

Improving the Mobility of People and Goods: A Holistic Approach to Addressing the Workforce Shortage

Workforce development initiatives involve continuing education and programs that equip individuals with the skills and knowledge they need to succeed in their careers and to contribute to the economy and their communities. The Mineta Transportation Institute has been delivering workforce development programs since 1991 in order to accelerate the development of talent for the transportation industry, boost productivity, diversify the workforce, and drive innovation and economic growth. MTI's programs serve as holistic best-practice models agencies can reference to develop their own initiatives in order to engage even the youngest learners and prepare them—and the industry—for future success.

Key Issues Addressed

Critical Workforce Shortage

In a 2022 American Public Transportation Association [survey](#) of 117 transit agencies of all sizes, 71% reported they have either had to cut service or delay service increases because of worker shortfalls. MTI's programs help build a pipeline for a robust workforce.

STEM Skill Gap

Youth workforce development programs help ensure that young people from all backgrounds engage with and get excited about science, technology, engineering, and math. Programs like MTI's, which reach students of diverse backgrounds and at different ages, also help sustain that interest overtime and inspire new generations of talented, capable transportation workers.

Evolving Landscapes

Recent years have brought significant changes to the transportation industry, which is tasked with continually adapting to emerging technologies and evolving threats like those from climate change and cyberattacks. MTI's programs prepare a new generation of talented engineers, planners, scientists, and frontline workers to understand and face these challenges.

Methodology

Successful MTI WFD programs, which foster interest in transportation careers, strengthen professional leadership, and promote diversity within the field, include:

Program	Target Audience	Focus Area	Description
Preschool & Elementary Lesson Plans	Pre-K - Grade 5	STEAM, Literacy, & Mobility Education	Standards-aligned activities that introduce young children to transportation and mobility concepts.

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Essay & Poster Contests	Grades 1-12	Critical Thinking & Communication	Promote creative expression and awareness of transportation issues through writing and art.
Garrett Morgan Sustainable Transportation Competition	Middle School Students	STEM & Sustainability	Encourages students to design innovative, STEM-based solutions to transportation challenges.
Mineta Summer Transportation Academy	High School Students	Career Exposure & College Credit	Offers hands-on career exposure and free college credit.
Mineta Leadership Academy	Mid-Senior Level Professionals	Leadership Development	Builds leadership capacity for a changing industry landscape.

Results

- The PreK pilot successfully launched in 2024, empowering 4- and 5-year-olds to ride transit, practice pedestrian safely, and learn the importance of mobility in their communities.
- Over 1,300 students have participated in the Garrett Morgan Sustainable Transportation Competition from multiple states, which also connects participants with high school mentors and industry experts from organizations like Caltrans, APTA, and HNTB.
- Since 2011, the Mineta Summer Transportation Academy has empowered over 277 students with hands-on experiences in transportation, and over 70% of participants reported a heightened interest in pursuing careers in the field—demonstrating the program’s strong potential to inspire the next generation of transportation professionals.
- The Leadership Academy has engaged 160 emerging leaders at agencies like the San Francisco Bay Area Rapid Transit (BART) and NY’s Metro-North Railroad to equip them with essential skills for successful team-building and organizational and personal growth.

Benefits & Further Research

MTI’s comprehensive workforce development programs engage the next generation of skilled bus operators, expert planners, and executives by introducing them to the challenges, opportunities, and real-world impact of transportation careers. These programs are essential to cultivating the future-ready workforce our nation’s transportation systems depend on. Ongoing evaluation ensures these programs grow to meet emerging industry needs, enables long-term impact, and supports replication by other agencies nationwide. The free lesson plans and more information about each of the programs is available on MTI’s [website](#).

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