



U.S. Department of Transportation
Office of the Assistant Secretary for Research and Technology

Advancing Safety Through Innovation

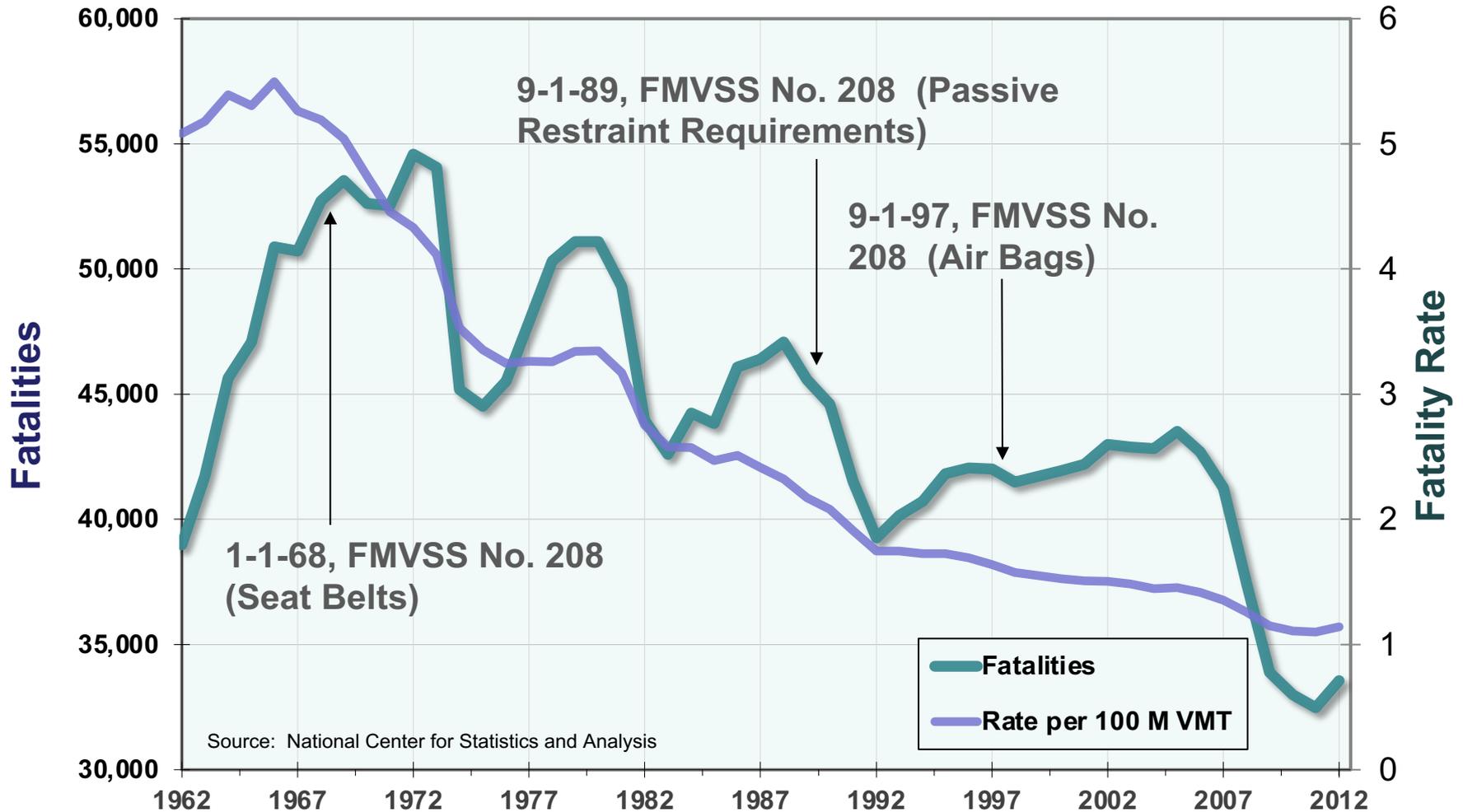
University Transportation Centers Safety Summit

March 19-20, 2015

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Intelligent Transportation System Joint Program Office
U.S. Department of Transportation (USDOT)

Multi-Faceted Federal Actions To Improve Safety



A system defined by integrated communications & information technology

Advanced Transportation Management & Operations

NextGen Air Traffic Control
NG9-1-1 & AACN
Integrated Corridor Management
Bus-Rapid Transit
Dynamic Message Signs

Vehicle-to-Vehicle/Infrastructure Communications

Motor Vehicle Collision-Warning Systems
Positive Train-Control
Signal Phase & Timing
Dynamic Pricing

ICT Affecting Transportation & Travel

Remote Sensing & Robotic Applications

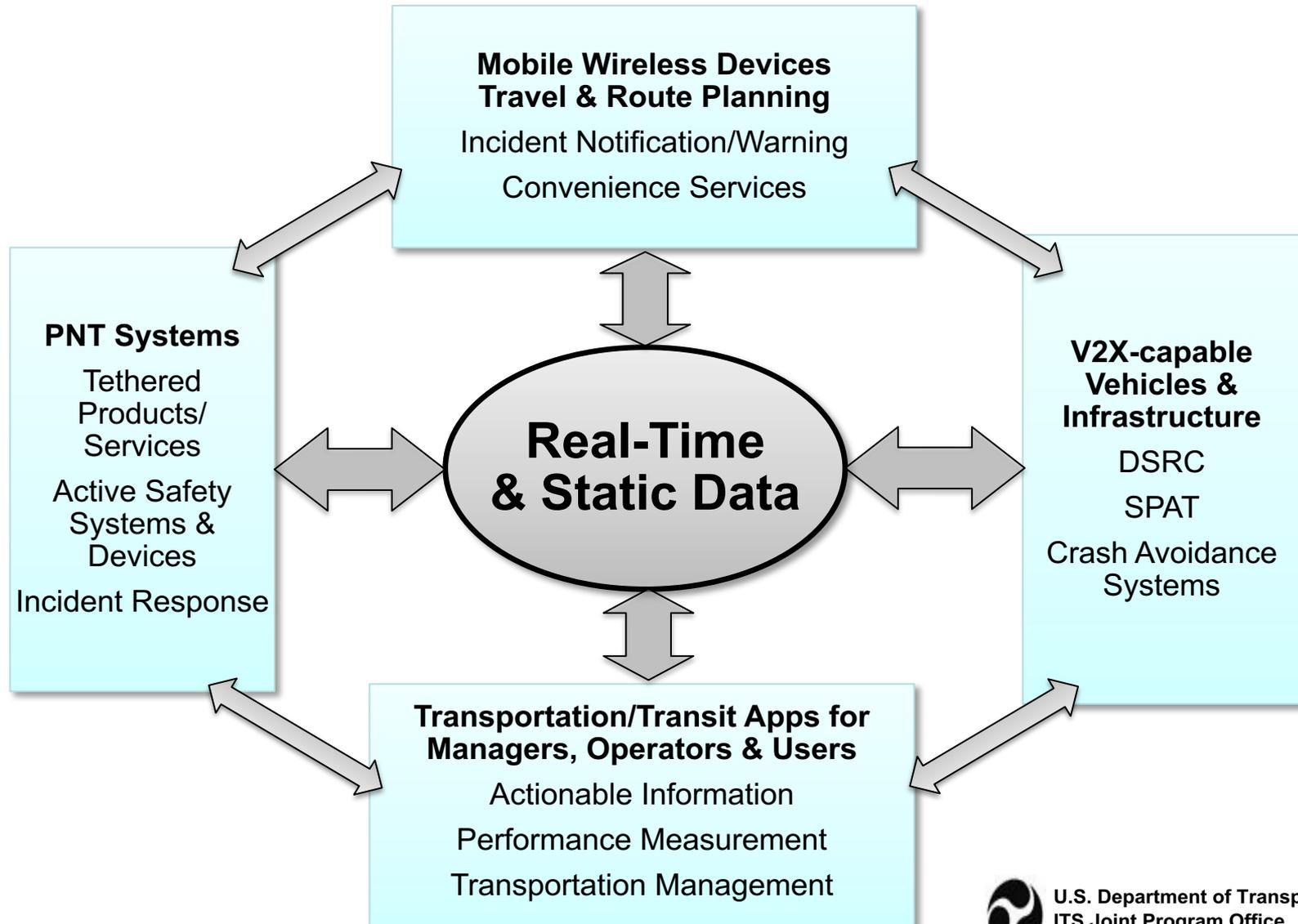
Robotic Inspection of Roads & Bridges
Self-Sensing Materials
Prototype Autonomous Vehicles
Wireless Motor Carrier Inspections

Real-Time Travel Information

Transit Arrival/Departure Times & Geolocation
PNT-Enabled Navigation & Route Planning
Real-Time Maritime Cargo Tracking



Toward a Data-Driven Transportation Environment



Emerging Safety Applications for Transportation

- **DSRC-based vehicle-to-vehicle and vehicle-to-infrastructure communications technology**
 - Interoperable “connected vehicle” platform meeting minimum standards for collision avoidance capabilities
 - Positioning, speed and other time-critical data communications are secure, anonymous and free from spectrum interference
 - Supports innovation, including automation and multi-modal applications (i.e. bicycle and pedestrian safety and services)

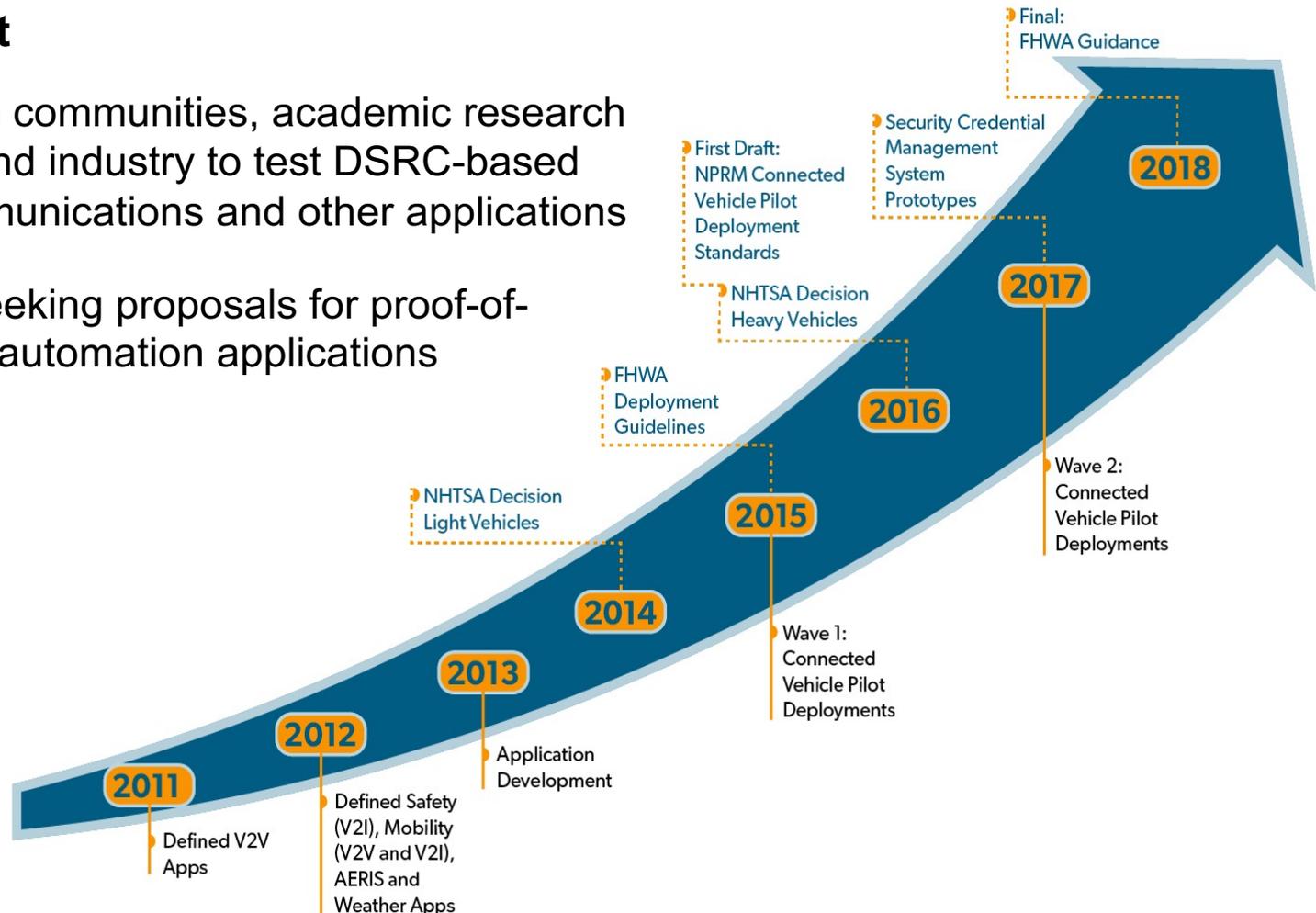
- **Automated vehicles and operations**
 - Platooning and other automated benefits continue to mitigate limitations of human-operated vehicles
 - Systems enabled by real-time data for enhanced incident response and management



U.S. DOT Research & Implementation Priorities

2015 Connected Vehicle Pilots Deployment

- Partner with communities, academic research programs and industry to test DSRC-based safety communications and other applications
- Currently seeking proposals for proof-of-concept for automation applications



Key Priorities: Education & Workforce Development

- **U.S. needs a multi-disciplinary transportation workforce capable of meeting the demands of the 21st Century**
- **University Transportation Centers (UTC) Program is a vital federal partnership with leading academic transportation research institutes**
 - Sponsors research on safety and other national transportation priorities
 - Educates the next generation of transportation thought leaders
 - Promotes tech transfer
- **U.S. DOT's Intelligent Transportation Systems (ITS) program offers technical assistance resources to support developers and early adopters**
 - Webinar series and workshops on tools and best practices for implementation
 - Knowledge resources, including a research data exchange for deployment and a cost-benefits database



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