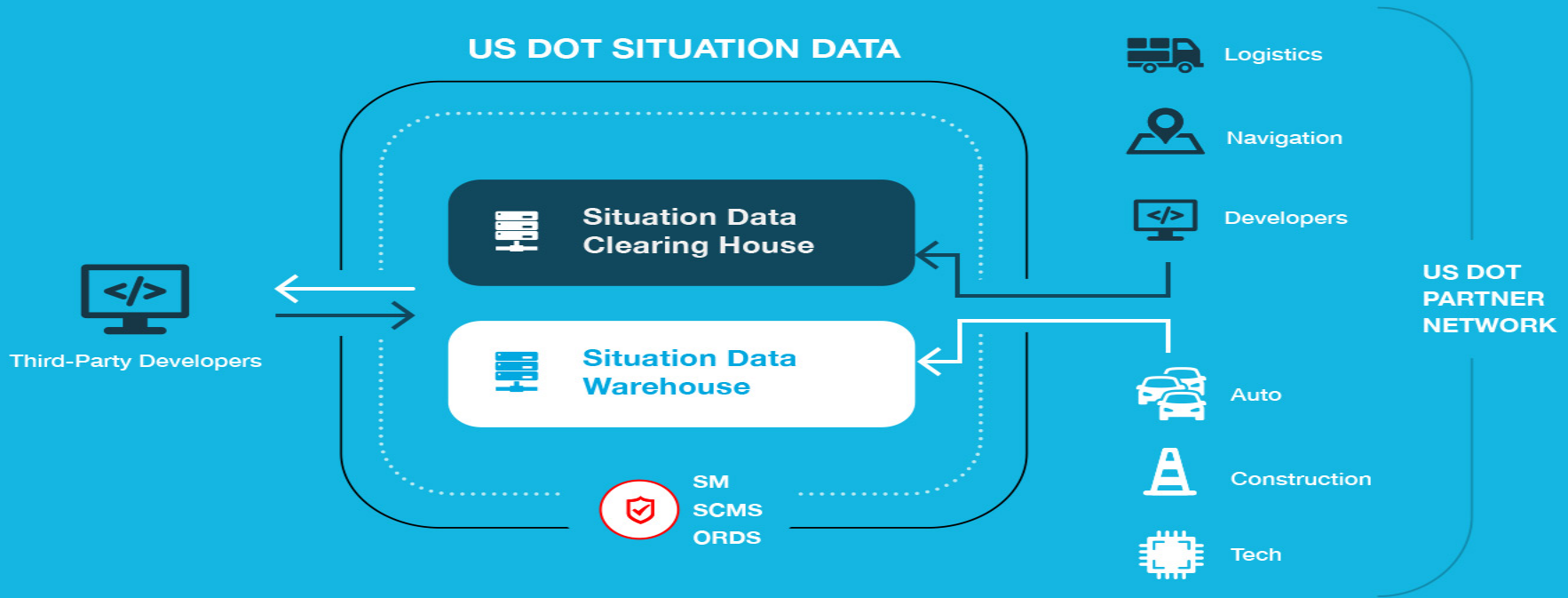
Community



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

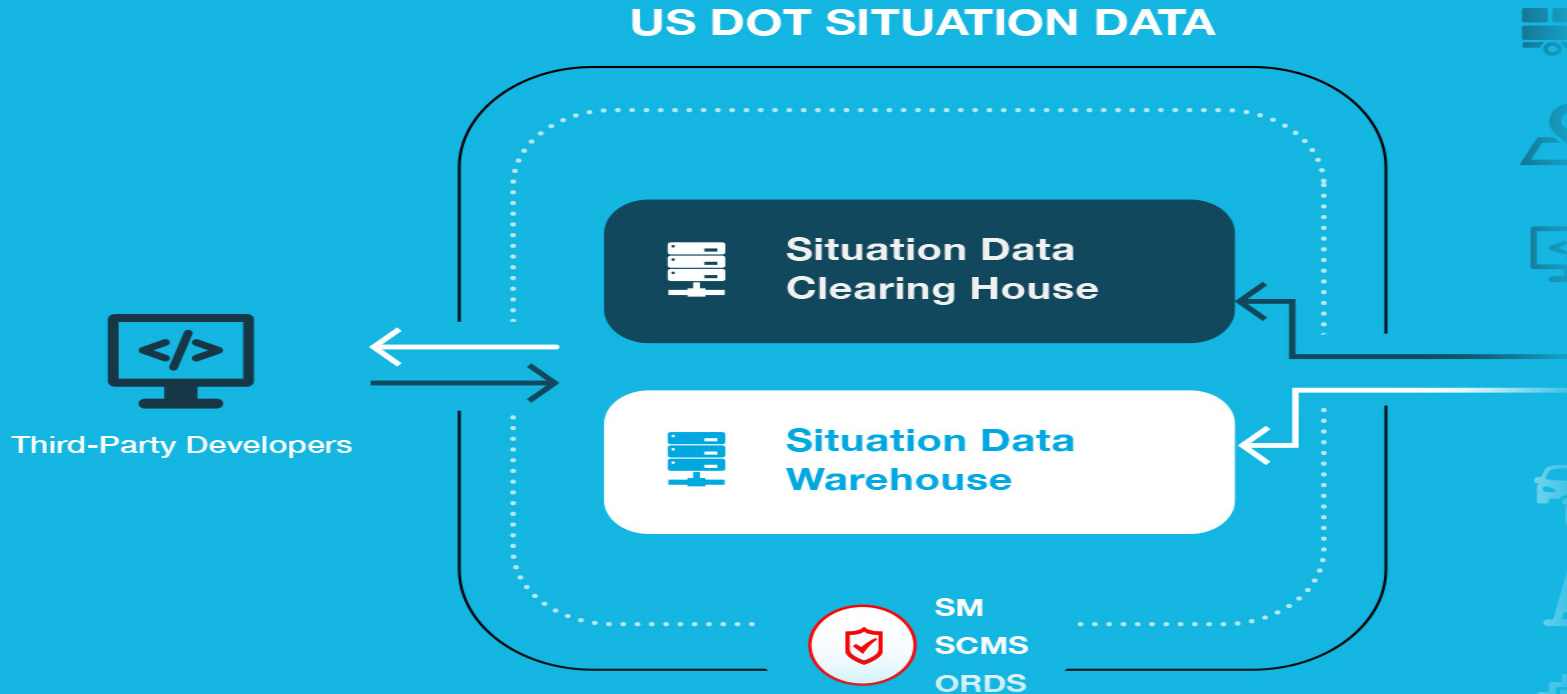


THE PLATFORM [Overview]



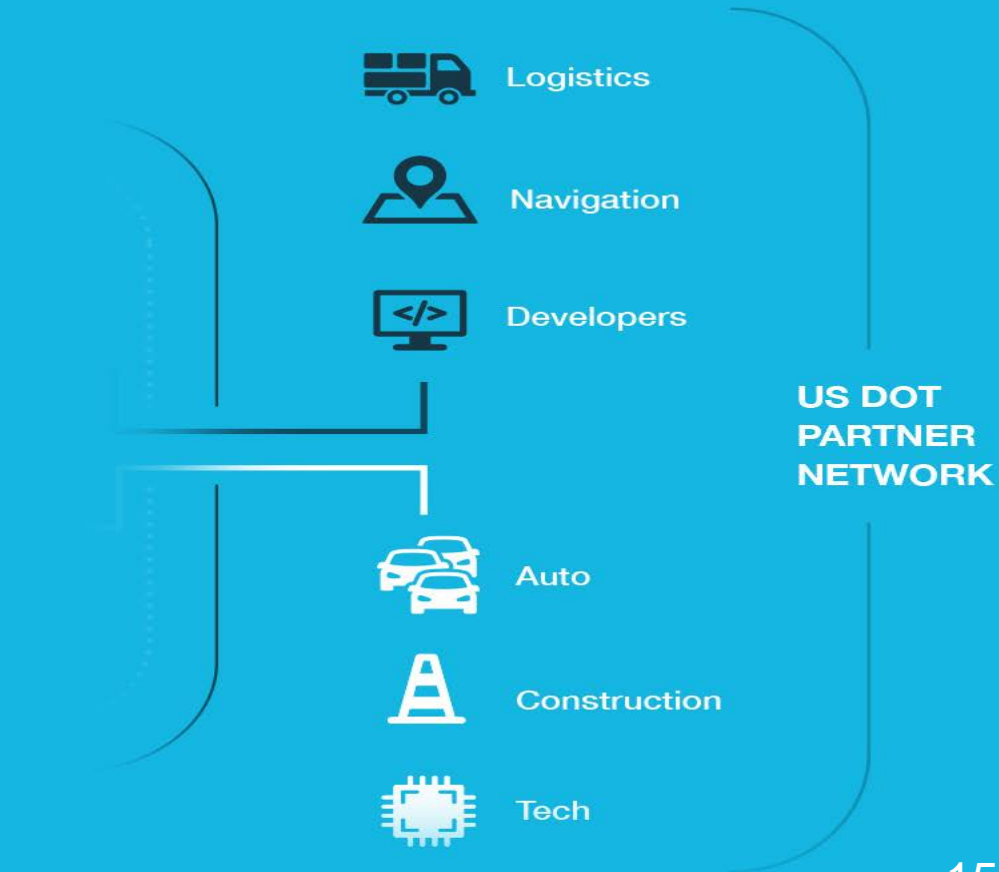
THE PLATFORM [Developers]

Focus on 3rd party developers



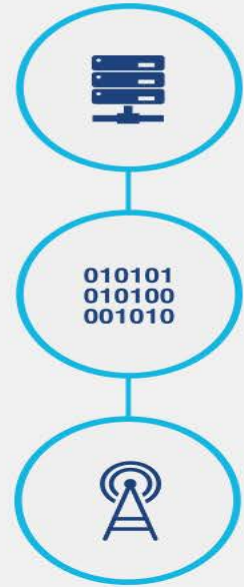
THE PLATFORM [Network]

Focus on partners



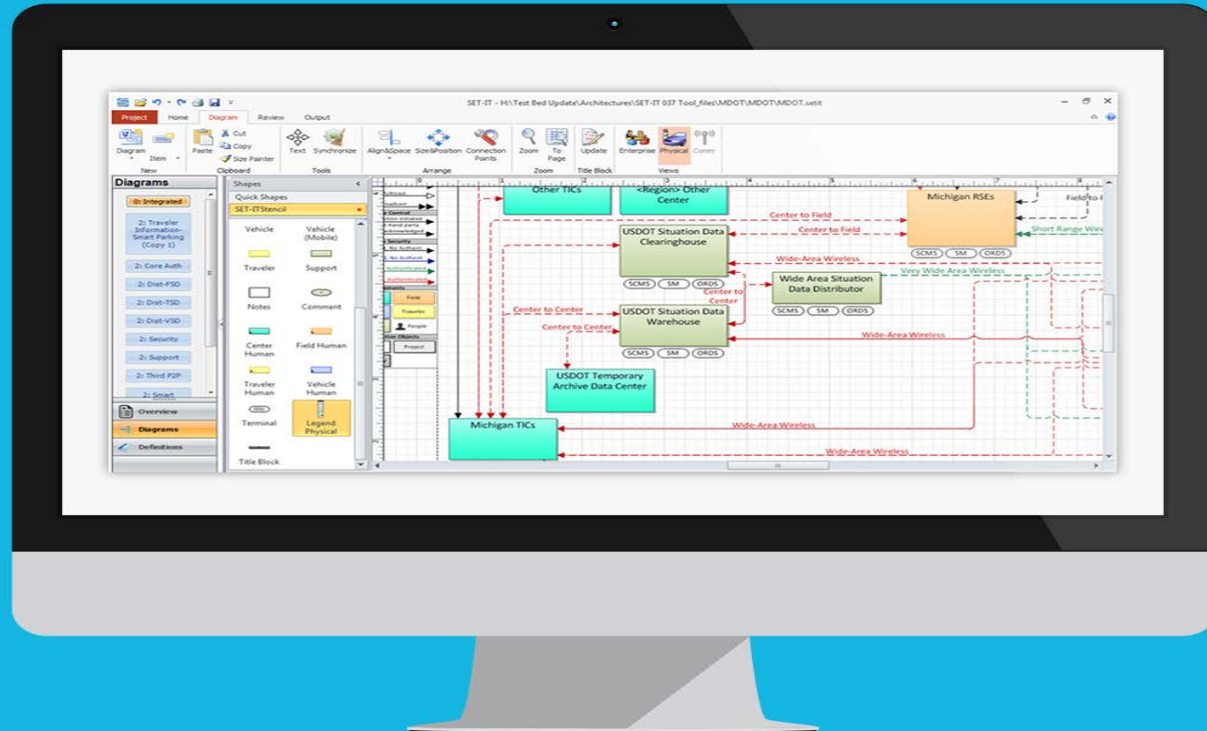
We have the tools...

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.

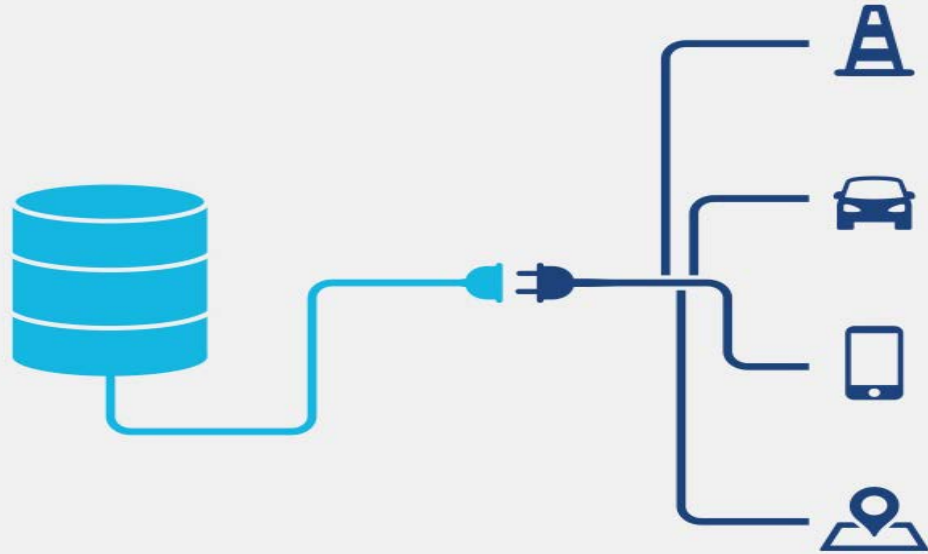


TEST HARNESS

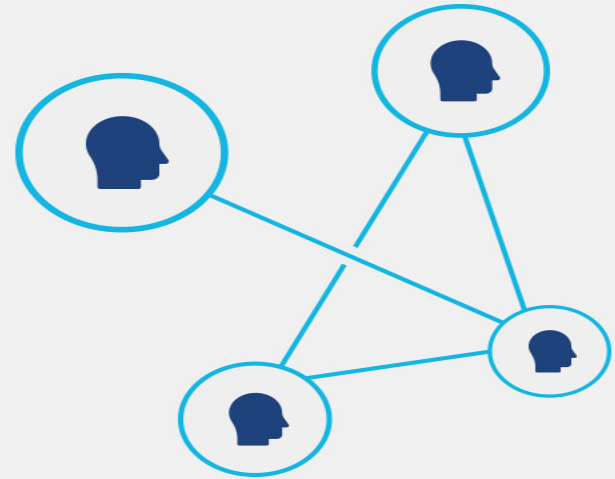
A tool for 3rd party developers to functionally complete, test, and validate their code.



We have the APIs...



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

Walton Fehr - walton.fehr@dot.gov
Greg Krueger - gregory.d.krueger@leidos.com
Test Beds: <http://www.its.dot.gov/testbed.htm>

