

2ND TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS (TSMO) SUMMIT

CASE STUDY 3: BEST PRACTICES IN WORKFORCE DEVELOPMENT FROM SIMILAR INDUSTRIES



AUTHOR
Pat Noyes

August 2021

HIGHLIGHTS

- The TSMO community can leverage and adapt noteworthy workforce development practices from other industries with similar challenges.
- Water, Information Technology, Accounting, and Trucking Industries were scanned for lessons learned that the TSMO community could adapt.
- Advancing diversity, equity and inclusion strategies can bring additional workforce into the TSMO community.

INTRODUCTION

Workforce recruitment and retention challenges exist in TSMO, as they do in many other industries. This case study looks at what can be learned from similar industries to inform practices within TSMO. It also looks at opportunities to enhance inclusivity and diversity in the workforce through recruitment and retention practices.

LESSONS FROM OTHER INDUSTRIES

This section looks at similar and related industries to TSMO on the topic of recruiting and retaining staff. It includes recent work in the following professions and sectors:

- Water
- Information Technology
- Accounting
- Trucking

Similar to TSMO, these industries require various levels of specialized training at the professional and paraprofessional levels, and each faces challenges in employee shortages and diversity.

Water

In 2020, the EPA published [*America's Water Sector Workforce Initiative: A Call to Action*](#) to address workforce needs "vital to sustaining our critical water infrastructure investments." It identified a critical shortage of staff and a large number of water sector workers eligible to retire in the next five to ten years. The Workforce Initiative focuses on the declining water sector workforce, its impact on public drinking water and wastewater systems, and the challenges that arise from aging infrastructure and increasingly complex systems and technologies. Similar to TSMO, this industry uses increasingly sophisticated information management systems to monitor water quality, treat and process drinking and waste water, and manage operations and assets. This requires a workforce with strong information management and cybersecurity skills. It also requires knowledge of new treatment technologies and advanced and emerging processes that support long term sustainability and resilience.

The Initiative focuses on bringing together federal and non-federal entities (e.g., associations, local governments, tribes, and utilities) to expand successful practices, promote innovative workforce development, and bolster water careers through increased awareness and education of water careers. It identified three action areas:

1. Provide federal leadership to create national momentum and coordinated efforts

2. Partner to build the water workforce of the future
3. Bolster education and outreach to make water a career of choice

Action Area 1 includes a commitment to federal agency partnerships between EPA, the Department of Education, Office of Career, Technical, and Adult Education (ED-OCTAE); the Department of Labor, Employment & Training Administration (DOL-ETA); the Department of Labor, Women's Bureau (DOL-WB); USDA's Rural Utilities Service; the Veterans Affairs Office of Transition and Economic Development (VA-TED); and the VA Veteran Readiness and Employment (VA-VR&E) Service. The EPA has focused on a diverse workforce through The National Summit on Women in Apprenticeship, The Women in Apprenticeship and Nontraditional Occupations Grant Program, Veterans Affairs Economic investment initiatives, and the Promoting a Veteran Workforce for the Water Sector MOU, which guides the transition into the water sector. A recent partnership between EPA and the Department of Education advances collaboration through Rural Community College Grant Application Convenings to promote engagement with water sector partners, education and training program support through Perkins funding, and the VA Non-paid Work Experience Program. The EPA has also worked with tribal workgroups, state and local workforce development boards, and federal apprenticeship programs to access workforce needs in the water sector.

In support of Action Area 2, the EPA developed a series of workforce case studies highlighting success practices in recruitment, retention, competency, and community partners. They created a webinar series on Creating the Water Workforce of the Future, they held a workforce symposium with utilities, states, and tribes; created a website to share workforce tools and resources; and supported Decentralized Wastewater Partners efforts to address workforce, education, training, and research needs related to the decentralized wastewater industry.

The third Activity Area focuses on education and outreach to make water a career of choice. It utilizes workforce grants and school career days outreach and other strategies to connect the next generation of professionals to the water sector. It focuses on underserved communities and water workforce diversity through targeted outreach in opportunity zones and post-secondary institutions such as Historically Black Colleges and Universities and Hispanic Association of Colleges and Universities.

Information Technology

Information technology (IT) is closely related to many of the functions and technologies in the TSMO arena. For this reason, a number of challenges, needs, and skills are similar, allowing IT workforce practices to align with TSMO. The CIO Council, a forum of federal Chief Information Officers (CIOs) published the *Future of the Federal IT Workforce Update* in 2020, which looks at primary issue areas and drivers of the future. The report considers recruiting and hiring, retaining and reskilling, and augmenting the federal workforce. In addition to key findings in each of these areas, the report makes recommendations specific to actions that could be taken to support the federal IT workforce. These include:

1. Develop a new governmentwide special IT pay system
2. Move to a competency-based classification model for all IT positions
3. Create interdisciplinary procurement teams
4. Redesign the IT recruiting and hiring processes to attract highly qualified and diverse individuals
5. Make federal IT career paths more attractive to the workforce of the future
6. Improve recognition for the best performers and innovators in federal IT

7. Compare the effectiveness of IT workforce programs with the private sector
8. Expand existing pilot programs to improve recruiting efforts
9. Increase adoption and long-term impact of intragovernmental augmentation offerings
10. Employ more technical SMEs who are trained as project managers

Although directly targeting the federal IT workforce, many of the challenges and recommendations translate well to state DOTs and large local or regional agencies. The report offers findings that can be referenced to address workforce recruiting and retention in public agencies engaged in TSMO.

Accounting

The American Institute of Certified Public Accountants (AICPA) National Commission on Diversity and Inclusion published a [*Recruitment and Retention Toolkit*](#) to support the development of a more diverse and inclusive workforce in the accounting industry. The toolkit is intended “to help leaders understand how recruiting and retaining a diverse workforce can help them better achieve their companies’ overall talent recruitment and retention goals...[and] how to integrate diversity recruiting and retention techniques into broader day-to-day business and personal activities.” It addresses the importance of diversity in the profession and provides tools for creating a culture and actions to attract, recruit, and retain a diverse workforce. It presents the importance of leadership support for the value of diversity. The document builds on recruiting plans, training recruiters on the value of diversity, developing effective job descriptions and postings, enlisting current employees as recruiters, practicing targeted recruiting, creating a consistent interview experience for all candidates, and investing in onboarding. In the area of retention, the toolkit looks at organization-wide diversity and inclusion training, fostering an inclusive environment, investing in employee performance and development, conducting “stay interviews” in addition to exit interviews, and measuring ongoing progress. The report includes steps for building an effective mentoring program, combatting unconscious bias, turning employees into inclusion champions, and cultivating candidates that may not be actively looking for a new position. AICPA has created additional resources for advancing diversity and inclusion, available on their [website](#). These include an Accounting Inclusion Maturity Model, webcasts, scholarships, and tools for women and other targeted groups.

Trucking

A recent article in [*Heavy Duty Trucking*](#) discussed a recent USDOT roundtable on the challenges of recruiting and retaining truck drivers. The Federal Motor Carrier Safety Administration (FMCSA) hosted the roundtable on July 8, 2021 with trucking stakeholders, attended by Transportation Secretary Buttigieg, Labor Secretary Walsh, and Deputy Administrator Joshi, to discuss workforce challenges and opportunities in the trucking industry. FMCSA noted that the turnover rates for long-haul carriers is 90% and 72% for small carriers. This turnover creates a lag time from training and onboarding new drivers, resulting in driver shortages. The American Trucking Association (ATA) noted that the median age of current drivers is well above the national average age of all workers, creating a high rate of potential attrition. Recruiting a younger and more diverse workforce means making trucking a more attractive career choice. Registered apprenticeships which offer on-the-job training with wage progression has been an effective tool for retention. Wages are also a critical factor in retention and signing bonuses are being used to compete for skilled drivers. Federal support to state departments of motor vehicles is helping to address backlogs in issuing commercial driver’s licenses and return issuance rates to pre-pandemic levels.

The *Heavy Duty Towing* article, [*Retention Practices: Align with Shippers That Care About Your Drivers*](#), June 2021, suggests that beyond implementing in-house practices to keep drivers feeling valued and

appreciated, it is important to look at how clients and shippers treat drivers. An example shipper practice that shows respect to drivers is to provide easy access to all-gender restrooms. Other best practices for driver retention include creating an open door policy, giving drivers a say in fleet investments, and mentorship programs. A 2018 article in *FleetOwner* states that the keys to recruiting drivers are money, lifestyle, and respect. A 2021 article in *Logistics* confirms the importance of the issues in driver retention. The research looked at compensation, management quality, equipment quality, wait time requirements, and home time. It found the keys to retention lie in driver respect, proper supervision, good equipment, time at home, and sufficient compensation.

OPPORTUNITIES FOR TSMO WORKFORCE ADAPTATION

The EPA's Water Sector Workforce Initiative is a collaboration that brought together a number of federal partners, including the Department of Education, Department of Labor, Department of Agriculture, and Veterans Affairs to work together to build a strong foundation for workforce development. Federal leadership at USDOT could create a similar initiative to support the development and advancement of a TSMO workforce at the federal, state, regional, and local level, modeled after the EPA initiative and building on other previous multi department workforce initiatives. For example, in 2014, a major convening of transportation workforce development experts was held by US Departments of Transportation, Education, and Labor to delve deeply into current and future workforce needs of all transportation modes.

Recommendations and research findings in the above industries offer insights for workforce recruitment and retention in TSMO. Looking at the literature in these industries provides examples of good practices and recommendations that can be applied to TSMO workforce retention and recruitment. Several of these are outlined below as an initial list for discussion and to generate additional thoughts and ideas.

Recruiting

Looking first at recruiting, the following are some key takeaways from the related industry literature.

Cooperation between TSMO and HR professional

- Simplify and update hiring processes
- Streamline application process
- Use non-government sites for job postings
- Revise traditional compensation structure
- Create a performance evaluation process more in line with industry

Promoting a sense of purpose, social good

- Document TSMO workforce case studies that highlight the social good
- Develop the social case for TSMO (beyond business case)
- Promote TSMO in school career days

Retention

Retention includes workforce development and creating an environment that meets the needs of employees. Some of the recommendations from other industries that can be brought to TSMO are outlined below.

Career mobility

- Define career paths

- Enhance education and reskilling programs
- Provide cross-functional training
- Promote leadership competencies

Culture of innovation

- Implement modern technology tools, infrastructure, and applications
- Create job rotation programs
- Create or participate in TSMO communities of practice
- Embrace rapid pace of technological change

Flexibility and work environment

- Include flex time and remote working programs
- Orient office culture and environment to younger works – more like industry
- Conduct stay interview to make proactive changes to work environment
- Implement open door policies and encourage idea sharing

Diversity and Inclusion

Several ideas and suggestions were included in the related industry literature to expand diversity and inclusion in the workforce. A number of key concepts can be applied to the TSMO workforce and are noted here to encourage further ideas and discussion.

Build a culture of diversity and inclusion

- Leadership support
- Build the business case
- Assess current culture and establish goals
- Communicate tolerance and inclusivity
- Train recruiters on the value of a diverse workforce
- Include diversity on interview and hiring panels
- Implement diversity and inclusion training organization-wide
- Track advancement of diverse talent compared to non-diverse talent in agency

Apprentice, mentoring, and sponsorship programs

- Use apprenticeship programs to promote diversity and inclusion of female and minority workers in the workforce
- Participate in the National Summit on Women in Apprenticeship and Nontraditional Occupations
- Assign onboarding buddy to new hires

Targeted outreach and recruiting

- Nontraditional and underrepresented workers
- Veterans
- Public outreach, including social media

Collaborate with underrepresented groups

- Post-secondary institutions, such as Historically Black Colleges and Universities and Hispanic Association of Colleges and Universities

- Community and technical colleges organizations, such as American Association of Community Colleges