

and plans to guide future research. A total of 17 projects were selected and grouped in three major categories: resource development, decision support, and financial management.

A variety of options for implementing the research program was recommended. Many of the options require resources beyond those available to the NCHRP—the initial investment to perform all of the recommended research is estimated to exceed \$6 million—and some of the recommended research projects may be conducted by other agencies. SCOR will consider these projects for future funding and the NCHRP will carry out several of the higher-priority projects within the next few years.

Activities Under Way

Activity has begun on three studies under Project 20-24:

1. Using Market Research To Improve Management of Transportation Systems is nearing completion; a draft report is now being reviewed. The findings of this research project will help state departments of transportation add modern marketing techniques to their program development and evaluation methods.

2. Executive Management Information Systems for State Departments of Transportation is also nearing completion. Guidelines for such systems are being developed in conjunction with an AASHTO task force.

3. Recruitment, Training, and Retention of Professional Employees is expected to begin early in 1990. Activities under this research project will be coordinated with those of another AASHTO task force interested in finding solutions to the problems of attracting and keeping highly qualified transportation professionals.

Completion of successful projects and continued involvement of the NCHRP panel should ensure that a portion of the annual NCHRP program will be devoted to research identified and guided from a top management perspective.

Copies of the final report, NCHRP Project 20-24: Research Program Design, are available for loan from the NCHRP.

University Transportation Centers

Attracting the nation's best talent to study transportation issues

MILTON PIKARSKY

When interest in transportation research wanes and funding dwindles, among the organizations hardest hit are universities, which depend on outside support to help train future professionals and develop research programs. Current trends indicate that the future of transportation in the United States may be in jeopardy:

- Federal funding for transportation projects, especially major mass transit capital programs, and education has been reduced.

- Fewer transportation professionals are being hired.

- Enrollment in civil engineering programs at U.S. universities has dropped significantly.

- Transportation infrastructure is deteriorating.

- Senior transportation professionals are retiring at a greater than average rate.

These factors, along with the completion of the Interstate program in 1991, are contributing to the simultaneous decrease in the number of transportation professionals and rise in their average age. This profound personnel deficit is expected to continue well into the next century.

Sensing the need to reverse this discouraging situation, several transporta-

tion educators got together in the late 1970s to discuss ways to draw federal attention to these problems and obtain federal funds to support solutions. The Council on University Transportation Centers (CUTC) grew out of that group. CUTC consists of universities from various U.S. regions that together serve as a nationally coordinated and cooperative university program.

Laying the Groundwork

Members of the fledgling CUTC outlined plans to secure increased support for individual researchers through enhanced funding of existing U.S. Department of Transportation university research programs and to gain additional interdisciplinary research support by establishing a reliable new dedicated source of funding. The new funds would be used to encourage university faculty members and researchers to undertake

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FIGURE 1 Federal regions and locations of their University Transportation Centers.

regional projects supporting both national and regional needs and objectives. These regional needs, however, would be determined by the universities themselves, and projects would be chosen to fulfill the unique requirements and goals of each school.

Two objectives were developed at the early CUTC meetings. The first was to invite all universities that had an interest in transportation to become CUTC members. The second was to begin establishing a legislative university transportation research, education, and knowledge-dissemination grant program that would allow existing federal units and their staffs to focus and direct their limited university transportation research funds. The results are plain: CUTC had gained nearly 40 members as of June 1989, and the University Transportation Centers Program was authorized by Section 314 of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (49 U.S.C. 1607c).

Transportation Centers

The University Transportation Centers legislation authorized grants to non-

profit institutions for establishing and operating a regional transportation center in each of the 10 federal regions (Figure 1). The Office of the Secretary of Transportation was established as the program administrator, and the secretary was designated as the source selection authority for the grants. The law also defines the responsibilities of the centers, describes the application procedures, and sets up an advisory council. Grant recipients must continue to maintain their level of expenditures for other efforts. The federal share of the grant was set at 50 percent. These funds are to be allocated equitably among the federal regions, and 5 percent or more of the funds must be used for technology transfer.

The University Transportation Centers Program is meant to be a national resource for research on transportation infrastructure, as well as research and training programs on the transportation of passengers and goods. Goals include attracting the nation's top talent to the study of transportation and developing new strategies and concepts for effectively addressing transportation issues. A number of objectives have been established to help meet these goals (see box).

Objectives of the University Transportation Centers Program

Enhancement of Transportation Research

Improve quality and expand scope of transportation research initiatives; maximize use of available resources; foster multidisciplinary approaches in transportation research undertakings.

Human Resources Development Stimulate recruitment of experienced faculty to engage in transportation research; foster efforts to attract and recruit exceptional students (especially women and members of minority groups) for transportation careers; expand transportation research and training opportunities for students and faculty; develop training programs (continuing education, cooperative, extension, ongoing, and postgraduate) for students and transportation professionals.

Institutional Impact Foster collaboration of public- and private-sector transportation-related businesses, organizations, and state, local, and federal government agencies; provide support for university transportation center instructional programs and activities; contribute to the teaching and learning environment; promote links between the host institution and other academic institutions for transportation research.

Technology Transfer Promote the interpretation, publication, and dissemination of the findings and results of transportation center research and training to users in the transportation community; introduce innovative techniques and methods to facilitate technology sharing; establish a mechanism for the identification and promotion of chances for intermodal technology transfer.

Last summer, the U.S. Department of Transportation selected 10 grantees to serve as lead universities for the institutional consortiums in their respective regions (institutions that join a consortium are not limited to the geographic region in which they are physically located):

- **Massachusetts Institute of Technology (Region I)** *Affiliates:* Harvard University, North Carolina Agricultural and Technical State University, University of Connecticut, University of Maine, University of Massachusetts, University of New Hampshire, University of Rhode Island, University of Vermont.
- **City University of New York (Region II)** *Affiliates:* Cornell University, New Jersey Institute of Technology, New York University, Polytechnic Institute of New York, Princeton University, Rensselaer Polytechnic Institute, Rutgers (State University of New Jersey), Stevens Institute of Technology, State University of New York (Albany), University of Puerto Rico (Mayaguez), University of the Virgin Islands.
- **Pennsylvania State University (Region III)** *Affiliates:* Morgan State University, University of Pennsylvania, University of Virginia, Virginia Polytechnic Institute and State University, West Virginia University.
- **University of North Carolina (Chapel Hill) (Region IV)** *Affiliates:* Duke University, North Carolina State University, University of Kentucky, University of Florida (Gainesville), University of North Florida, University of Tennessee (Knoxville), Vanderbilt University.
- **University of Michigan (Region V)** *Affiliates:* Central State University, Michigan Technological University, Northwestern University.
- **Texas A&M University (Region VI)** *Affiliates:* Louisiana State University, Oklahoma University, Texas Southern University, University of Arkansas, University of Texas.
- **Iowa State University (Region VII)** *Affiliates:* North Carolina Agricultural and Technical State Uni-

versity, University of Iowa.

- **North Dakota State University (Region VIII)** *Affiliates:* Colorado State University, University of Colorado (Denver), University of Minnesota, University of Wyoming, Utah State University.
- **University of California (Berkeley) (Region IX)** *Affiliate:* University of California (Long Beach).
- **University of Washington (Region X)** *Affiliates:* Portland State University, Oregon State University, University of Alaska (Fairbanks), University of Idaho, University of Portland, Washington State University.

The program went into effect on September 30, 1988. For FY 1988, \$5 million in funding was appropriated, to be matched by equivalent nongovernment funds.

Although it is too early to draw any conclusions about the success of the University Transportation Centers Program, the level of enthusiasm among the participants is high. An interactive communications network has been established to link the regional centers, and CUTC representatives are now working to establish projects and funding for FY 1989.

For more information on FY 1989 projects undertaken by the University Transportation Centers Program, contact William F. Brown, Director, University Transportation Centers Program, Office of the Secretary (P-34), U.S. Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590.