

State Government Perspective

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The state government group included representatives from state transportation agencies (chief administrative officers and research directors), state toll road and transit authorities, Volpe National Transportation Systems Center, a university transportation research program, the American Association of State Highway and Transportation Officials, two consulting firms, the Transportation Research Board, and the U.S. Department of the Interior. The group acknowledged the fine work of the National Science and Technology Council (NSTC) in developing the draft Strategic Implementation Plan as a focus for this forum. There also was a strong endorsement of current federal research endeavors, which were universally seen as productive. There was agreement that much of the success now attributed to the U.S. transportation system simply could not have been achieved without these federal programs.

With that said, the group decided that the first task should be to identify the components of an essential national research program for transportation. The group decided to use a zero-based approach in developing this agenda, with the caution that this approach should not be interpreted as having any negative connotation regarding existing federal research programs. It also was recognized that this national agenda would include particular research areas where federal leadership is deemed critical.

FEDERAL ROLE

The group determined that the primary elements of federal research should include responsibility for the following:

- Conducting basic research,
- Developing and fostering international liaisons,
- Addressing intermodal issues,
- Establishing multiyear programs that entail a commitment to sustained federal support,
- Resolving tort liability issues,

- Evaluating new products,
- Developing improved/streamlined procurement systems,
- Maintaining a core federal technical competence in research,
- Serving as a partnership catalyst, including pooled funding,
- Conducting crash testing,
- Training and transferring technology across all modes, and
- Identifying and analyzing new and restructured funding sources/mechanisms.

NATIONAL ROLE

Beyond the federal role is an even broader research agenda. The group agreed that this national role, which requires collaborative efforts of a number of entities in addition to the federal government, includes the following:

- Developing a clear and broadly supported national vision for transportation and related research,
- Constructing effective models and modeling systems,
- Developing major equipment,
- Providing a forum for common interest issues that cannot be effectively addressed by a single entity,
- Developing information infrastructure, including intelligent transportation systems,
- Developing safety initiatives,
- Resolving disposable materials issues productively and sensibly,
- Developing advanced bridge material designs and construction/maintenance techniques,
- Adopting adaptable codes and standards,
- Developing multidisciplinary human resources,
- Developing meaningful research performance measurements,
- Establishing environmental programs and responses,
- Analyzing land use implications for transportation systems, and
- Supporting the University Transportation Centers Program.

PUBLIC-PRIVATE PARTNERSHIPS

There was consensus that public-private partnerships are extremely valuable, work well, generate both technical and funding innovations, and offer great promise for the future. The group recognized partnerships as an evolving area in research and development (R&D) and recognized the need to develop a user-friendly business framework (contractual, collaborative, etc.) within which these relationships can continue to grow and prosper.

USE OF RESEARCH RESULTS

The states, which are the test beds for most research, are open to using research products that provide measurable paybacks. However, the number of research products available exceeds the opportunities for their use. This is further complicated in most cases by the dearth of adequate and timely information on research results. Funding deficiencies for implementation also are a barrier. There is a critical need for meaningful performance measures that help decision makers evaluate and set priorities for research products.

IMPROVING THE RESEARCH PROCESS

The group identified some practical changes that could improve the current research process. These include the following:

- Consolidating some programs,
- Creating opportunities for block grants to be directed to research (with unified funding),
- Developing required, objective research performance measures,
- Developing and applying expertise in research instead of in contract administration,
- Including operation and maintenance costs in research results, and
- Providing premiums (incentives) for joint research initiatives.

CONCLUSION

The state government group reiterated its call for a national vision for transportation and for strategies to enable the realization of that vision. The NSTC Strategic Implementation Plan is considered a good start, but it needs improvement.

The term “sustainable transportation” presented a problem to the group because of the lack of a commonly accepted definition. More accountability throughout various levels of the research process, which would enable the states to clearly demonstrate the positive results of R&D investments, is needed.