Eastern Idaho Connected Vehicle Project

Bob Koeberlein, P.E.
Mobility Services Engineer
Idaho Transportation Department
Questions to Answer

- How was the project initiated?
- What are the project goals?
- How was the project defined?
- Who are the partners?
- What are the applications?
- Funding opportunities?
Commuter Traffic

INL Buses
Van Pools
Private Vehicles

Origins

Mackay
Rexburg
Rigby
Idaho Falls
Blackfoot
Pocatello

INL Employee Travel

7 days per week
Reduced on weekends
INL Transit Commuter Traffic
Eastern Idaho Winter Weather
snow, ice, limited visibility
Things Can Go Wrong...
Project Initiation

- Summer 2010: Idaho Transportation Department (ITD) & Idaho National Laboratory (INL) discussed environmental factors affecting safety and mobility:

  - ITD winter maintenance challenges
  - Visibility (year round)
  - INL employee/contractor commuter traffic
  - Volatility of road weather conditions
  - Animal–vehicle collisions
  - Fleet management
Project Goals: Improved Safety and Mobility

- Reduce Crash Rates
- Keep roads safe
- Manage road closures better
- Provide better information to INL employees and traveling public
- Make optimum use of maintenance resources
In November 2010 a Concept of Operations was begun to examine how Connected Vehicle Technology could improve Safety and Mobility.

Kimley–Horn and Associates led the effort.

Stakeholders were identified and interviewed.

Four Technical Memos were prepared:
- Needs Assessment
- Available Systems and Standards
- Concept of Operations
- Functional Requirements
Defining the Project

- Improved winter maintenance operations; less need to drive roads to observe road conditions.
- More informed road closure decisions
- Improved incident response, incident detection and EMS dispatch
- Improved posting of events into 511 web and phone
- Improved posting of messages on DMS and HAR
- Better fleet management—ITD and INL
- Establish a model for statewide Connected Vehicle deployment
Eastern Idaho Connected Vehicle Team

- Idaho Transportation Department
- Idaho National Laboratory (INL)
- Idaho Health & Welfare EMS
- Idaho State Police
- Bingham County Sheriff
- Kimley-Horn Associates
- Battelle
- Kapsch TrafficCom
- Vaisala
- Meridian Environmental
- Western Transportation Institute (Montana State University)
- Castle Rock Consultants
- Syringa
- Interest from
  - Commercial vehicle and transit operators
  - cities
Possible Connected Vehicle Applications

- On-board video snapshots delivered to dispatch centers
- Fleet management (ITD and INL)
- Pavement data–thermal mapping of routes
- Animal avoidance warnings
- Mayday alert relay
- Engine performance data transmission (GHG, emissions)
- Automated and enhanced 511 updating
Funding Opportunities

- USDOT Connected Vehicle Safety Pilot—proposal submitted but rejected
- FHWA Discretionary Program—proposal not selected
- TIGER 3 Program—proposal in preparation
- Upcoming USDOT Regional Demonstration Projects
- Incremental funding approach, ITD and INL
Questions or Comments?

Thanks for attending this session.

Bob Koeberlein

Robert.koeberlein@itd.idaho.gov