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