

ITS Strategic Plan

Goal:

Safety: Achieve measurable reduction in crashes, injuries, fatalities, and the associated economic costs

Focus Area

- Networked/Intelligent Vehicle - Create capability for all vehicles to have 360 degree awareness of hazards and communicate appropriately with drivers. This includes:
 - Vehicle to vehicle
 - Vehicle to infrastructure
 - Communicate appropriately between the driver and the vehicle

Objectives

- Establish architecture and standards to promote interoperability across OEMs and jurisdictions
- Develop enabling technology building blocks
- Develop applications
- Ensure appropriate driver behavior and driver acceptance
- Quantify benefits
- Define a realizable business model for deployment
- Establish operational rules and governance policies
- Accelerate market penetration
- Facilitate targeted infrastructure deployment with a focus on high payoff locations
- Assess opportunities and requirements for longer term safety and mobility enhancements through the possible evolution toward autonomous vehicle control

Metrics

- Reduction in crashes, fatalities, and injuries
 - Safety effectiveness
 - % of targeted crash problem being addressed
 - Measures of effectiveness for each application
 - Deployment metric
 - Communication technology available
 - X% of new vehicle fleet instrumented
 - Y% of existing vehicles
 - Z% of targeted infrastructure instrumented
 - Effective applications commercially available
 - X% of vehicles using... (either list for each app or define by percentage of safety problem being addressed)

- infrastructure application XYZ deployed at Y% of target locations (list of various safety apps)
- Longer Range Opportunities
 - Strategic plan and program elements identified for longer term and broader (more locations and safety problem types) safety enhancements
 - Position research for future mobility applications achievable through autonomous vehicle control
- Improved customer satisfaction regarding safety and reliability of Connected Vehicles

Federal Role

- Convening industry and academia to develop and implement research or applications
- Coordinate with States on infrastructure needs and deployment
- Conduct high-risk exploratory advanced research
- Provide leadership in defining priority areas
- Attract telecommunication, insurance, and other related industries as contributing parties
- Establish public-private partnership opportunities
- Allow use of Federal-aid funding for infrastructure improvements (100% for certain safety related projects)
- Lead development of standards
- Regulate only where necessary, such as frequency band and high safety applications

Not Federal Role

- Create new financial programs to pay for private sector investments
- Establishing “how” internal systems should function
- Autonomous single technology safety applications

Strategies

- Leverage Exploratory Advanced Research program results
- Leverage UTC research initiatives and external basic science results
- Develop and validate effective applications
- Conduct reliable benefit/cost analyses
- Leverage automotive industry technical expertise
- Accelerate vehicle introduction:
 - Leveraging retrofit and aftermarket
 - Use NHTSA NCAP process for getting stars
 - Possible use of regulation
- Recommended practice for high hazard or focused locations
- Attract telecommunication and other related industries
- Leveraging current industry implementations