



INSIDE THIS ISSUE

- A Green Transportation Workforce
- Upcoming Events
- Professional Development Opportunities
- Catch up on the best in Transportation Workforce Webinars
- Featured Program: Building a better Bikeshare
- Education Resources

A Green Transportation Workforce

The National Transportation Career Pathway Initiative ([NTCPI](#))

The National Network for the Transportation Workforce (the 5 regional FHWA surface transportation workforce centers) received funding from FHWA to launch an initiative to inform the development of career pathway demonstrations that address critical transportation occupations in planning, engineering, safety, operations, and environment. The NETWC will lead a discipline working group on pathways that lead to environmental careers in the transportation industry.

The NETWC Environment Initiative will:

- Consult with industry and discipline stakeholders to identify critical transportation occupations with an “environmental” focus, covering the next 5-15 years;
- Identify the skills, competencies, experiences, and credentialing required for workers to be successful in these critical occupations;
- Evaluate the availability, breadth, and efficacy of existing educational and training outlets, courses, and materials; and
- Establish career pathways, demonstration programs, and work-based learning projects as resources for education/training institutions across the nation.

The Northeast Transportation Workforce Center (NETWC)

is organized to make a significant contribution to ensuring the U.S. surface transportation system has a workforce that is resilient, skilled, efficient and effective in designing, operating, building and maintaining a 21st century transportation system that best supports the region and country's social and economic vitality.

Be Engaged

Provide your direct input helping to develop a scope of transportation workforce issues and highlight particularly promising local, state and regional programs and actions.

Become a NETWC partner

- Be a network builder for one of NETWC's [Action Plans](#)
- Host a NETWC webinar
- Advance one of NETWC's Action Plans locally
- Share your program successes
- Help develop a specific career pathway or share tools that are successful in workforce development

Contact us today!

Today we face many challenges in developing a qualified talent pipeline of transportation professionals, including generational retirement, competitive hiring, workforce diversity, and the adoption of new technologies. We also face significant environmental challenges. Over the next two years, the Environment Initiative will focus on career pathway solutions that provide demonstrable achievements for both students—in terms of articulating a continuum of learning versus occupational opportunity, and employers—by demonstrating how to attract and support a technically agile and comprehensively skilled talent pool. We aim to identify and help create solutions that are ready to deploy within technical schools, community colleges, degree-granting institution, and professional development programs. All NETWC research, education, and industry engagement efforts are **guided by FHWA's position that the nation's ability to successfully deliver and manage an efficient, safe, and effective transportation system is dependent on the knowledge, skills, and abilities of the transportation workforce.**

For more information, contact NETWC Director [Glenn McRae](#).

Bicycle Share Systems are Growing Career Pathways



Active transportation has become an attractive urban travel mode, responding to rising concerns with environmental sustainability, automobile traffic congestion, and obesity rates. In its efforts to support active transportation, the U.S. Department of Transportation advocates for **its agencies to work on “reducing distances between key destinations and providing and improving bicycle and pedestrian facilities.”**¹ One reflection of the new seriousness around bicycles as a form of transportation is the expansion and growth of bike share companies and programs around the country (119 cities with more than 4800 stations/hubs).² These bikes and bike share systems need regular, quality maintenance and repairs in order to remain a viable transportation alternative, creating new career pathways for professional bicycle mechanics, assemblers, and technicians able to work on bike share system technology and maintenance. Bike share systems and careers also link directly into the Smart City movement,³ and expansion of smart technologies in urban planning and design.⁴

The Bikeshare industry offers career opportunities for a variety of learning types – those who are mechanically inclined, those who like to work with people, as well as folks who like to analyze and solve problems, employing both people skills and technology. While a typical entry-level bicycle mechanic position requires only a high-school diploma or its equivalent, most also require a base level of bicycle mechanic experience. Those interested in a career in the bicycle industry can step into the field through training and certificate courses at any number of bicycle mechanic institutes.⁵ Embedded in the career pathway are positions at community bicycle shops that offer Earn-a-Bike programs to income eligible youth, high-school students, those working toward a high-school equivalency, disconnected youth, and those from economically disadvantaged backgrounds. The Earn-a-Bike programs are bike mechanic training programs that – in the end- offer its students a bicycle as part of the training process. Finally, there are bike mechanic apprenticeship opportunities at various bike shops and institutes.⁶

Once a worker has bike mechanic training, the next step is getting a job to gain valuable work experience. Due to the tremendous growth in bike share systems in the past decade there are increasing numbers of job available along the career pathway. Currently, the ten largest bike share systems in the U.S. have over 25,000 bikes in service, with a total of over 34,000 bike share bikes across the United States. It is no surprise to see that the data from the Bureau of Labor Statistics (BLS) from 2015 show a projected increase of 22% in bike mechanic jobs between 2014 and 2024. The median annual wage for a bike mechanic is \$27,470 and a mean hourly wage of \$13.41.⁷ As bike share technology advances, it is important for mechanics to stay on top of those changes as **IT-bike sharing expands to include “electronic and wireless communications for bicycle pickup, drop-off, and tracking.** These technologies are **important to public bike sharing's recent expansion in both locations and scale.**⁸ With additional training in information technology, solar power, and e-bikes within the bike share positions, there is flexibility to move laterally and vertically through the bike industry.

A trained bike mechanic can step into a wide-range of career pathways in the bike industry.⁹ The growing trend, however, is in the bike share industry, where a technician can find work, receive additional training and move up through the ranks to a fleet operations manager or bike share implementation specialist. The intersection of bike share with multi-modal urban planning, Smart City build out and contributions to economic growth and advancement of social equity make it a growth field for new careers and jobs.

- 1 -US DOT Active Transportation Mission. 2015. <https://www.transportation.gov/mission/health/active-transportation>
- 2- <https://ggwash.org/view/62137/all-119-us-bikeshare-systems-ranked-by-size> (accessed 02222017)
- 3- <http://smartcitiescouncil.com/article/why-bike-friendly-cities-are-smart-cities-and-how-be-one> (accessed 02222017)
- 4- <https://ecf.com/news-and-events/news/cyclists-and-public-bike-sharing-%E2%80%93-best-kept-secret-smart-city-data-collection> (accessed 02222017)
- 5- [United Bicycle Institute](#) and [Barnett Bicycle Institute](#) are among the most well-known and respected.
- 6- Here are some examples of apprenticeship programs: <http://bikerecyclevermont.org/programs/apprenticeship-program>; <http://neighborhoodbikeworks.org/programs/leadership-and-advanced-mechanics-course/>; <https://bikesnotbombs.org/mechanics-training>; <http://gearinupbicycles.org/youth-programs/become-a-youth-mechanic/>
- 7- **Bureau of Labor Statistics. 2015 “Employment Projections.” World Wide Web site accessed on Jan. 17, 2017:** <https://data.bls.gov/projections/occupationProj>
- 8- **Mineta Transportation Institute. 2014. “Public Bikesharing in North America During a Period of Rapid Expansion: Understanding Business Models, Industry Trends and User Impacts.” p. 17. World Wide Web accessed on February 16, 2017:** <http://transweb.sjsu.edu/PDFs/research/1131-public-bikesharing-business-models-trends-impacts.pdf>
- 9- There are many lateral tracks in the bike industry. With mechanical experience and some additional certifications (CPR/First Aid, Bike Safety Instructor Course, etc.), a bike mechanic can branch off from the bike share pathway into other bike industry careers, such as: bike factory mechanic or assembly technician, bike retail store manager, bike tour guide; bicycle safety educator, active transportation advocate, Earn-a-Bike program coordinator, or bicycle delivery specialists, and collegiate or elite race mechanics.

Upcoming Events



WTS Conference 2017

Wed May 17th 9:00am - Fri 19th 9:00am
New York City

WTS International is hosting its 2017 annual conference in New York City, May 17 - 19, 2017! During this interactive, three-day session, transportation leaders will exchange ideas and learn about the latest developments in transportation. More than 700 corporate and governmental industry leaders worldwide will attend the conference. A multitude of thoughtful and engaging topics will be covered, including autonomous technologies, transportation funding, shared mobility solutions, innovative data collection methods, professional development, and more! *Keynote Speaker: Arianna Huffington*

Upcoming Events

The Brass Tacks of Knowledge Management for Transportation Organizations Webinar

May 17 and May 31, from 1-2p.

Sponsored by the TRB Task Force on Knowledge Management (AB010T) and the Northeast Transportation Workforce Center

This two-part series highlights specific knowledge management techniques that can be applied in a transportation agency. It is designed for staff within human resources, engineering, research, planning, or information technology functions who are interested in starting up a knowledge management initiative or pilot and

want to gain an operational understanding of what would be involved. The session will provide stories and information from those who have implemented knowledge management in their organizations. Versions of these presentations were made at TRB in January 2017 (Session 271)

Part 1: Wednesday May 17th, 1-2pm REGISTER

Brass Tacks of Knowledge Management: Getting off the Ground

- *Introduction to the Brass Tacks of Knowledge Management* by Becky Burk, Performance Management Manager, Maryland State Highway Administration
- *Like Peanut Butter and Jelly: How to Start a Knowledge Management Program That Is a Natural Fit with Your Organization* -- Alexander Linthicum, Office of the Assistant Secretary for Research and Technology
- *A Tale of Two Strategies: Getting a Knowledge Management Program Off the Ground* -- Kathy Schumann, Mead Hunt & Molly Johnson, Dewberry

Part 2: Wednesday May 31st, 1-2pm REGISTER

Brass Tacks of Knowledge Management: Successful Implementation

- *Introduction to the Brass Tacks of Knowledge Management* by Becky Burk, Performance Management Manager, Maryland State Highway Administration
- *Developing a Gold Standard Knowledge Management Program* -- Shellie Glass, U.S. Army (R)
- ***One Size Doesn't Fit All: Start Where You Are*** -- Maureen Hammer, Knowledge Management Engineer, Battelle



The Northeast Association of Transportation Officials

July 10 – 12, 2017

Hilton Penn's Landing in historic Philadelphia, PA

This is the premier meeting of state transportation officials from across the Northeast. Highlights include noteworthy panel discussions on the latest transportation issues and developments in the United States, with focus areas this year that include:

- Autonomous Vehicles, Electric Vehicles and/or Smart and Connected Infrastructure
- Freight in the Northeast
- **IT Innovations and Best Practices for DOT's**
- Resiliency and Sustainability in Transportation

Registration and further program information will be available at: <http://nasto.org/2017-nasto-conference/>

Professional Development Opportunities

"Invest in the Future, Invest in Leadership"

AASHTO and CMC & Associates announced the schedule for the 2017 series of one-week National Transportation Management Conferences, which will be held in four cities from July through October.



The conferences, now in their 62nd year, are sponsored by AASHTO and conducted by CMC, with a limited number of participants for each event selected from a list of nominees.

Sponsors say the events can particularly help middle managers of transportation agencies increase their management and leadership skills. For those who are already experienced managers, the workshops can help them update and refine existing skills, challenge current thinking, introduce new concepts, and explore changing employee and customer relationships.

Sponsors say the events can particularly help middle managers of transportation agencies

This year's events will be July 24-27 in Madison, Wis.; Aug. 21-24 in West Palm Beach, Fla; Sept. 25-28 in Spokane, Wash.; and Oct. 16-29 in Annapolis, Md. Those interested in participating should submit their nomination forms by the dates listed in the conferences brochure, by April 1 for the July and August dates and by May 1 for the September and October events.



The American Public Transportation Foundation Scholarship Application Is Open!

The American Public Transportation Foundation (APTF) is now accepting applications for 2017.

In furthering our mission to increase and retain the number of individuals choosing the transit field as a career, the APTF will award a minimum of twenty scholarships, ranging from \$2,500 to \$5,000 each, to college students or transit professionals who are interested in pursuing or advancing in a career in the public transportation industry.

Awards cover the academic year, beginning in the fall 2017 semester, and assist with tuition costs or other educational expenses. All applicants must be sponsored by an APTA member.

Who Should Apply?

Applicants must be enrolled in a fully accredited institution, have and maintain at least a 3.0 GPA in course work that is relevant to the industry or required of a degree program, and demonstrate a strong interest in entering the public transportation industry. College sophomores (30 hours or more satisfactorily completed), juniors, seniors, or those seeking advanced degrees may apply for scholarships.

Deadline: Complete applications must be submitted by 5:00 PM ET, Friday, June 16, 2017.

For more information on the scholarship, please visit the APTF website or contact Lindsey Robertson at lrobertson@apta.com. *Our Mission - "To increase and retain the number of individuals choosing the transit field as a career by providing scholarships and engagement opportunities to deserving students and transit professionals - our future leaders."* www.aptf.org

Catch up on the best in Transportation Workforce Webinars

The NETWC and its partners have produced many exciting and informative webinar programs in the past year. If you missed any of them, or if you participated and want to share the experience you can find a full listing on our [Event page](#) and connect directly to the recording and resource. Several recent programs include:

Driving Without Gas: How Electric Vehicles are Transforming the Education and Workforce Landscape What are the key skills needed in future workers to support an Alt Fuel fleet? How can employers and educators partner to boost career pathways in the field? What has been the key learning from different program approaches in the EV education field to expand or replicate these efforts?

Why All the Momentum for Registered Apprenticeships? What Are They? An overview of the various models of registered apprenticeship programs as well as some of the benefits for businesses, students, job seekers, technical colleges, and community colleges. The value that apprenticeship can add to the transportation sector to develop a skilled workforce, build employee pools, capture the knowledge capital of experienced workers, and retain valuable employees was explored.

Diversity in the Transportation Industry: Attracting and Engaging Diverse Groups

Diversity of people, minds and thought unlocks great potential for the transportation industry. Breaking down barriers, diversity creates an environment of inclusion and ceaseless knowledge sharing among communities, organizations, and individuals. The forum opened a discussion on how to examine diversity as a significant cultural value, rather than a set of baseline numbers. The participants through conversation and stories expanded the definition of diversity as they considered a range of topics, including careers and opportunities, serving underrepresented populations, and organizational transformations.

Featured Program



Baltimore Bike Share and Veterans



In a recent article [Building jobs while building bike share](#) from [betterbikeshare.org](#), Stephanie Cox chronicles a workforce development partnership between [Baltimore Bike Share](#) and [Corps Logistics](#), a company with a mission to employ veterans **who've struggle with homelessness, addiction, and poverty.**

Education Resources

Two excellent continuing resources for teens to explore the world of Transportation, including the science behind it and the careers it can lead to are e-zines *Go!* and *Fast Forward*.



Go! is a free, not-for-profit, online magazine (e-zine) for teens on education and career opportunities in transportation. *Go!* aims to develop the transportation workforce by educating and stimulating young minds about the vast educational and career possibilities in transportation. *Go!* and its companion Spanish e-zine, *iVamos* (www.vamos-explora-trans.org) are managed and published by Iowa State University's [Institute for Transportation \(InTrans\)](#). Presenting transportation from different angles such as the infrastructure, vehicles, designers, as well as the users of transportation, these e-zines include information on scholarships, internships, and other educational resources.



Fast Forward was developed for middle school, high school and community college students and faculty to enhance awareness of careers and other important issues involving the transportation industry. *Fast Forward* introduces materials related to transportation industry leaders and professionals, programs, projects, and careers. It creates an opportunity for the transportation industry to reach out to students and faculty across the U.S. *Fast Forward* was developed and launched by the University of Nebraska-Lincoln Nebraska Transportation Center under contract to the US DOT Federal Highway Administration.



Building the Workforce for Today and Tomorrow: Warehousing and distribution, logistics and supply chain.

Mon Jul 10th - Fri 14th Charlotte, North Carolina
[2017 CTE Educators Summit](#)

ACADEMIC CO-HOSTS:

Central Piedmont Community College (CPCC), Charlotte, NC
Rock Hill Applied Technology Center, Rock Hill, SC

The CTE Educators Summit is a highly interactive event sponsored by MHI, targeted for instructors, program directors, and associations in warehousing and distribution, logistics and supply chain.

Educators from across the country will be introduced to the latest instructional materials, teaching techniques, and partnership opportunities to advance their career and technical education programs.

This five day event will offer:

- Educational lectures and industry updates
- Networking with academic peers and industry professionals
- Facility tours of state of the art supply chain organizations
- Curriculum tips, tools, resources, and insights

Questions? Contact Angela Jenkins ajenkins@mhi.org

Online registration will begin May 2017



USDOT's Women & Girls in Transportation Initiative ([WITI](#))

The USDOT Women & Girls In Transportation Initiative ([WITI](#)) offers an internship program and is available in all 13 OSDDBU regions, enabling young women from colleges and universities across the country to participate. The WITI internship programs is administered through the department's [13 Small Business Transportation Resource Centers \(SBTRC\)](#) which provide resources, technical assistance and outreach to all 50 states and U.S. territories, each SBTRC is responsible for placing qualified female college students in transportation related internships throughout their regions.

Each program has its own approach to establishing partnerships with employers and educational institutions and may have opportunities for mentoring, creating job shadow programs and other ways to introduce and advance women and girls in transportation-related careers.

[Capital Region \(Washington D.C. Metro Area\)](#)

[Mid Atlantic Region \(NJ, DE, MD, PA\)](#)

[Northeast Region \(CT, MA, ME, NH, NY, RI, VT\)](#)

[Northeast Transportation Workforce Center](#)

NETWC Director: Glenn McRae (802) 656-1317 | Glenn.Mcrae@uvm.edu (University of Vermont)

Associate: Janet Leli (848) 445-2906 | jl@rci.rutgers.edu (Rutgers University)