



Project Summary

Texas Department of Transportation

0-6661: TxDOT Strategic Research Program

Background

The proposed Strategic Research Program (SRP) is intended to prepare the department for the transportation challenges likely to be faced in the next 10–30 years. It complements the current technical research program by addressing longer-term and broader transportation issues that could affect the efficiency of the statewide transportation system.

What the Researchers Did

Eight tasks were completed in the period February 2010 to August 2011. The lead university for each task is indicated in parentheses:

Task 1: Makeup and Role of Oversight Panel/Advisory Committee (TTI): A plan was developed for an oversight panel, ultimately named the SRP Advisory Committee.

Task 2: Development of Alternative Project Management Approaches (TTI): An array of options for managing the SRP was developed.

Task 3: Communicating Information (TechMRT): Methods for communicating SRP developments and results were developed.

Task 4: Topic Identification Process (CTR): A preliminary set of broad initial themes for the SRP were developed. Procedures for acquiring, screening, and developing research topics were outlined.

Task 5: Topic Selection Process (CTR): Procedures were laid out for screening and ranking research topics/ideas.

Task 6: Develop “White Paper” Concept (TechMRT): The researchers developed a design for Research Briefs (originally called “white papers”), and prepared one example.

Task 7: Implement the Plan (CTR): The requirements for implementation of the SRP (namely, resources, responsibilities, and timeline) were laid out in a work plan.

Task 8: Development of Research Briefs (CTR/TTI/TechMRT): Seven RBs were developed on topics selected by the TxDOT PMC.

What They Found

External Advisory Committee: Members should be drawn from experts in transportation, major users of the multi-modal system, business executives, and entities who compete for State resources, among others. A list of potential members was submitted to TxDOT for consideration.

Research Performed by:

Center for Transportation Research (CTR),
The University of Texas at Austin

Center for Multidisciplinary Research
In Transportation (TechMRT)
Texas Tech University

Texas Transportation Institute (TTI),
The Texas A&M University System

Research Supervisor:

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Project Completed: 8-31-11

Project Management: The recommended key steps in project development are:

1. Gather and screen ideas
2. Select about 10 ideas every 6 months for research briefs
3. Select about 3 research briefs each year for in-depth research projects
4. Disseminate results using latest communication technologies.

Strategic Topics: Five themes and 14 sub-themes were recommended for organizing strategic topics

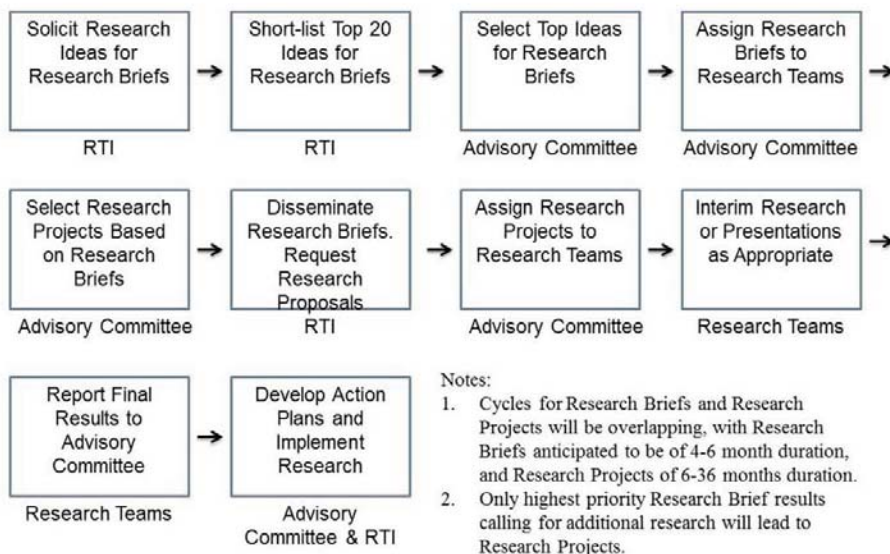
- Demand- who will use transportation, where and how.
- Organization- how the agency responsible for transportation will function.
- Infrastructure- how will the transportation network be engineered and maintained.
- Network- how will system elements connect and operate.
- Environment – how will transportation interact with society and nature.

Research Briefs: RBs will resemble the “Background and Significance” section of RMC proposals, presenting an unbiased look at an issue and possible resolutions. They should be reader-friendly documents, covering the following:

- What is already known on the topic (literature review)
- What current research is ongoing
- What can be researched (scope of required research)
- Potential applications/benefits (implementability).

What This Means

Researchers recommended implementation cycle for the SRP



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