EXPLORATORY ADVANCED **RESEARCH**

A vision of a future intermodal system: How research can lead to safe, mobile, & sustainable networks

National Conference on
Intermodal Transportation

October 12, 2012

Future Network Vision

Transportation Networks that provide

- Safety, where deaths and serious injuries are rare events;
- Efficiency, where travel times are assured;
- Conservation of resources, where infrastructure conditions and system operations minimize the need for new materials and energy

Key Processes

- Focus on high-risk, high payoff research
- Merit review is used to enhance the quality of research processes and results
- Research stakeholders are involved throughout
- Commitment to successful project handoff

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Partner Collaboration

- Research stakeholders are involved throughout
  - From scoping of focus areas through communication of research results
- Stakeholders include
  - Academic
  - Government (federal, state, and local)
  - Industry (businesses, associations)
  - International

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Breadth with Depth

- All projects begin with initial stage investigations
  - Reference searches, scanning trips, convening workshops, etc.
- Assure leverage of the most recent, relevant and advanced research from all fields
- Not all initial stage investigations lead to (or are expected to lead to) research investments

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Focus Areas

- Connected highway and vehicle systems
- Breakthrough concepts in material science
- Human behavior and travel choices
- New technology and advanced policies for energy and resource conservation
- Technology for assessing performance

Cross cutting

- Nanoscale research
- Information sciences

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Program Status

- 100+ Initial stage investigations
  - Video decoding, feature extraction
  - Adaptive materials
- Six solicitations resulting in
  - 50 projects awarded; 37 ongoing
  - $43M federal, $17M match
- 7th closed October 4
  - Topics: Novel binders, low-powered, wireless sensors

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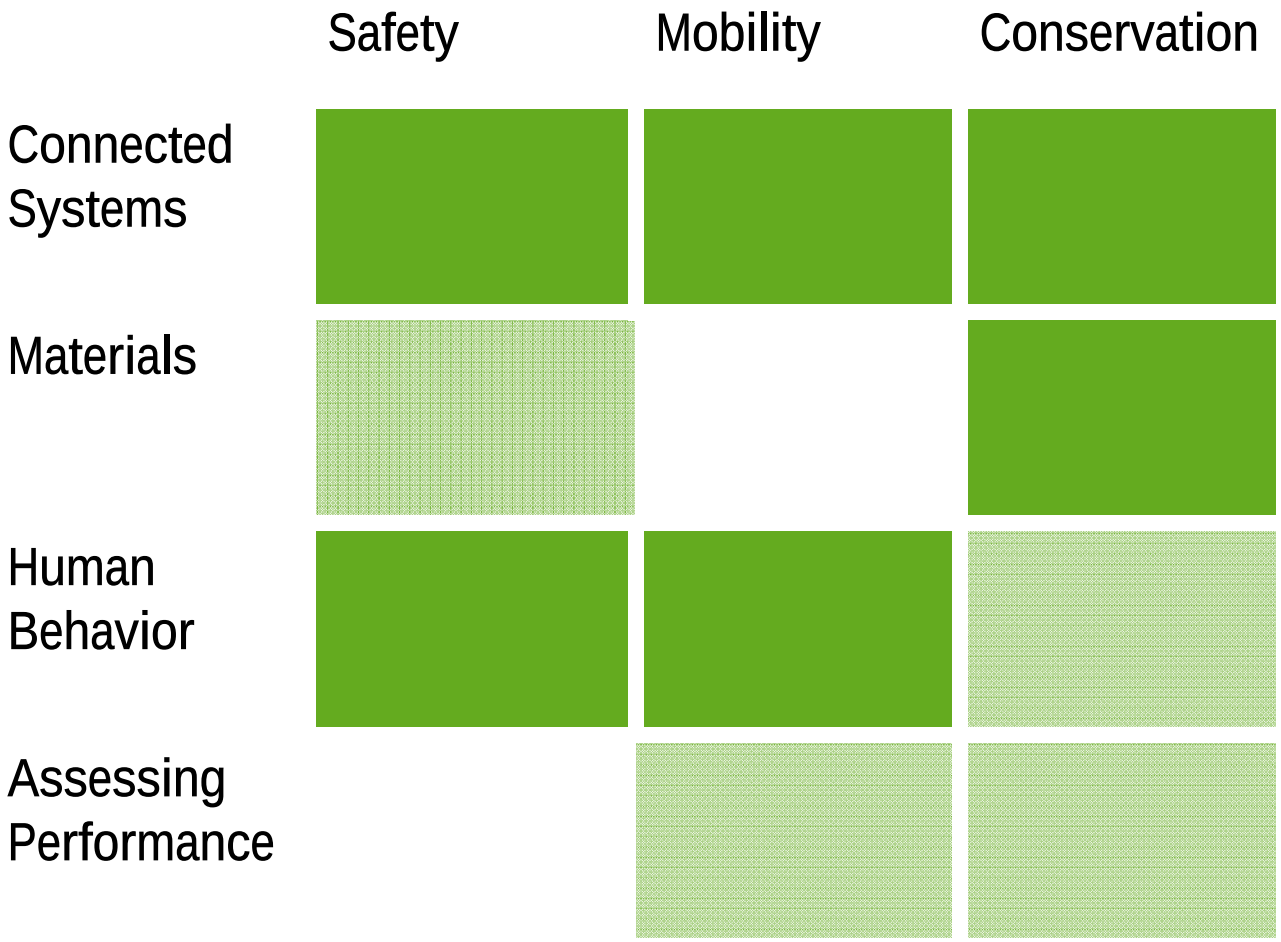
Program Results



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EAR Program Payoff

- Pointing the way to new technology, applications
- Connecting with new partners
- Growing scientific capacity and pushing disciplinary frontiers
  - Building tools that accelerate discovery, allow for new measurements, concepts
- Encouraging original ideas

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Thank You

EAR Program website

www.fhwa.dot.gov/advancedresearch

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