



VII Overview & Program Plan

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**DaimlerChrysler Research &
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**Vehicle
Infrastructure
Integration**



The VII Coalition

- **US Department of Transportation**
 - *FHWA –NHTSA - FMCSA*
- **State Departments of Transportation**
 - *CA, FL, ID, MI, MN, MTC, NY, UT, VA, WA, AASHTO*
- **Automotive Industry**
 - *BMW, DaimlerChrysler, Ford, GM, Honda , Nissan, Subaru, & Toyota*



Improving Safety & Mobility

The Concept

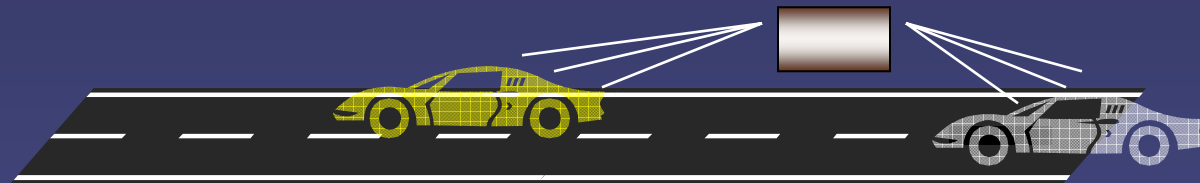
Vehicle manufacturers install communications link & GPS in new vehicles

Transportation public sector installs communications link on roadside

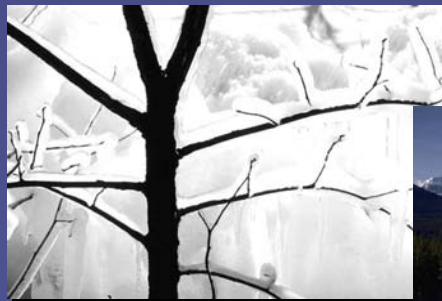
Vehicle Infrastructure Integration

Vehicle
Infrastructure
Integration

Connecting Vehicles and Infrastructure



*Creating a
“nationwide enabling
communication
infrastructure”*



Vehicle
Infrastructure
Integration

What Does Nationwide Mean?

- **In our Urbanized Areas**
 - *Freeways and major arterials*
- **Rural Areas**
 - *National Highway System*
 - *Interstates*
 - *Major Rural Roads*

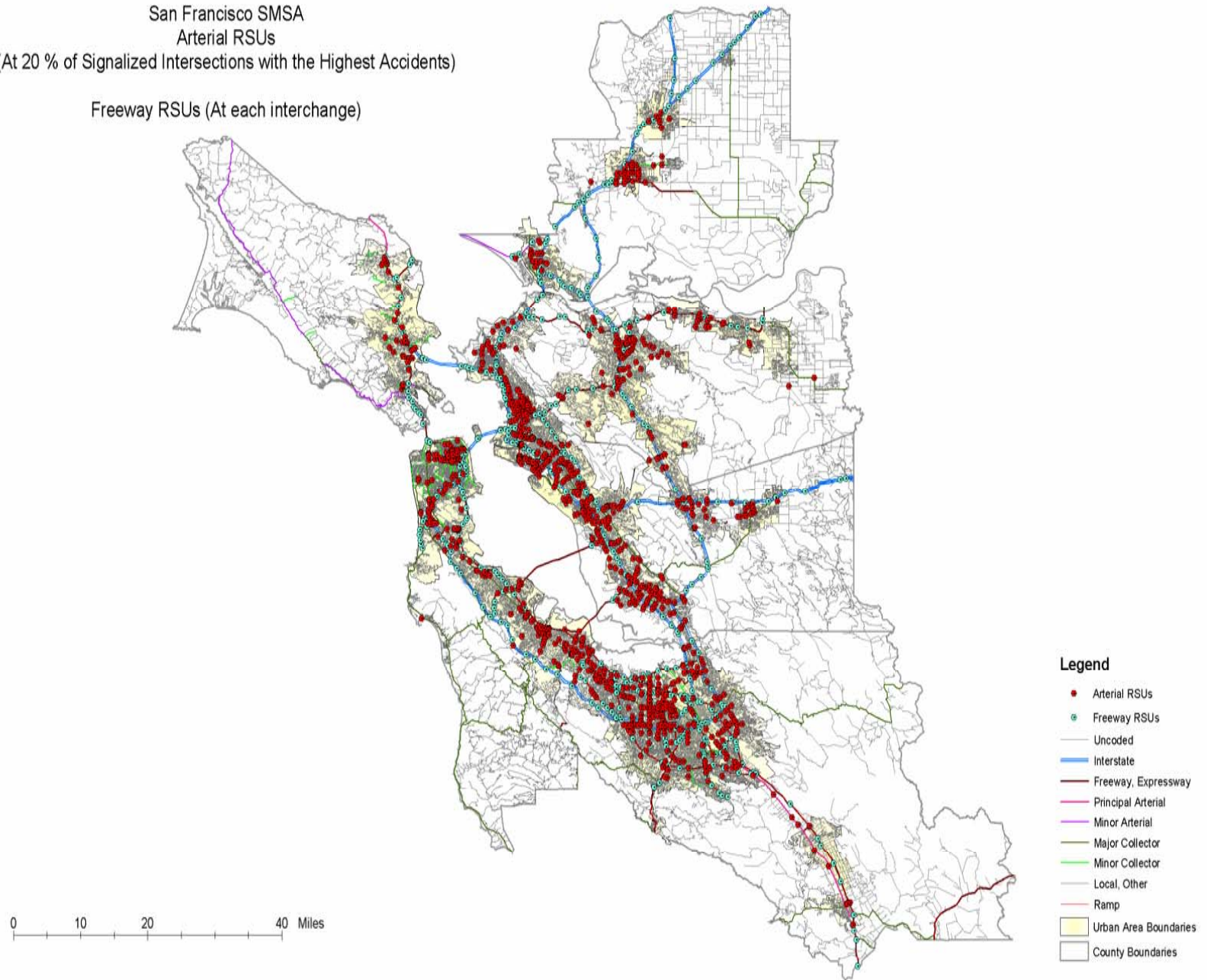


Urban Deployment

- **400+ Urbanized areas with**
Pop. > 50,000
 - *70% of Total population*
- **Signalized Intersections**
 - *265,000 Nationwide*
 - *90% of Crashes at 50% of Intersections*
- **Urban freeway Interchanges**

San Francisco SMSA
Arterial RSUs
(At 20 % of Signalized Intersections with the Highest Accidents)

Freeway RSUs (At each interchange)

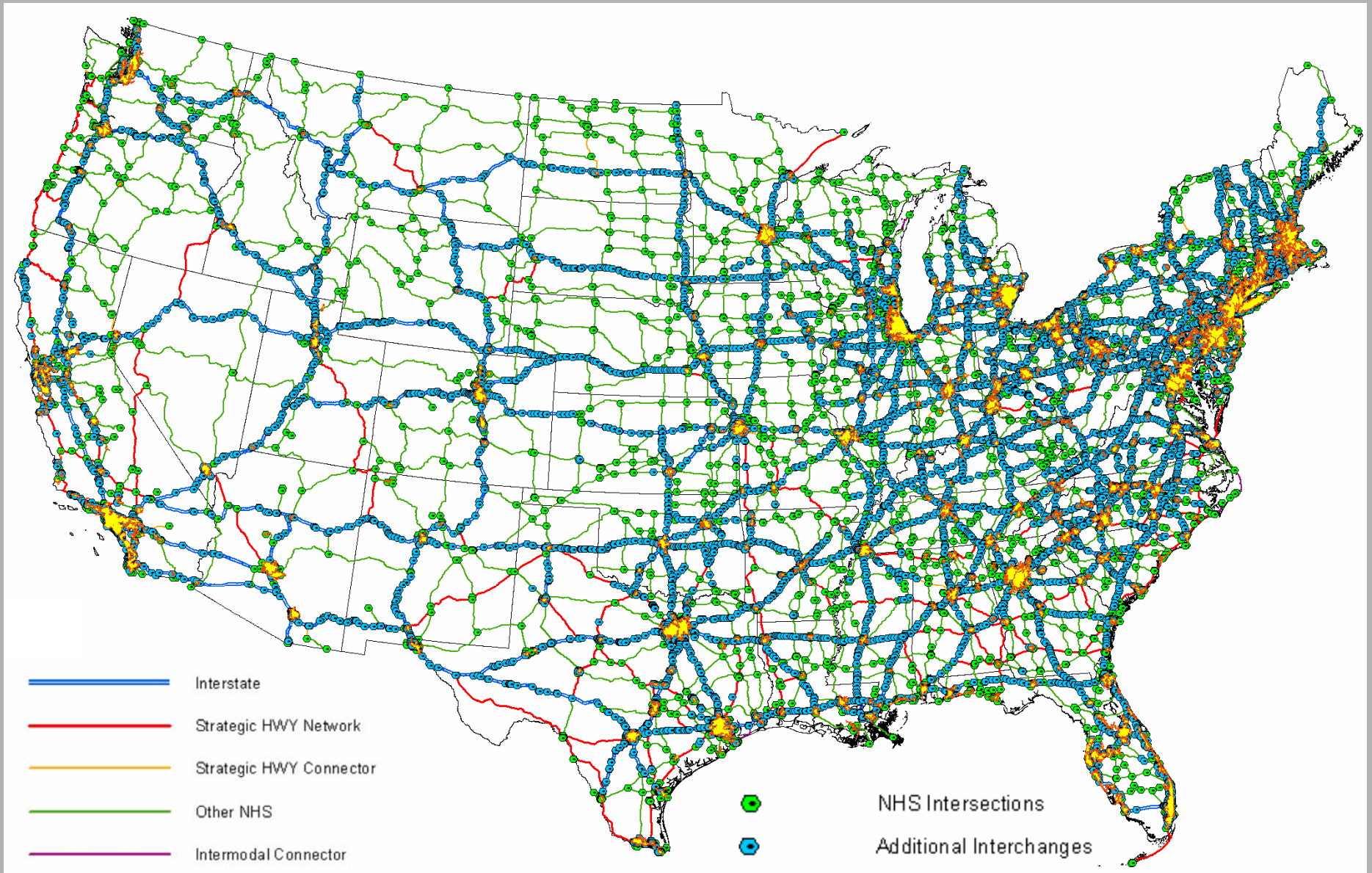




Rural Infrastructure

- **Interstate & Freeway Interchanges**
 - *33,150 miles Rural Interstate*
- **Intersections of NHS Routes & NHS/Interstate Interchanges**

Potential Rural RSE Deployment



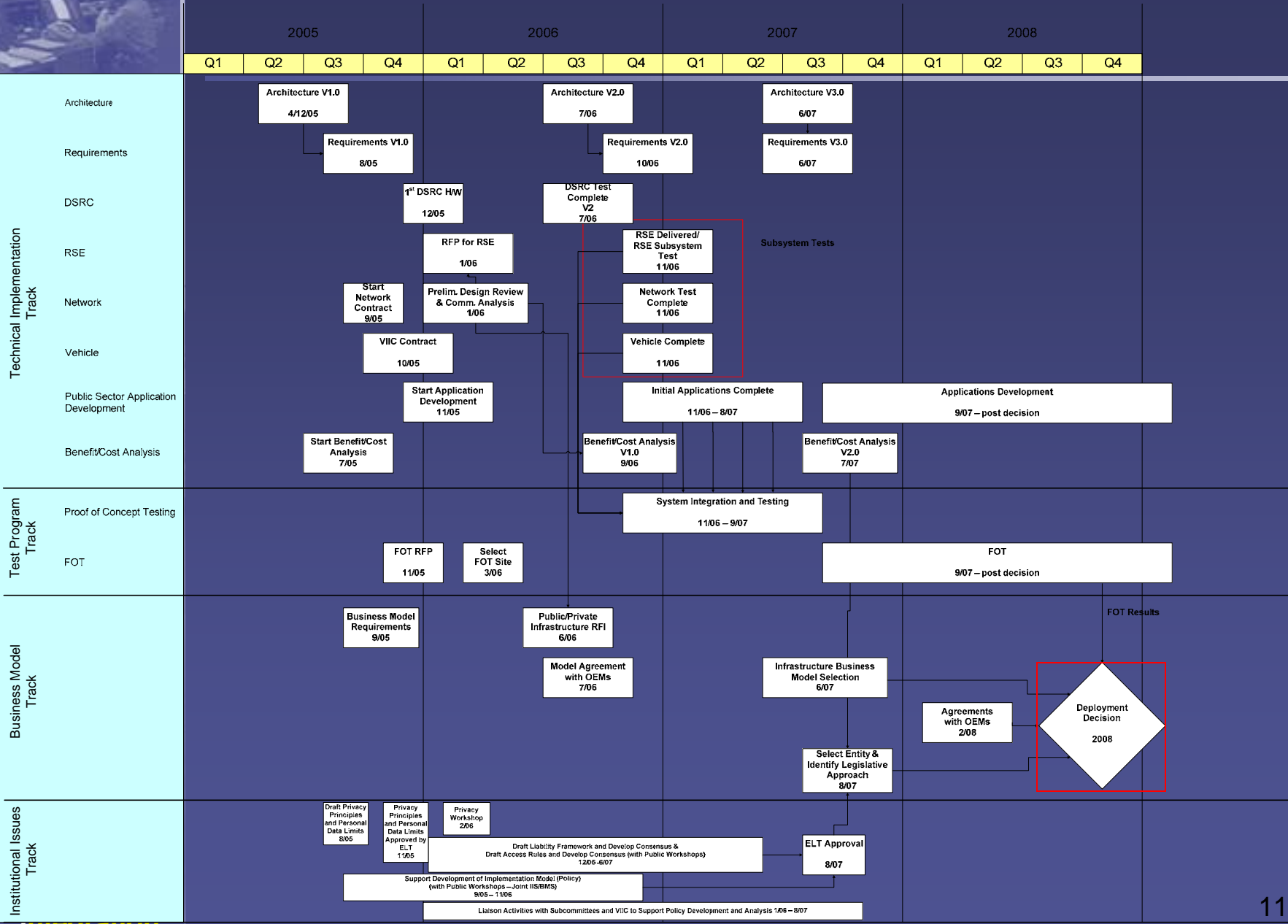


The Plan

- **Aiming for a Decision to Deploy in 2008**

How Do We Get There?

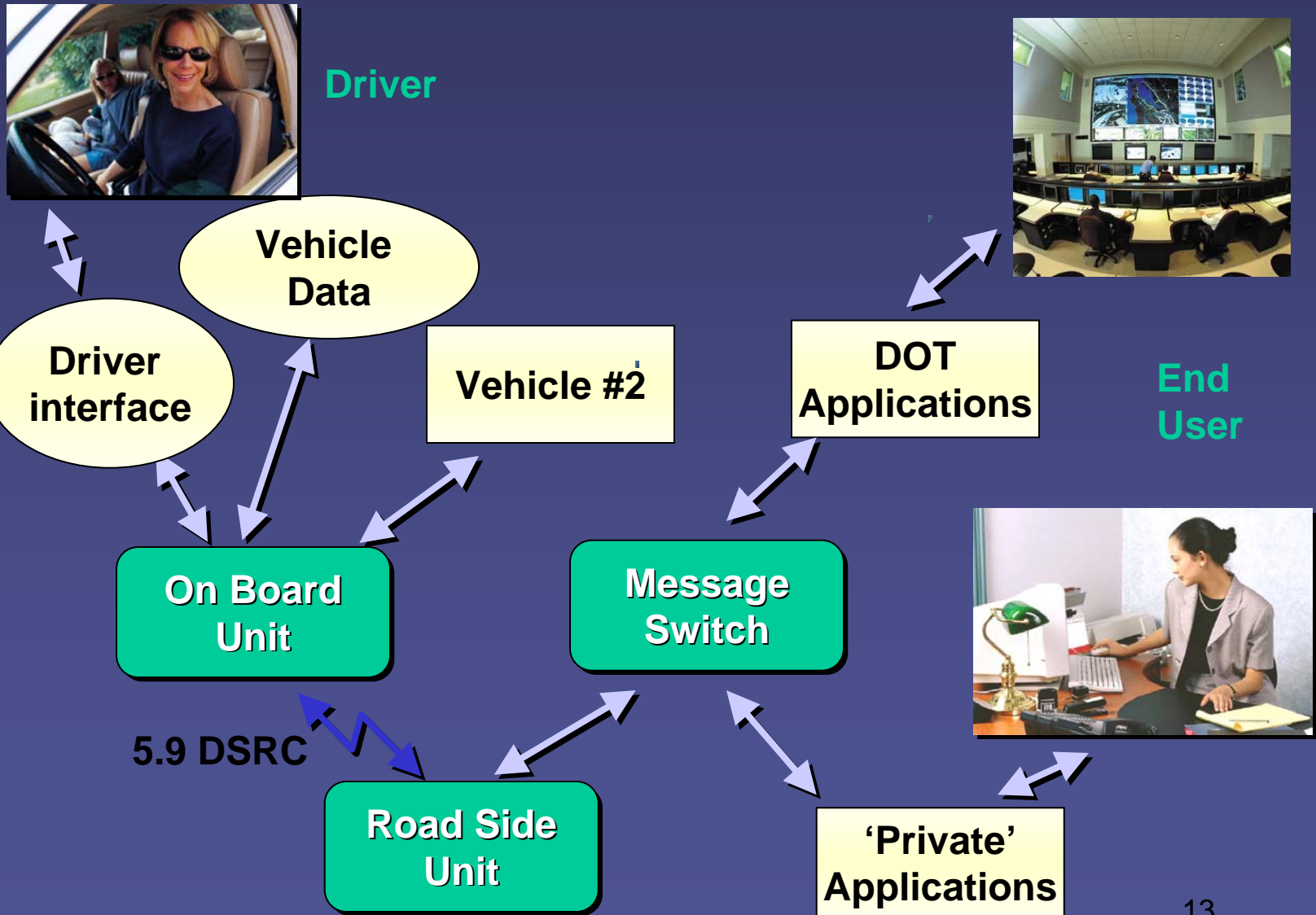
VII Roadmap



Program Tracks

- **Technical**
- **Testing**
- **Business Model**
- **Institutional Issues**
- **Outreach**

Simple Block Diagram



Technical Implementation Track

- Includes development of all equipment & software to implement VII
- System Integration of
 - *Vehicle*
 - *Network*
 - *Infrastructure*

“Day 1” Applications

Signal Violation Warning

Corridor Mgmt

Stop Sign Violation Warning

Traveler Info

Curve Speed Warning

Electronic Pay

Electronic Brake Lights

Local Weather

Advance Warning Info

Winter Maint


In Vehicle Signing

Probe Mapping

Ramp Metering

Signal Timing & Adjust





Test Program Track (slide 1 of 2)

- **Proof of concept testing begins Nov 2006**
 - *locations: Detroit and Palo Alto*
- **Field Operational Test (FOT) begins in 2007**



Business Model Track

- Deals with
 - *How to deploy*
 - *Who Pays*
 - *How to Operate & Maintain*
 - *How to manage the Network*
- **There are Many Options**



Institutional Issues Track

- **Addresses privacy and liability issues**
- **Challenge: Ensure authenticity while maintaining anonymity**
- **Initial focus on privacy issues**
 - *Submit privacy limits and principles to ELT
Nov 2005*



Outreach Track

- **Outreach to:**
 - *Stakeholders*
 - ITS Community
 - Wireless network providers
 - Public
 - *How can we make this win-win for everyone?*
- **First public meeting in February 2005**