# Highway Transportation Transition Issues

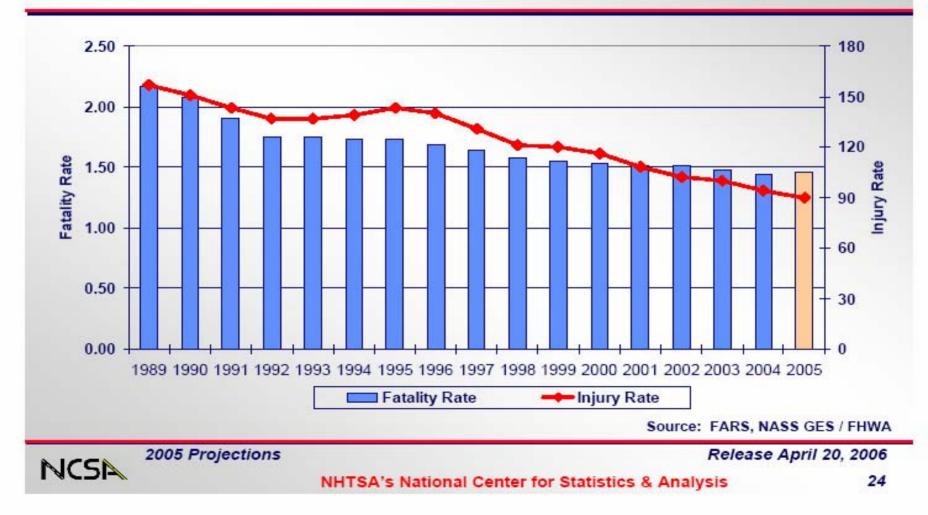
Rodney Lay, Mitretek Systems 13 June 2006

#### **Critical Context**

- 243 million registered vehicles, ~ 3 trillion vehicle miles traveled on US roads each year
- Over 43 thousand highway related fatalities in 2005
- Really bad news: the rate rose after two decades of decline



# Fatality and Injury Rates per 100 Million VMT, by Year



•http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/PPT/2006/810583.pdf

## We lack the societal/political will

- 55% passenger vehicle fatalities not restrained
- 39% fatalities involve alcohol
- 31% fatalities related to speeding

 Technologies to address these exist: seat belt locks, alcolocks, speed and headway controls

### Vehicles are getting smarter

- Auto manufacturers are pushing ahead with driver assistance/convenience offerings, viz:
  - GM's announcement that their 2008 Opel will drive itself…
  - Mercedes and BMW delivering Intelligent Cruise Control now
  - Ford offering extensive voice control
  - Honda's stop-and-go, lane keeping assist
  - GM's blind spot and lane change assist

#### Roads are getting smarter

- Traffic management centers
- Network performance, variable posted speeds, route guidance
- Weather, road condition alerts
- Intersection collision avoidance
- Gap acceptance assistance

#### Vehicle Infrastructure Integration

- A consortium has been established to determine the feasibility of widespread deployment and to establish an implementation strategy
  - Automobile manufacturers
  - State Highway Officials
  - Federal Highway Administration

### Transition Challenges

- How to integrate multiple public government service agencies with multiple competitive business entities
- How to engage an unskilled unpredictable user population
- How to deploy consistently across the nation
- How to "mainstream" systems operation and management

### Key Institutional Preconditions

- Commitment to formal agency policy and stakeholder support
- Formal planning and programming process
- Appropriate organization/staffing
- Authorized partnerships—interagency and public/private
- Agreement on Performance Measures
- Conventional budgeting processes

Ref: AASHTO Business Plan for Mainstreaming
November 2005

#### Transition Needs...

- Staffing, not just changing what gets done by the same people
- Sustained organization and leadership by decision makers
- The three pillars: Systems Engineering, Program Planning, and Acquisition Management