

The Workforce Challenge

Recruiting, Training, and Retaining Qualified Workers for Transportation and Transit Agencies

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The nation's economy and the lifestyles of its citizens depend on a safe and efficient transportation system. In 2001, surface transportation comprised 8 percent of the gross domestic product and about 18 percent of average U.S. household expenditures, second only to housing.

Yet surface transportation agencies face unprecedented challenges in recruiting and retaining the workforce necessary to deliver transportation infrastructure and services effectively. The responsible and efficient operation of the nation's transportation system depends on a well-trained transportation system workforce. Successfully addressing workforce issues requires a collective effort, involving transportation agencies, the federal government, the private sector, and a range of academic institutions, as well as the transportation workforce.

Workforce Issues

Under the auspices of the Transportation Research Board, the National Research Council of the National Academies convened the Committee on Future Surface Transportation Agency Human Resources Needs (see sidebar, page 30) to determine how public transportation agencies can reorient human resources efforts to respond to changes in organizational roles

and responsibilities in the next two decades. These agencies include state departments of transportation (DOTs) and transit agencies that deliver transportation infrastructure and services with support from private-sector contractors and consultants.

The study did not measure the shortfalls of labor force supply. Instead, the committee examined strategies and made recommendations for transportation agencies to alter human resources activities—specifically, recruitment, training, retention, and succession management—to meet emerging workforce challenges and to adjust to the labor market. The study also addressed the leadership role of the federal government in this area.

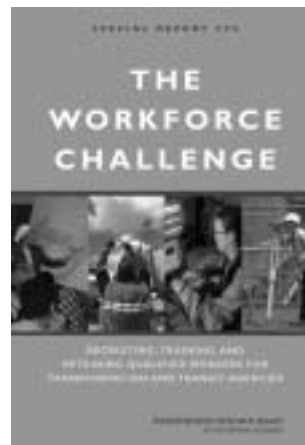
Complexities and Constraints

Transportation workforce issues are complex. More than 50 state DOTs, nearly 6,000 transit agencies, and many other public agencies share responsibilities for transportation. In addition to unique responsibilities, each agency has its own organizational structure, history, and culture. Each must adapt to internal and external social, political, and institutional working environments, often in different ways.

Agencies vary in size and in the capabilities and resources available to address workforce needs. Few have addressed these needs comprehensively, complicating predictions of how many people will be needed in 5 or 10 years in specific job categories for each type of agency. Most individual agencies do not have the mechanisms to identify the specific skills that will be needed in the future workforce. Therefore, because the data were insufficient, the committee did not estimate specific agency needs—what kinds of workers would be needed for what kinds of jobs.

In recruiting, training, and retaining employees, agencies must adopt and adapt practices from a range of alternatives and combinations to suit circumstances. The endeavor is complex, because each agency competes for qualified staff not only with other agencies but with the private sector.

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[PHOTO CREDIT: LAUREL LEWIS]

Washington (D.C.) Metropolitan Area Transit Authority bus drivers receive training on a simulation device.

The committee therefore focused on how agencies can meet workforce needs regardless of specific or cumulative requirements. Transportation agencies—in the public and the private sector—have a history of working together to address common problems systematically and successfully. Resolving workforce needs provides an opportunity for partnering.

Expansion and Expenditures

The committee's recommendations aim at avoiding the severe consequences of inaction that already are having an effect. Today's agencies require a workforce with a wider range of technical disciplines. State DOTs were established early in the last century to build highway networks, but some now are responsible also for airports, railroads, public transportation, ports and waterways, intermodal operations, and other ancillary functions, such as motor vehicle registration and enforcement.

The changing mission and expanding responsibilities require a workforce capable of addressing many issues beyond the scope of engineering. Transit agencies, for example, offer a variety of services and must address many community, economic, and customer concerns. All agencies face planning, environmental, and technology issues and are increasing the use of telecommunications, data management, and other information technologies.

Moreover, transportation programs are expanding at the same time that budget restrictions are limiting agency staff or requiring staff reductions. As a result,

more tasks must be contracted out, calling for personnel skilled in contract management and administration.

Another problem common to all public agencies is that senior staff are likely to retire in unprecedented numbers—more than 50 percent of the state transportation agency workforce will be eligible for retirement in the next 10 years. This is more than double the retirement eligibility rate for the nation.

Agencies are facing difficulties recruiting and retaining professional and technical staff because the highly competitive job market has created a disparity between public- and private-sector pay scales. Transit agencies, with bus and train operators comprising approximately 75 percent of the workforce, have additional problems to overcome in recruiting:

- ◆ Attracting workers to a rule-bound, seniority-based environment;
- ◆ The inability to offer the work schedule flexibility sought by job applicants and common in other industries competing for the same employees; and
- ◆ Lower pay scales and fewer opportunities for advancement in comparison with DOTs.

Within the context of greater skill needs and expanding programs, agency expenditures for training are insufficient. Benchmark studies of training investment in the private sector and federal agencies indicate that successful organizations spend an average of 2 percent of salaries on training—at least four times more than transportation agencies are spending.

Federal Stakes

Any one of these issues would be a concern by itself, but taken together these issues suggest a possible crisis. Because it is responsible for strategic national interests, the federal government—Congress, the administration, and U.S. DOT and its modal administrations—has a large stake in the effectiveness of the nation's transportation workforce and has a key role in meeting the challenges.

The federal government relies on the national transportation workforce to deliver the programs and projects necessary to accomplish the economic, mobility, safety, environmental, and defense mobilization goals for transportation. As the primary steward of the nation's transportation system, the federal government is in the best position—in terms of resources, scope of interest, and influence—to take a leadership role in addressing transportation workforce issues. Without federal leadership, attempts to resolve these issues will lack strategic direction and national scope, despite the best efforts and accomplishments of individual transportation agencies and their national associations.

Recommendations

The committee's recommendations aim at a range of skill needs in surface transportation agencies. The federal government, the private sector, educational institutions, unions, and employees, however, also must be involved in the solution. Opportunities abound for partnerships.

Partnering may be difficult at times, however, because of rules and regulations that require distance between public- and private-sector activities. Examples from successful partnerships and collaborations in other industries indicate that these barriers can be overcome.

The consequences of inaction include ineffective agency operations, inefficient use of limited resources, higher future costs to meet needs, and delays in introducing innovation and improvements to the transportation system. Each of the committee's recommendations aims at improving the performance of transportation agencies and, ultimately, the nation's transportation system. The recommendations reflect the goals and benchmarks of successful public- and private-sector organizations and reflect the primary goal of President Bush's 2002 Management Agenda—improving human capital.

Training must be a priority.

All transportation agencies—in partnership with the federal government, the private sector, educational institutions, unions, and employees—should establish training as a priority. Training is an investment,

providing necessary knowledge, skills, and abilities. Training supports alternative paths to transportation agency careers, so that college and community college graduates from programs in business, planning, environmental science, public policy, and other areas can enter the transportation workforce.

Commitment to training is measured by investment and effectiveness. An investment goal of 2 percent of salaries for training—as suggested in benchmarking surveys of successful organizations—is appropriate for transportation agencies. This is equivalent to approximately 40 hours of training annually for each employee. Although the benchmark goal is important, the training must be effective in terms of improved performance, lower costs, and other measures.

More federal surface transportation program funds should be eligible for use by state and local transportation agencies for education and training.

Although spending at all levels for the training and education of the transportation workforce should be increased, federal spending serves as a catalyst. Federal reliance on the nation's transportation workforce points to the need for federal leadership in addressing transportation workforce training.

Federal funding for transportation workforce training has several components. The largest single source of federal training funding to agencies is a discretionary program that permits states to use up to 0.5 percent of a portion of the funds from the Surface Transportation Program for education and training—approximately \$38 million. Similarly, transit agencies can use a portion of federal operating and capital investment funds for training—approximately \$32 million.

The committee supports the administration's reauthorization proposal to make more program funds eligible for use in education and training. If enacted, the proposal would yield a 200 percent increase in available discretionary funds.

Many federal transportation programs encourage the use of new methods and advanced technologies, including planning and environmental models, systems analysis, intelligent transportation systems, community involvement, and alternative-fuel transit vehicles. But these programs—which receive a total of approximately \$36 billion annually—do not support training for the people responsible for implementing, operating, and maintaining the innovations.

This lack of support acts as a barrier to wider implementation of transportation system innovations and to achieving the corresponding safety and performance improvements and cost reductions. The lack of support also hampers federal stewardship in assuring

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that state and local governments are using national resources efficiently.

The committee supports reauthorization proposals to increase funding for federal programs that directly support education and training, including the University Transportation Centers (UTC) program; the Federal Highway Administration's National Highway Institute; the Federal Transit Administration's National Transit Institute; and the Local Technical Assistance Program (LTAP). In addition to increasing the funds for agency education and training, Congress should introduce incentives to trigger more federal funding if states and agencies invest their own funds in education and training for the transportation workforce.

Incentives should be added to the UTC program to encourage partnering with community colleges on education and training in areas for which the community colleges are well suited. A systematic evaluation of training outcomes must accompany the increased investment in training.

U.S. DOT, in partnership with transportation agencies, the private sector, educational institutions, unions, and employees, should undertake an initiative that focuses on innovation in human resources practices, addressing recruitment, training, retention, and succession management for transportation agency personnel.

This initiative would provide leadership and a focal point for federal, state, and local agency efforts, as

well as a basis for creating partnerships among key parties. The federal government, with its national transportation responsibilities and the human resources capabilities in U.S. DOT and its modal agencies, should take the lead in this initiative as a follow-up to the U.S. DOT-sponsored National Transportation Workforce Summit of 2002.

U.S. DOT should interact with other federal agencies that are pursuing workforce development initiatives and acquire useful information and data. The transportation workforce initiative also can build on efforts such as the Transportation Workforce Development website that the Federal Highway Administration is developing in partnership with the American Association of State Highway and Transportation Officials, documenting exemplary workforce practices at state DOTs. The initiative also can incorporate the ongoing work of the American Public Transportation Association's Workforce Development Task Force.

Including experiences from all types of transportation agencies and private-sector organizations would provide much-needed information and support. All stakeholders in the nation's workforce—agencies, academia, trainers, unions, employees, and the private sector—should participate in setting priorities and directions for the initiative. These partners should work together to compile data and information to examine the national implications of transportation workforce issues.

Transportation agencies should partner with universities, community colleges, training institutes, and LTAP centers for training and workforce development. These institutions are well organized to provide education and training and have the technical expertise to deliver the curricula, courses, and training materials to meet agency needs. Many already are doing this.

Transportation agency leaders must make human resources management a strategic function.

The most successful private- and public-sector organizations have raised human resources management to the strategic planning level in their organizations, because human capital is a key to successful and improved performance. Several transportation agencies have made the human resources function a strategic and equal partner with other key agency functions.

Without this organizational change, agencies will continue to fill positions in a piecemeal fashion instead of identifying future workforce needs and addressing gaps in the ability to meet those needs through a strategic human resources program.

The author, a Senior Program Officer in the TRB Division of Studies and Information Services, served as study director for this project.