FINAL REPORT

PROJECT E5

FEBRUARY 2023

A Framework to Promote Diversity & Inclusion in Workforce Development in the Southeast States

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ACKNOWLEDGEMENT OF SPONSORSHIP AND STAKEHOLDERS

This work was sponsored by a grant from the Southeastern Transportation Research, Innovation, Development, and Education Center (STRIDE).

Funding Agreement Number - 69A3551747104

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1.0 INTRODUCTION

The lack of workforce diversity has made it challenging for transportation agencies to incorporate resiliency into their long-term plans effectively. This project developed a framework for creating an inclusive and functional workforce environment for transportation agencies in the southeast region. The project identifies existing gaps, predicts future needs, and captures the role transportation agencies, research centers, Departments of Transportations (DOTs), and professional organizations can play to recruit, train, and maintain a diverse and inclusive workforce. This research will ultimately contribute to creating a resilient transportation workforce structure in the southeast region. The goal of this project is to present an Equity, Diversity, and Inclusion (EDI) -focused framework for promoting diversity and inclusion within the workforce.

1.1 Scope

This project is specifically focused on the Southeast region; however, the existing body of knowledge on diversity in the transportation workforce is not limited to the Southeast. Notable practices from across the country were considered to develop a set of strategies and tools for addressing diversity issues in the workforce. Through reviewing existing efforts nationwide and in the Southeast, this project aimed at identifying the gaps regarding diversity and inclusion aspects of workforce planning and provide an EDI framework that helps transportation agencies develop diversity and inclusion programs or long-term plans.

2.0 LITERATURE REVIEW

Understanding the current dynamics of diversity within the transportation industry requires a comprehensive view of: 1) what diversity means for the transportation workforce; 2) how different agencies (e.g., DOTs, MPOs, and Transit Agencies) marry diversity and inclusion with their business goals; and 3) what barriers transportation agencies encounter in diversifying the workforce and supporting—and helping advance—a diverse group of employees within their agencies. The transportation industry has suffered from a lack of diversity across multiple levels of jobs and departments. Gender is a subcategory for demographic diversity, and gender equality is one of the core pieces of an inclusive and accountable transportation system (Kermanshachi & Sadatsafavi, 2018).

A recent United Nations Development Programme (UNDP) report on gender equality in public administration showed that transportation and public works have the lowest representation of women in public administration around the world (Finkel, Hughes, & Hill, 2021). The image is not different in the United States and has important consequences as such a 'glass ceiling' is diminishing women's power to influence policymaking and pursue comprehensive changes in the system. This section of the report will summarize the findings detailed in existing scholarly research and practices across the United States related to diversity in the transportation

workforce (Figure 1).

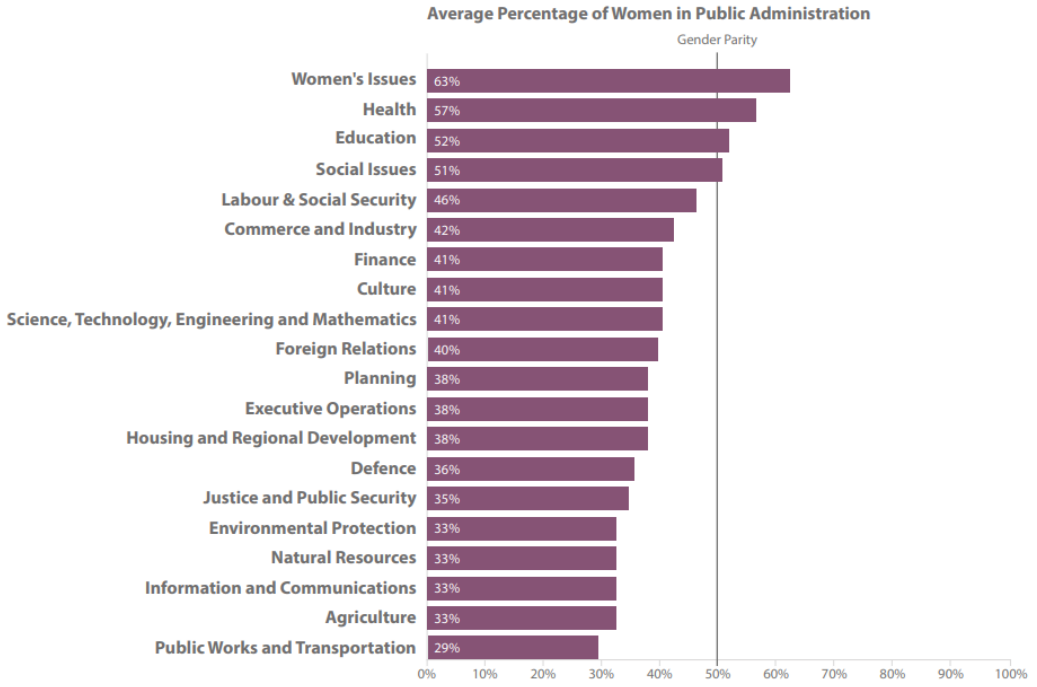

FIGURE 1 AVERAGE PERCENTAGE OF WOMEN IN PUBLIC ADMINISTRATION WORLDWIDE

2.1 Diversity and Inclusion in Workforce

The way agencies define diversity in the workforce impacts their overall approach to enhancing inclusion, uplifting equity, and developing a forward-thinking plan for workforce development. Recognizing the inclusion of all identities, abilities, and expertise in the workforce makes it possible for transportation agencies to address the concerns of transportation users *and* non-users. This is particularly important in crisis aftermath when public services have the chance to reach and serve new populations. Now, in the ongoing crisis of the COVID-19 pandemic, diversity and inclusion in the workforce matters more than ever, as it will result in a deeper understanding of transportation needs and exploration of the best way to collaborate with communities to address those needs. However, the ability for each agency to make its own definition also allows for a wide variety of techniques and standards across the country.

2.1.1 Definition of Diversity and Inclusion

Historically, diversity was often defined in limited terms of race and gender; however, the current definition of diversity includes many more variables such as gender identity, personality, experiences, and sexual preferences (Kermanshachi & Sadatsafavi, 2018). In the previous STRIDE project, entitled *Transportation Workforce Development for State DOTs to Address Congestion for the Southeast Region project (STRIDE C4)*, recommendations regarding recruitment strategies proposed ways to attract underrepresented groups, such as younger

generations and women, which eventually result in promoting long-term workforce diversity. The study's findings showed that in order to create an inclusive recruitment plan, DOTs need to re-emphasize their approach in recruiting women and minorities, rethink traditional methods, and conduct recruitment earlier in the pre-professional educational pipeline (Steiner, et al., 2021).

Other dimensions of promoting diversity that were partially explored in the previous STRIDE (STRIDE C4) project were (a) the significance of diversity in technical skills and (b) work-life balance in encouraging prospective employees to join the transportation workforce. Therefore, defining what diversity in the workforce means for an agency is essential. Diversity, as defined by the Transportation Research Board (TRB), is a variety of experiences, cultures, and physical attributes that influence one's interactions within a community, which includes race, language, sexual orientation, age, culture, social strata, gender, religion, political perspective, mental and physical ability, and experiences (both professional and personal) (TRB, 2021).

This study uses TRB's definition of diversity to explore ways to promote diversity and inclusion within the Southeast region's workforce. Additionally, inclusion emphasizes the promotion of individual involvement in all levels of decision-making within an agency (Ivey, Powers, & Clark, 2019). Therefore, simply hiring more diverse workers does not actually diversify the workforce. This is only possible if an agency creates an inclusive environment by elevating the roles and voices of employees from underrepresented groups and providing opportunities for career advancement. In a nutshell, strengthening diversity and inclusion requires rethinking leadership styles, diversifying the workforce, *and* supporting individuals throughout their career journey in an agency (PHEAL Steering Committee, 2020).

2.2 Existing Diversity within the Transportation Industry

While hiring diverse employees alone is not enough to make significant strides with diversity, equity, and inclusion, it is a starting point. Further, with a significant fraction of the nation's transportation workforce nearing retirement age, attracting new talent to transportation fields and retaining that talent is essential. Demographic changes within the transportation industry, lack of diversity, and immediate need for interdisciplinary skills are some of the current hurdles being faced by the transportation industry (Steiner et al., 2021; see also Ivey et al., 2012). As noted in the 2019 TRB's report on critical issues in transportation, promoting diversity and inclusion opens the door to a resilient and robust workforce (National Academies of Sciences, 2019). Further, addressing future challenges that the transportation industry faces depend heavily on the workforce capacity and capabilities to adapt during the crisis. The COVID-19 pandemic shed light on challenges such as equity in access that have long been impacting communities overburdened with health and social inequities (Zeller et al., 2021; see also Davis & Plerhoples, 2021). The transportation workforce should include a diverse group of individuals who bring a wide variety of experiences, abilities, and identities to the decision-making table in order to understand the magnitude of transportation policies' adverse impacts on communities' everyday lives (Ewoldsen, 2021).

Creating an inclusive workforce environment requires an understanding of where we are right now and utilization of lessons learned from the past in order to move forward into the future. As the former secretary of transportation, Anthony Foxx, stated, "To some communities, particularly those who have been historically victimized by the transportation planning and decision-making process, the transportation system can be viewed as a weapon pointed directly at them" (Stacy, et al., 2020). Understanding how different segments of society view transportation interventions and incorporating their perspectives and preferences in the transportation planning process is the key to successfully addressing their needs and remove existing biases and inequalities.

Studies further discuss the importance of transparent and well thought of transition plans during leadership changes. While the entire workforce is impacted from such transitions, groups that have long been underrepresented in the transportation field experience a greater impact (Godfrey & Bertini, 2019). Transportation agencies would be able to get a clear image of impacted groups only through a multidisciplinary approach that requires richness of experiences and diverse views.

2.2.1 Millennials in the Workforce

For many years, the baby boomer generation has been the largest group within the transportation workforce. In 2014, more than 50 percent of the transportation workforce was older than 45 years of age (Metro, Harper, & Bogus, 2021). This means that a considerable portion of the transportation workforce is looking at the prospect of retirement, and now millennials have become the largest cohort in the transportation industry (Dimock, 2019). Additionally, a 2014 report by the National Academies of Science projected that close to 70 percent of the skilled technical workforce in rail transit agencies are expected to retire in 10 years—double the rate of the whole US workforce (National Academy of Sciences, 2014). The public transportation industry is also experiencing a severe workforce shortage, with many agencies struggling to recruit, retain, and develop skilled workers (Bartlett, Collins, Hart-Mrema, & Valesano, 2021).

Across the industry, different agencies have started to discuss ways to attract the younger generation to the transportation professions. A 2016 study documented notable practices to attract, recruit, and retain millennial workers based on input from a number of transportation agencies in Alaska, Minnesota, Montana, and Wisconsin. The following recommendations are based on that data and can be applied to agencies in other geographical locations: 1) developing a plan for online and social media presence to reach millennials; 2) building agency-wide mentorship capacity and providing opportunities for constant feedback; 3) rethinking the length of employees' tenure time and developing creative strategies to get the best return on short-term investment; 4) inviting millennials in the business process reviews to create organizational shifts acceptable from millennials' view; and 5) developing common career messaging highlighting benefits of DOT careers and internship, leadership development,

and job rotation programs in conjunction with other DOTs to create consistent messaging (Gallagher & Villwock-Witte, 2016).

To address the issue of the shrinking transportation workforce and attract new talent, transportation agencies need to make strategic, fundamental changes in the four categories of recruitment, attraction, retention, and workplace culture. The latter has become more challenging during the pandemic as younger generations intend to pursue careers that provide flexibility, high salaries, and competitive benefits, which most transportation agencies do not reflect (O'Boyle, 2021). However, the industry offers some unique benefits—such as job stability and opportunities for advancement, which should leverage against private sector opportunities.

2.2.2 Women and Minorities in the Transportation Industry

A recent UNDP report indicated that transportation is among five policy areas with the lowest average population of women worldwide. Other policy areas include *environmental protection*, *natural resources*, *information and communication*, and *agriculture* (Finkel, Hughes, & Hill, 2021). The situation in the United States is not different. Occupation by sex has been tracked since 2000. At that time, women accounted for 12.1% of the transportation workforce. In 2018, it had increased just 2.5% for a total of 14.6%. This includes transportation supervisors and material moving workers, aircraft and traffic control operations, motor vehicle operations, among other transportation occupations (Godfrey & Bertini, 2019). For example, within state DOT staff across the nation, minorities and women are underrepresented in almost all workforce categories, but the disparity is even more notable among the officials and administrators who play pivotal roles in hiring processes and decision-making.

Gender diversity is only one dimension of diversity as our nation is striving to become more and more diverse. There is a significant amount of evidence on transportation agencies' struggle to recruit and retain women and minorities, which is partially rooted in the lack of present role models in those agencies from the same demographic group as well as the unclear advancement opportunities for women and minorities (Ivey, Golias, Palazolo, Edwards, & Thomas, 2012). Women and minorities are also notably underrepresented in engineering and computer occupations, which are critical for a data-driven and technology-enabled workforce (Cronin & Goldstein, 2019; see also Ivey et al., 2019). The following table shows the representation of women and minorities in the transportation workforce based on mode and occupation (Table 1).

Occupation	Total Jobs	Projected Growth 2016-2026 ** (%)	Women * (%)	Black or African American * (%)	Hispanic or Latino * (%)
Civil Engineers	461,000	11	14.4	6.4	10.7
Construction and Building Inspectors	89,000	10	10.2	9.8	11.2
Construction Managers	1,081,000	11	7.4	4.9	12.4
Computer Systems Analysts	554,000	9	38.9	9.7	7.2
Electrical and Electronics Engineers	284,000	7	12.3	3.5	9.0
Engineering Managers	129,000	6	8.7	8.3	6.2
Engineering Technicians	375,000	…	20.0	8.9	10.3
Information Security Analysts	105,000	28	20.2	15.6	4.6

* U.S. Bureau of Labor Statistics. *Labor Force Statistics from Current Population Survey.* January 18, 2019.
** U.S. Bureau of Labor Statistics. *Occupational Outlook Handbook 2018*. April 12, 2019.

TABLE 1 REPRESENTATION OF WOMEN AND MINORITIES IN THE TRANSPORTATION WORKFORCE BASED ON MODE AND OCCUPATION

Individual organizations must work to build inclusive cultures that demonstrate clear paths for career advancement, support equity, and provide a workplace infrastructure that is dynamic and appealing to incoming generations of workers. Organizations should also reach out to educational institutions and training programs to develop an early career pipeline and expanded vocational training options for students of diverse backgrounds. Externally, organizations can use targeted messaging to reach underrepresented demographic groups, such as women and racial minorities, to combat stigmas and misconceptions surrounding transportation jobs (Kermanshachi & Sadatsafavi, 2018).

3.0 THE STATE OF PRACTICE

Current workforce development practices have historically been characterized by fragmented, disjointed efforts between a large number of stakeholders. The industry has no consensus on the approach to—or methods used for—workforce development. This is partly due to disparate definitions of diversity, as discussed earlier. Despite such fragmentation, the literature discusses a set of challenges and priorities that need to be thoroughly considered when promoting diversity and inclusion within the transportation workforce. There is a consensus that transportation agencies need to actively and intentionally seek ways to transform institutional beliefs, practices, and policies that have long discouraged underrepresented groups and the younger generation from joining the workforce. The role that community outreach plays should be reemphasized as one of the critical steps to present transportation career opportunities to the next generation.

3.1 Notable Practices

There are fragmented efforts across the country to promote diversity and inclusion within the transportation workforce. Still, there are some notable efforts that can be more widely adopted. For example, some agencies, such as the American Public Transportation Association (APTA), have started initiatives with the prospect of making a tangible impact on the future transit workforce (APTA, 2021). The APTA recent initiative provides an opportunity for agencies to sign the APTA's racial equity commitment form and participate in a two-year pilot program. The Federal Highway Administration (FHWA) also directs many programs and initiatives intended to address diversity issues in the transportation industry, including programs that assist and attract a diverse future transportation workforce (FHWA, 2022). In addition to governmental and non-governmental agencies and organizations, higher education centers play a pivotal role in leading research programs or initiatives that help transportation agencies achieve equity goals. Universities and colleges have a leading role in connecting the public and private sectors on developing innovative initiatives that eventually advance workforce development and promote diversity and inclusion within the future workforce. As an example, the Southeast Transportation Workforce Center in Memphis, Tennessee, is a collaborative effort to create a Transportation-STEM Academy for high school students in Memphis and prepare students to immediately enter the transportation workforce after graduation (O'Brien & Braham, 2021; see also Steiner et al., 2021).

3.1.1 Transit Agencies

Transit Agencies across the country have taken significant steps towards promoting diversity and uplifting equity as the central piece of their organizations' culture (Mohebbi et al., 2022). Two notable practices in the transit industry are initiatives at the Santa Clara Valley Transportation Authority (VTA) and the Metropolitan Atlanta Rapid Transit Authority (MARTA). Both agencies identified and prioritized diversity issues in their workforces and collaborated with their communities to understand diversity issues pertinent to those they serve.

VTA is a pioneer in seeking equitable approaches for their daily practices. Three main areas of *business diversity*, *workforce diversity*, and *equitable decision-making* have been central in VTA efforts. One of the model programs VTA is known for is the *Joint Workforce Investment Program* with the Amalgamated Transit Union (ATU) Local 265 and Mission College in Santa Clara. The program is for operators, mechanics, line workers, and track workers, with two main components focusing on leadership and mentorship. The leadership program encourages entry-level workers (mainly minorities) to advance in their careers into high-paying management positions (Hendler Ross, Nash, & Richards, 2021).

Regarding MARTA, diversity, equity, and inclusion (DE&I) are essential parts of its everyday work. In fact, MARTA follows a model that incorporates diversity, equity, and inclusion into every aspect of its daily practices through 1) workforce engagement; 2) Supplier

Diversity program; 3) targeted outreach; 4) customer-centric service; and 5) social equality and responsibility. Workforce engagement is critical to retaining valuable assets and maximizing job satisfaction. Examples of encouraging programs that provide employee engagement opportunities at MARTA include *cultural awareness programs* (connecting with specific communities), *cross-cultural mentoring programs*, and *featuring employees' accomplishments* (Hendler Ross, Nash, & Richards, 2021).

While these regional efforts are commendable, they cannot be viewed as a replacement for the state—and federal—initiatives.

3.1.2 State DOTs

Several state DOTs across the country also have programs to address diversity and inclusion in the workforce issues. Three notable practices from DOTs include the Kansas DOT's program for attracting women to the workforce, and the North Carolina DOT (NCDOT) and Michigan DOT program for racial/ethnic minorities.

- Kansas DOT offers several innovative programs, including *Summer Training Institute*, *Senior Shadowing Day*, and *MAGIC camp* (Mentoring A Girl In Construction). For instance, MAGIC Camp has the goal of exposing young females to hands-on activities, non-traditional female careers, motivational speakers, and fieldwork (MAASTO, 2016).
- The NCDOT focuses on the state's historically Black colleges and universities (HBCUs) and minority-serving institutions (MSIs) to contribute to the long-term success of these institutions. The NCDOT's office of HBCU Outreach has a core role in providing *summer and year-round internships*, implementing *scholarship programs*, and leading a *fellows program*. The Office of HBCU Outreach determined these priorities by considering factors such as trends in the transportation industry, economic mobility in North Carolina, and the status of science, technology, engineering, and mathematics (STEM) education in the state (Febey, 2021).
- Michigan DOT (MDOT) offers on-the-job training and mentoring to HBCU engineering and construction management undergraduates through the *Transportation Diversity and Recruitment Program (TDRP)*, a 10-week summer internship program. The TDRP was established in 2013 in collaboration with the University of Michigan and the Atlanta University Center Consortium, a group of HBCUs located in Atlanta, Georgia. The program assists MDOT in recruiting the best fit for full-time positions and ensuring that the workforce reflects the existing diversity within the state population. As MDOT does not have enough positions for every intern, TDRP is extended to include private firms collaborating with MDOT for different projects. Such a partnership contributes to the private sector's success in achieving its diversity goals (TDRP, 2021; see also Febey, 2021).

These initiatives have led to gains in hiring and retaining a more diverse employee pool and have increased community awareness about the available opportunities and efforts in the transportation industry.

In addition to training opportunities to ensure diversity within the future workforce, there are DOTs with specific practices regarding human resources management. In a recent study focusing on the Region 6 DOTs, several agencies reported providing *specific incentives* (ARDOT, ODOT, TXDOT, DOTD), *schedule flexibility* (DOTD, TXDOT, ODOT, ODOT), *performance-based evaluation* (ODOT, DOTD), *education funding* (DOTD, TXDOT, ODOT, NMDOT), and *succession planning* (DOTD, TXDOT) to increase retention and encourage underrepresented groups to join the transportation workforce. For instance, Oklahoma and Texas DOTs offered longevity bonuses and raises. Other incentives include Louisiana and Oklahoma DOTs' recognition program or employee appreciation days, which recognize high-quality work (Metro, et al., 2019). These efforts boost employee morale and increases retention rates.

In recent years, in an effort to meet communities' needs and address equity and diversity issues within the transportation workforce, several DOTs across the nation created new executive positions for diversity, equity, and inclusion officers (AASHTO, 2021). Through those positions, DOTs host specific recruitment efforts emphasizing schools and community activities to raise awareness about their initiatives, programs, and job opportunities. For example, the Kansas DOT's diversity recruiter and employment officer collaborates with high schools, community colleges, and technical/vocational schools across the state to promote KSDOT's efforts, including the Multicultural Youth Explorer Program (MAASTO, 2016; see also KSDOT, 2014).

3.1.3 Existing efforts on diversifying the workforce in the Southeast

Diversity in the transportation workforce is a multidimensional subject that requires both collaboration among the public and private sectors as well as adjustments based on current scholarly research findings regarding workforce development. The lack of diversity within the workforce is recognized as a weakness, as it contributes to the failure to meet the needs and address the concerns of a diverse group of transportation users and non-users.

The STRIDE Project C4 titled "*Transportation Workforce Development for State DOTs to Address Congestion for the Southeast Region*", provided several case examples of notable recruitment practices that intend to promote diversity within the transportation workforce and introduced a few strategies that have been used across the country to address diversity issues: 1) changing the public perception about the transportation industry; 2) increasing career advancement opportunities and education, specifically focusing on women and minorities; and 3) collaborating with communities for marketing and advertisements (Steiner, et al., 2021). To understand the existing efforts and initiatives, the research team prepared a list of DOTs, MPOs, and major cities in the Southeast region. MPO sampling was based on geographical location (urban/suburban, rural) and the size of agencies. During fall and winter 2021, the identified stakeholders were contacted via email to determine if they have any DE&I effort or

initiative that emphasizes diversity in the workforce. While preparing the official list, the persons directly associated with workforce development of the agencies, civil rights, or the personnel of HR (Human Resource) were prioritized. The following table provides more information about the findings from stakeholders' outreach regarding the existence of DE&I efforts and updated related plans (Table 2).

In practice, Metroplan Orlando in Florida (MPOAC) has a task force for workforce development and conducted an equity audit, and Hillsborough Transportation Planning Organization, a Florida TPO (Transportation Planning Organization), is taking primary steps to diversify its workforce. In South Carolina, both the Central Midland Council of Governments and the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) are following the Workforce Innovation Opportunity Act (WIOA) guidance (U.S. Department of Labor, 2021). According to the response of one of the Central Midland Council of Governments officials, equity and diversity inclusion are built into the work of the Midlands Workforce Development Board. However, the board does not currently have any specific task force or committee focusing on equity and diversity inclusion in workforce development. Looking at this sample, each agency is at a different point on their journey to reach equity goals, and many of them are using unique approaches. A list of Southeast stakeholders is provided in Appendix A and B.

Types of Agencies		Number of Agencies	Percentage with DE&I Initiative/Program/Advisory Group	Percentage with Updated Affirmative Action Plan (2019-)
Cities		7	42%	86%
MPOs		23	21.7%	60.8%
	Florida	5	3	5
	Georgia	3	0	0
	North Carolina	4	2	3
	South Carolina	3	0	2
	Alabama	2	0	1
	Tennessee	4	0	2
	Mississippi	2	0	1
DOTs		7	28.5%	71.4%
	Florida		No	Yes
	Georgia		No	Yes
	North Carolina		Yes	Yes
	South Carolina		No	No
	Alabama		No	Yes
	Tennessee		Yes	Yes
	Mississippi		No	No

TABLE 2 SOUTHEAST STAKEHOLDERS' ENGAGEMENT FINDINGS (SOURCE: SELF-ELABORATION)

4.0 METHODOLOGY

In addition to a systematic review of literature on workforce diversification and state of practice and the development of a list of notable practices, the research team completed the following research activities:

- Designed a leadership workshop for transportation practitioners and policymakers
- Analyzed a survey study conducted during the leadership workshop and
- Summarized lessons learned from breakout room discussions

The leadership workshop was designed to: 1) provide key insights on the barriers and challenges transportation agencies encounter in diversifying the workforce; 2) inform leaders in transportation workforce management about underrepresented groups' needs and concerns based on findings from practice review and literature; 3) emphasize the significance of interdisciplinary skills in equitably addressing communities' transportation needs and concerns; and 4) develop a list of effective and meaningful strategies to be considered to diversify and support diverse groups of employees within public agencies (Mohebbi et al., 2022). The workshop was advertised through STRIDE and UFTI newsletters and 64 transportation professionals across the country were registered.

4.1 EDI Leadership Workshop

There are specific needs and practices regarding workforce development in different stages of recruitment, retention, and promotion. Training is central to both promotion and retention practices; creating an inclusive workforce management system requires an equitable approach to training as a key component. To move toward a future-ready workforce as mobility technologies emerge, transportation agencies need to be intentional in providing opportunities for technical training along with human skills training (such as communication and management). In addition, interdisciplinary skills within the transportation industry enable practitioners and decision-makers to comprehensively understand communities' needs and create a robust process of engagement. Ultimately, that process encourages interactions among different stakeholders coming from diverse lived experiences, helping achieve industry goals.

Considering the existing gaps in *dysfunctional policies and practices, lack of a future-ready workforce, the public's image of transportation agencies*, and *interdisciplinary skills requirements,* the leadership workshop was focused on the latter. The necessity of diversity in skillsets and its contribution to the future success of the transportation industry was the central subject of the workshop and the survey. The survey questions were drafted in late December 2021 and finalized in early February 2022. The survey instrument, recruitment notice, and IRB protocol were submitted to the University of Florida IRB and the study received exempt approval in March 2022.

The EDI Leadership Workshop included three sections:

- The introduction presentation, *What Does an Equitable Work Environment Look Like?*
- Survey study
- Three Interactive Exercises: *Interdisciplinary Skill Requirements*
    - Breakout Room I: What do interdisciplinary skills mean for your agency?
    - Breakout Room II: Effective strategies to ensure interdisciplinary skills for future workforce
    - Breakout Room III: Development of a two-year plan for your agency

The introductory presentation covered the following subject areas: 1) basic definition of diversity and inclusion in the workforce; 2) strategies to move diversity and inclusion goals forward; 3) notable practices across the industry; and 4) major takeaways from the literature and practice review (see Appendix). In total, 61 individuals from across the country registered for the workshop, and two individuals registered from Europe and the Middle East (Table 3).

US Regions					Sector				
Northwest	**Midwest**	**Northeast**	**Southeast**	**Southwest**	**Academia**	**DOTs & FHWA**	**Cities & MPOs**	**Private Sectors**	**Transit Agencies**
4%	4.5%	5.5%	60%	22%	22%	47%	17%	12.5%	1.5%

TABLE 3 PERCENTAGE OF THE WORKSHOP PARTICIPANTS CONSIDERING SECTORS AND LOCATIONS (SOURCE: SELF-ELABORATION)

4.1.1 Lessons Learned

The interactive exercises provided participants with an opportunity to examine the topics discussed in the first part of the workshop and share their experiences regarding introduced strategies and tools. Here are the summarized lessons learned during each breakout room discussion:

<u>Breakout Room I: Interdisciplinary skills definition</u>

- Presently, efforts around promoting interdisciplinary skills in the transportation workforce are centrally focused on technical skills. The transportation industry needs diversity in skills *not strictly in engineering or transportation-related subjects*, but also in skills such as communication, interpersonal relationships, administration, emergency management, law and enforcement, critical thinking, and conflict resolution.
- The industry encounters a wide range of barriers to recruiting while promoting interdisciplinary skills within its workforce. Those roadblocks include *salary constraints, lack of flexibility in hours and location, and heavy responsibilities compared to salary provided*.
- With very few applicants, the transportation industry cannot be exclusive about skills during the hiring process; therefore, the focus should shift to *training post-*

hiring training. In this regard, training management is key to preparing the workforce for future challenges as technology emerges.

- Public agencies should consider the *possibility to employ international applicants*, which opens the door to many college students and skilled immigrants.
- Salary is one of the roadblocks to hiring skillful practitioners in public agencies. *Salary based on competencies* can lead to a better retention outcome. Some agencies have regular (every one or two years) evaluation systems to help individuals seek higher salaries based on certifications and training, while working toward higher positions (such as moving from technician to engineer).
- To *improve retention and encourage individuals with higher skill levels* to continue their career path in a public agency, those agencies should take steps such as allowing flexible hours, providing training time, easing employees' active participation in professional organizations, and taking on additional responsibilities outside of the job description that would result in a salary increase.

<u>Breakout Room II: effective strategies to ensure interdisciplinary skills for future workforce</u>

- The *lack of diversity in the education system* contributes to the lack of diversity in workforce. A proposed solution to the problem is to *minimize attrition in education.*
- It is important to introduce the benefits of engineering and transportation jobs early by creating *student engagement opportunities* in the K-12 education systems, such as specific projects and internships.
- Educators should facilitate interested students to explore *vocational education* opportunities as opposed to traditional higher education opportunities.
- A need to diversify the workforce (focusing on increasing the numbers of women and minorities) will lead to organizations broadening the skills of their workforce. *Marketing externally and internally* can be valuable toward this goal. In addition to diversifying the workforce, providing continuous support to ensure that everyone reaches their full potential is essential for success. On-the-job training with programs that enhance technical and human skills should be made available to all employees.
- Recruitment of math and science education backgrounds and placement in leadership job tracks and using peer mentoring exchanges can improve performance. This strategy will provide *upward mobility* where both the workforce and the organization will benefit.
- With respect to outreach, transportation agencies and the industry should offer *K-12 outreach programs* where students are met in their current learning environment to do hands-on activities. Summer jobs and internships should also be offered. Similar strategies can be implemented with community colleges and universities. A good way to reach out to students is by utilizing social media and technology.

- *Non-monetary incentives* are also important, including offering paid time off for training and professional development.
- Employees value *flexible work schedules* and the *ability to telework*. These could change employees' perceptions and improve trust and job satisfaction.
- Providing an *inclusive work environment* where employees feel that they are valued, respected, and appreciated can boost performance and help with retention.

Breakout Room III: Development of a two-year plan for your agency

- As immediate steps for diversity planning, transportation agencies should search for *existing barriers and roadblocks* while establishing employee resource groups or clubs within the workplace.
- To ensure inclusion throughout the process of diversity planning, agencies should seek an *institutional shift toward becoming more responsive* and building diversity taskforces that include interested and prospective employees.
- *Unblocking communication* within agencies is a key step forward. Several agencies currently use online platforms, coffee hours, and other informal opportunities to maximize interactions among employees at different levels of decision-making while emphasizing the involvement of those coming from underrepresented communities and groups.
- Objectives are different for different agencies. It is essential to *set goals, develop a vision, and consider strategies and metrics* to achieve those goals in a very early stage of the planning process. Employees from all levels should be involved in this process.
- Every change, big or small, requires *resources*. Agencies should be mindful of the required resources and make these widely available to employees throughout the programming and planning process, including outsourcing efforts and offering management training.
- Developing a plan *with equity and inclusion in mind* is the key. Such an approach requires creating a responsible employee group to review and comment on the plan, providing all employees with a short version of the plan for their feedback, and inviting external reviewers from the transportation industry.
- Before any step for preparing a diversity plan targeting interdisciplinary skills, agencies should emphasize reevaluating what they have from hiring strategies in place to retention policies. Conducting a *self-assessment* to gather the required information is an essential phase of such a process.

4.1.2 Survey Findings

While the survey findings may not be directly generalized due to its limited number of participants, it nevertheless explains existing challenges that the industry faces in building a future-ready workforce and filling the interdisciplinary skills gap. Of the survey participants (14 individuals), the majority had a leading role in decision-making related to workforce

management in their agencies. Forty-three percent were general engineers or operation managers, and 37 percent were directors or managers of human resources at transportation agencies. The rest of the survey participants worked in the academic environment as faculty or graduate trainees. Regarding educational levels, more than 64 percent of survey participants hold a graduate degree, with them being mainly affiliated with DOTs and municipalities.

The survey participants reported that their agencies have taken the following steps to attract diverse groups of employees at different job levels:

- Invest in employees' training to assist them in career advancement
- Provide benefits that support work-family balance (such as non-monetary benefits)
- Connect with young people and prospective employees through school programs and social media

Creating a diversity-balanced hiring panel and *providing flexibility in work schedules and flexible work locations* were among the least-mentioned steps taken by participants' agencies.

The findings from the question: *does your employer have a strategy, or has it acted, to close any identified gender pay gap?* partially demonstrated the lack of transparency and communication gap between decision-makers and employees regarding gender pay gap. More than 66 percent of respondents chose "I am not aware of," while about 16 percent said there is no such strategy in their agency. On the other hand, from the few responses submitted for the question on existing barriers, *What are the main barriers your agency/organization face in diversifying the workforce?,* we learned that the following areas require specific investment and immediate attention:

- A lack of transparency around the existing roadblocks that public agencies are facing
- A decrease in the number of current and projected future applicant pools
- Wages that are lower than comparable roles in the private sector and a lack of communication around non-monetary incentives that are available at public agencies
- The necessity of community-based outreach to engage with organizations that represent underrepresented communities and groups.

The survey results are presented in the Appendix. An EDI framework was developed from the lessons learned in the survey and interactive workshop exercise. The framework will be described in the following section of the report.

5.0 EDI WORKFORCE MANAGEMENT FRAMEWORK

Based on the lessons learned from reviewing the literature and practice, and conducting the workshop and survey, it is clear that equitable transportation workforce development requires three key strategies, or, as the research team calls it, the *3 Ps of Equitable*

Transportation Workforce Development: 1) promoting employees' engagement in diversity planning; 2) prioritizing investments in areas lacking diversity; and 3) providing non-monetary incentives and benefits (Figure 2).

Promote Employees' Engagement in Diversity Planning: In diversity planning processes, emphasizing employees' specific needs and concerns is essential. To have an inclusive approach, the key step forward is to encourage employees' engagement throughout the entire process. For example, some employees may not have enough time or motivation due to their demanding jobs to engage in such a process. Therefore, considering specific time for their engagement in any activity related to diversity planning from internal meetings to fulfilling related assignments is critical. Identifying underrepresented employees and applicable communication tools can assist agencies in effectively and consistently inviting them to the decision-making table. This will help agencies understand the progress employees would like to see in the next five to ten years and enhance transparency throughout the process.

Prioritize Investments in Areas Lacking Diversity: Evaluation of the present conditions is a requirement for mindful diversity planning. Our review showed that the lack of diversity in the transportation workforce becomes even more pronounced in high-level decision-making positions, including executive- and senior-level jobs. The correlation between job seniority and levels of diversity hints at the importance of opportunities for career mobility within this sector. Answering the following questions will provide insightful perspectives throughout the planning phase and will result in equitable investments that lead to better retention outcomes: *What opportunities do our agencies provide for employees to excel in their work and move up?*; *Does our agency consider case-by-case accommodations for employees considering their specific needs and concerns?*; and *How can your agency's approach enhance employees' sense of attachment to their workplace and professional society*?

Provide non-monetary benefits/incentives: Our systematic review of practice and literature showed notable examples of how non-monetary incentives can also contribute to workforce diversification and attract talents to the industry. Furthermore, interactive exercises and the survey showed that promotion and retention are essential pieces of the equitable workforce development puzzle. Understanding each employee's needs, expectations, and future plans can lead to higher levels of engagement and retention. Underrepresented employees (such as caregivers, minorities, pregnant women, and older adults) are among the groups who may need specific accommodations in different instances. To create an equitable workforce environment, an agency must accept its shortcomings while moving towards an agency-wide structural shift. Such a shift can lead to a better understanding of different employee groups, consensus-building around non-monetary incentives (such as parental leave, leadership training, and dignity-infused engagement plans), and developing equitable retention policies that not only benefit underserved groups, but also create a welcoming environment for all employees, regardless of their seniorities, ages, abilities, sexualities, or lived experiences.

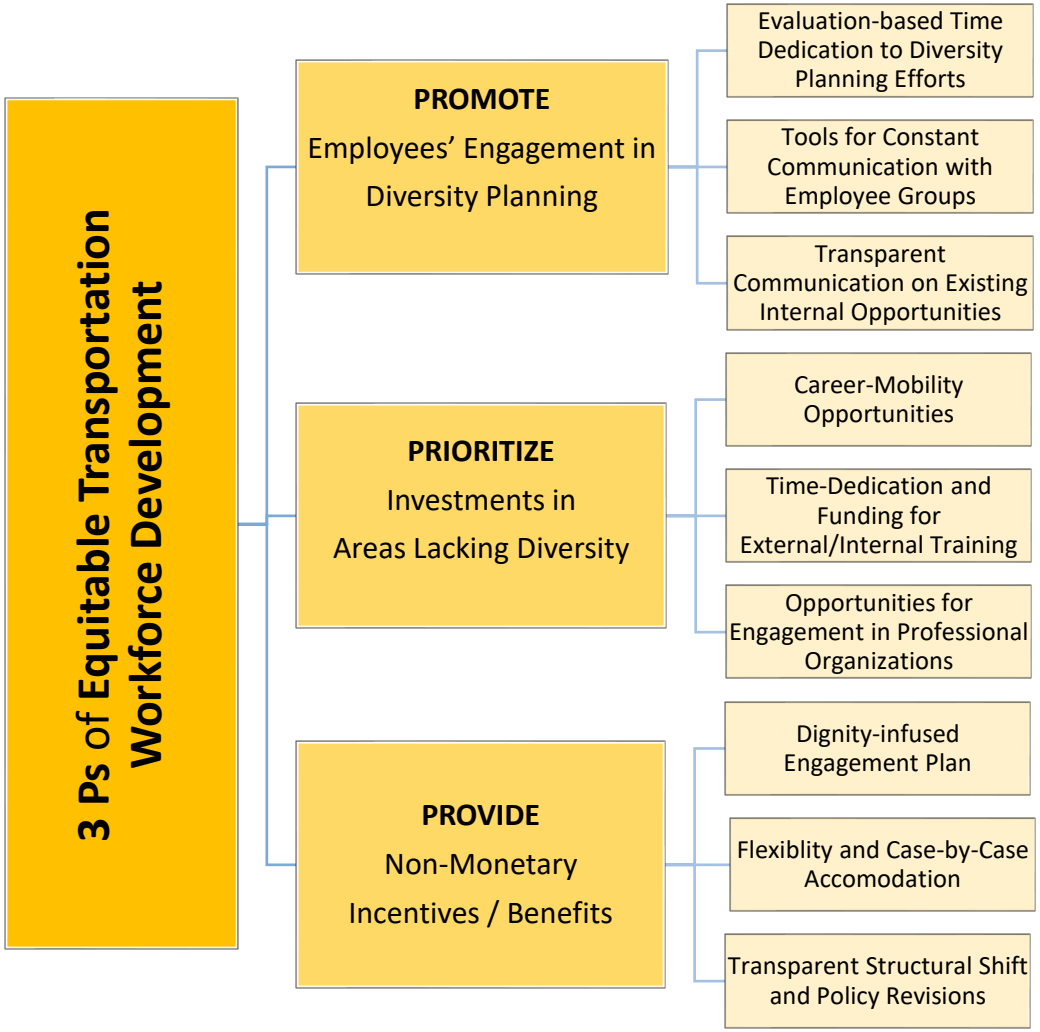

FIGURE 2 3 PS OF EQUITABLE TRANSPORTATION WORKFORCE DEVELOPMENT

6.0 KEY FINDINGS

As learned from the notable examples and literature reviews, there has been notable progress in the profession regarding diversity and inclusion issues; however, there still is a need for revisiting traditional workforce planning methods and ensuring these efforts exist across the country (Abel Lewis & Pedersen, 2021). Recruiting and retaining the workforce reflect different images in different contexts. A 2020 study on workforce resiliency in rural communities showed that most rural employees do not feel that DOTs are aware of their concerns or are addressing their needs. On the other hand, DOTs know that they face more recruiting barriers in rural regions than in urban areas. Thus, it becomes essential to understand the unique challenges in different environments and to create opportunities for long-term collaboration and inclusion with all communities that agencies serve (Metro, Bogus, & Harper, 2020).

In addition, the role of leadership has been highlighted in practice and literature. Many agencies seek transformation through new leadership or by defining new executive- or senior-level positions such as *diversity recruiter/employment officer* (MAASTO, 2016; see also AASHTO, 2021). However, implementing such top-down techniques are typically not enough to see true and lasting change. Here are some techniques and tools to diversify the workforce and promote career mobility for diverse groups of employees in transportation agencies. Examples include the following:

Apprenticeship Programs and Internships (actionable by STRIDE): Across the nation, training, mentoring, and apprenticeship programs provide low-income individuals, minorities, and women with technical knowledge and prepare them for employment in the transportation industry (O'Brien, Reeb, & Jaishankar, 2018). Such training opportunities offer paths that are more accessible than traditional college but require multi-agency and public-private partnerships.

Making Human Connection: Understanding employees' values, preferences, and obstacles is the key to successful leadership. Transportation agencies need to effectively communicate with their employees and provide constant feedback on daily operations, including compensation mechanisms and hiring processes. In addition, sharing an agency's diversity and inclusion goals with its employees is essential, as it provides a sense of transparency and ownership. Building a transparent system will help ensure accountability of all involved individuals and encourage their meaningful engagement in critical decision-making such as recruitment and promotion (National Academies of Sciences, Engineering, and Medicine, 2018). Therefore, increasing transparency and clarifying institutional priorities will assist agencies in building a diverse and resilient workforce with the ability to adapt in times of crisis, such as the Covid-19 pandemic and its aftermath.

Quantifying Total Compensation: As noted earlier, the private sector's ability to provide a competitive salary and benefits package attracts younger employees and adversely impacts

the public sector's workforce development plans. Considering existing competition between the public and private sectors and competition among different industries working in the transportation field, transportation agencies need to quantitatively communicate total compensations for potential employees. It is essential to make prospective employees aware of the valuable benefits and job security that come with DOT employment (Metro, Harper, & Bogus, 2021). While the public sector may not be able to offer the same benefits as the private sector, highlighting the unique opportunities can serve as a way to draw in younger generations.

Innovative Recruitment Methods: Transportation agencies need to explore practical and innovative recruitment systems that are based on: 1) partnership with education centers (such as colleges and high schools), community organizations (such as non-profit agencies and neighborhood centers), and other public agencies (such as cities and counties) (Ivey et. al, 2012); 2) comprehensive information package for prospective employees on non-monetary incentives as well as monetary compensation; and 3) inclusive outreach initiatives and programs that specifically target historically underrepresented groups in the transportation workforce (including women and minorities) (Bartlett, Collins, Hart-Mrema, & Valesano, 2021). As technology and workforce expectations progress over time, recruitment methods will need to be revisited and updated frequently to stay current.

Recovering Public View (actionable by STRIDE): Research shows that the public does not have a clear image of the types of opportunities that exist in the transportation industry. Transportation agencies need to utilize their resources to promote their projects and show how they impact communities' everyday lives. These agencies should use different platforms to communicate with distinct public groups. For example, agencies should increase their social media presence, along with other web-based tools, in order to reach younger generations (Nambisan et al., 2010). As the industry reaches—and hires—more young people, this will snowball and become easier to manage.

7.0 CONCLUSION

The transportation industry has historically been a male-dominated community that suffers from a lack of demographic diversity. While this is true at every level of the organization, it is even more pronounced in higher levels of decision-making and more prestigious positions. Not only does this negatively impact the workforce, it also harms the communities being served. In the last decade, there has been considerable progress towards promoting diversity and inclusion within the transportation workforce; however, we are still in the early stages of movement towards these equity goals and techniques and progress differ by agency.

To summarize our findings from both research and practice, it is important to note that type of service (transit vs. non-transit) and geographic location (urban vs. rural) critically impact an agency's capability to attract and retain diverse groups of individuals to their workforce.

Thus, strategies must take the entire context into consideration. In addition, the role the federal government plays in creating an equitable transportation system is critical, as some steps (such as ensuring equitable preparation for, and allocation of, jobs and other economic opportunities) cannot be completed without an overarching national effort. Federal leadership can create national momentum, coordinated efforts, and funding that elevate expectations for local and regional transportation agencies (Smith, Vogel, Cruce, Seidel, & Holsinger, 2010).

According to the findings of the review of literature and practices, the following tips should be adopted by transportation agencies to help fill the existing gaps regarding diversity and inclusion within the workforce:

- Invest in promotion and retention for underserved groups (such as caregivers, minorities, older employees, etc.) by providing non-monetary benefits and incentives (such as parental leave, leadership training, and dignity-infused engagement plan (Above the Fog Podcasts, 2019))
- Be active in creating awareness within the agency about the meaning and manifestations of inclusivity
- Emphasize that diversity is not the ultimate goal—it is only a step towards promoting inclusion and creating a work environment that reflects the communities that transportation agencies serve
- Actively and intentionally seek change and transformation in organizational culture, values, policies, and practices towards making inclusion a priority for everyone—including diversity in higher levels of decision-making
- Develop diversity policies and plans that support inclusion and promote employees' engagement, whether through an existing DE&I plan or in the development of such a plan
- Prioritize investments in areas that are the least diverse (such as senior-level jobs)
- Be intentional in promoting transparency within transportation agencies and, more specifically, in the workforce planning effort in order to ensure alignment throughout the organization and accountability for agency leadership in regard to DE&I in their practices and decision-making processes
- Create a collaborative environment, where every employee has a clear image of how to excel in their career and what other areas they can contribute to.

The transportation industry must recognize the intrinsic role that privilege and history play when considering current efforts to promote diversity and inclusion. As was mentioned earlier, simply diversifying the workforce is not enough. In many cases, transportation agencies qualify as demographically diverse by numbers and categories defined by EEO; however, looking at different levels of jobs and employees' engagement, pronounced disparities are easily detectable in higher levels of decision-making and in certain job classifications which need to be recognized and addressed.

To create an inclusive workplace, the transportation industry should support the voices and roles of professionals from historically underrepresented communities at every level of the workforce. In addition, leaders in the transportation industry must be intentional in advocating for the development of future generations of leaders from these communities (PHEAL Steering Committee, 2020). One suggested strategy is partnering with community organizations—including learning institutions—to reach potential employees earlier in the pre-professional education pipeline. Further, apprenticeship and internship programs offer a way to reach historically underrepresented groups, including minorities and lower-income populations. Overall, transportation agencies in the Southeast are in the early stages of initiating their ED&I efforts that ultimately contribute to their equity goals. The lessons learned from this project provides Southeast agencies with a framework to initiate or revisit their efforts regarding diversifying the workforce and supporting, retaining, and promoting different groups within the workforce. In addition, transportation agencies in the Southeast can learn from neighboring states as there are also opportunities to visit and learn. For instance, Georgia DOT may be willing to choose an innovative practice from Florida DOT rather than Washington DOT. DOTs in the southeast need to have a regional approach to workforce development and build a strong relationship with neighboring states in order to collectively solve existing workforce issues. Ultimately, these practices will lead to a workforce that truly represents the communities it serves, leading to a better transportation experience for everyone.

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9.0 APPENDICES

9.1 List of Stakeholders

		Number of Participants
Job Titles	Human Resources Manager / Assistant Manager / Director	23
	EEO Officer	3
	Civil Right Officer / Director / Title IV	2
	Executive Director / Planning Director / Secretary	15
	Principal Planner / Transportation Planner	2
Types of Agency	DOTs	7
	MPOs & TPOs	6
	Cities	19
	Transit Agencies	11
	Council of Government	4

9.2 EDI Leadership Workshop Presentation

Herbert Wertheim College of Engineering
Transportation Institute

EDI Leadership Webinar:
Techniques to *Diversify* & *Support Transportation Workforce*

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Transportation Institute
UNIVERSITY of FLORIDA

What Does Equitable Work Environment Look Like?!
(by Dr. Mehri "Mehrsa" Mohebbi)

Interactive Exercises:
Interdisciplinary Skill Requirements
(by Dr. Virginia Sisiopiku, Dr. Dimitra Michalaka, & Dr. Mehri "Mehrsa" Mohebbi)

AGENDA

Introduction, scope, and structure
Diversity and Inclusion in Transportation Workforce
Moving Towards Diversity & Inclusion Goals
3 Notable Practices
Lessons learned/Takeaway messages
Introduction to Survey + Interactive Exercises

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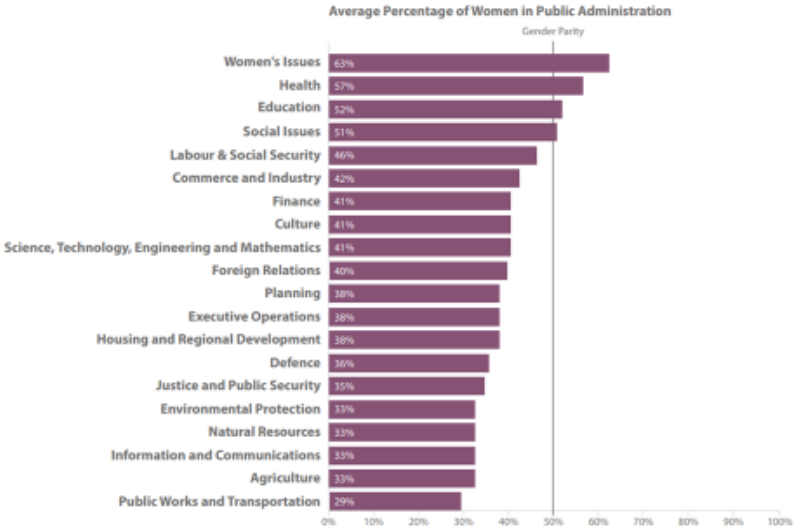
Existing Diversity within Workforce



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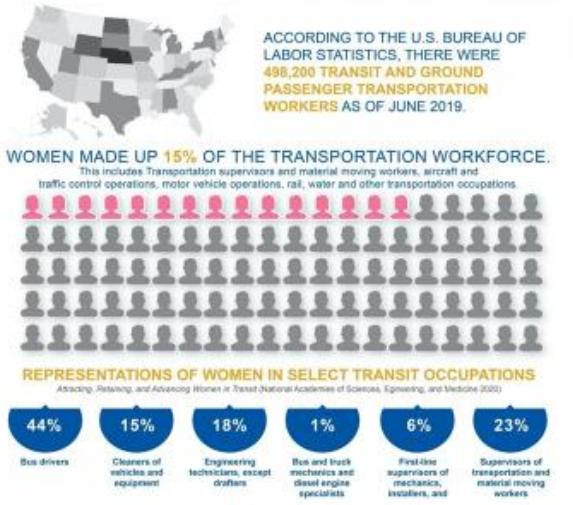
Existing Diversity within Transportation Workforce



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Existing Diversity within Transportation Workforce

Representation of women and minorities in the transportation workforce based on occupation

Occupation	Total Jobs	Projected Growth 2016-2026 ** (%)	Women * (%)	Black or African American * (%)	Hispanic or Latino * (%)
Civil Engineers	461,000	11	14.4	6.4	10.7
Construction and Building Inspectors	89,000	10	10.2	9.8	11.2
Construction Managers	1,081,000	11	7.4	4.9	12.4
Computer Systems Analysts	554,000	9	38.9	9.7	7.2
Electrical and Electronics Engineers	284,000	7	12.3	3.5	9.0
Engineering Managers	129,000	6	8.7	8.3	6.2
Engineering Technicians	375,000	...	20.0	8.9	10.3
Information Security Analysts	105,000	28	20.2	15.6	4.6

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Definitions
• Race & Ethnicity
• Age
• Gender/sexual orientation
• Citizenship status
• Education
• Income background
• Skills (technical & interpersonal)
• Beliefs/values
• Upbringing/family
• National origin
• Criminal background
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Moving Towards
Diversity & Inclusion Goals

Healing through Leadership

STRENGTHEN DIVERSITY & INCUSION

REFORM.

Redesign educational, training, and certification requirements for the health, planning, and design disciplines to reflect the tenets of anti-racism.

STRENGTHEN DIVERSITY & INCUSION

DIVERSIFY & SUPPORT.

Elevate the roles and voices of professionals and leaders from communities overburdened with health disparities.

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Inclusive Community Outreach

ACKNOWLEDGE THAT THE COMMUNITY IS IN CHARGE

AUTHENTIC ENGAGEMENT.

Ensure that members from communities overburdened with health disparities are actively included throughout the planning process.

ACKNOWLEDGE THAT THE COMMUNITY IS IN CHARGE

COMMUNITY EXPERTISE.

Build on the strengths of communities and honor local knowledge.

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3 Ps of ETWD

(Equitable Transportation Workforce Development)

Promote Employees' Engagement in Diversity Planning

Prioritize Investment in Areas Lacking Diversity

Provide Non-Monetary Incentives / Benefits

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Transit Agencies

VTA's Diversity, Equity, Inclusion Effort addresses:

- Business Diversity
- Workforce Diversity
- Equitable Decision-making

MARTA's model emphasizes:

- Workforce Engagement
  - *Cultural awareness programs* (connecting with specific communities)
  - *Cross-cultural mentoring programs*
  - *Featuring employees' accomplishments*
- Supplier Diversity Program
- Targeted Outreach
- Customer-centric Service
- Social Equality and Responsibility

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DOTs

Kansas DOT offers several innovative programs:

- Summer Training Institute
- Senior Shadowing Program
- MAGIC Camp (Mentoring a Girl in Construction)

NCDOT's program focuses on HBCUs & MSIs

- Office of HCSU Outreach
  - Summer/year-round internships
  - Scholarships and Fellows Program

MDOT's Transportation Diversity and Recruitment Program (TDRP):

MDOT + Umich + Atlanta University Center Consortium

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Existing Efforts on Diversifying the Workforce in the Southeast

	Types of Agencies	Number of Agencies	Percentage with DE&I Initiative/Program/Advisory Group	Percentage with Updated Affirmative Action Plan (2019-)
	Cities	7	42%	86%
MPOs		23	21.7%	60.8%
	Florida	5	3	5
	Georgia	3	0	0
	North Carolina	4	2	3
	South Carolina	3	0	2
	Alabama	2	0	1
	Tennessee	4	0	2
	Mississippi	2	0	1
DOTs		7	28.5%	71.4%
	Florida		No	Yes
	Georgia		No	Yes
	North Carolina		Yes	Yes
	South Carolina		No	No
	Alabama		No	Yes
	Tennessee		Yes	Yes
	Mississippi		No	No

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Key Findings:

* **Invest** in promotion and retention for underserved groups
* **Be active** in creating awareness within the agency
* **Emphasize** that diversity is not the ultimate goal
* **Actively and intentionally seek** change and transformation in organizational culture, values, policies, and practices
* **Develop** diversity policies and plans that support inclusion and promote employees' engagement
* **Be intentional** in promoting transparency within transportation agencies and, more specifically, in the workforce planning effort
* Create a collaborative environment

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Major Takeaways:

Apprenticeship Programs and Internships
Making Human Connection
Quantifying Total Compensation
Innovative Recruitment Methods
Recovering Public View

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Breakout Room 1:
What do Interdisciplinary Skills mean for your agency?
Breakout Room 2:
Effective Strategies to ensure Interdisciplinary Skills for Future Workforce
Breakout Room 3:
Start Developing a two-year action plan for your agency
Interdisciplinary Skill Requirements
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9.3 Example of Workshop Breakout Rooms Discussion

Effective Strategies to Ensure Interdisciplinary Skills for Future Transportation Workforce

Introduction

- Supporting talent with **training and development** opportunities and **incentives** is crucial to equip the workforce with the necessary skills for success in 2025 and beyond.

Group discussion focus on:

- Training and development
- Incentives and personal rewards

Training and development

1. **What skills** can lead to improve performance and job advancement and what are effective strategies to acquire them?

2. **What types of Training Opportunities** has your organization used effectively and what else would you like to see in the future?

3. Examples of **existing Outreach Techniques and strategies** to enhance them.

Personal Rewards and Incentives

1. What **strategies can motivate employees grow professionally** and **stay engaged** in team work?

2. **What strategies can improve** employee **retention and promotion**?

3. How important are **non-monetary incentives**? **Which types work best?**

9.4 Workshop Survey Instrument

UF UNIVERSITY of FLORIDA

Dear Sir/Madam,

Thank you for your participation in the *UFTI EDI Leadership Webinar*. We would like to invite you to participate in a short survey focusing on the status of equity, diversity, and inclusion in the transportation workforce across the Southeast. The survey will take approximately 10 minutes to complete and your participation is voluntary. The goal of this survey is to understand and document best practices in diversifying the workforce for the transportation industry in southeast states.

Your answers to the survey will be used with identifiable responses being removed. There are no risks or discomforts anticipated and all of your answers will remain confidential. There are no direct benefits of participation for you. No compensation will be awarded for participation in the survey. If you have any questions regarding your rights as a research participant, please contact **Dr. Mehri "Mehrsa" Mohebbi** mmohebbi@ufl.edu (Principle investigator) or the **UF IRB-02 Office** at 352-392-0433. Please consider that by clicking on the following button, you give your consent to participate in the survey.

Thank you very much for sharing your valuable insights.

* Mehri "Mehrsa" Mohebbi, Ph.D. *(Transportation Equity (TE) Program Director, University of Florida)*
* Virginia P. Sisiopiku, Ph.D., FITE *(Professor and TREND Lab Director, University of Alabama at Birmingham)*
* Dimitra Michalaka, Ph.D. *(Associate Professor, The Citadel)*

Next

Job Title:

Educational Level:

- High School Diploma
- Associate Degree
- Bachelors
- Master
- Ph.D.
- Other (Please specify)

Type of Organization:

- DOT
- MPO
- City
- County
- Public Transportation
- Other Public Agency
- Private Sector
- Non-Profit (Please specify)

From your perspective, please rate your agency's level of success in addressing *EDI (Equity, Diversity, & Inclusion) in the transportation workforce development.*

- Excellent
- Above Average
- Average
- Below Average
- Poor

What steps has your agency/organization taken to attract a diverse group of employees in different levels of jobs? (choose more than one if applicable)

- Created a diversity-balanced hiring panel
- Invests in employees' training to assist them to advance in their career
- Provides flexibility in work schedule and/or flexible work locations
- Provides benefits that support work-family balance (e.g. paid family leave, daycare services, telework options)
- Connects with young people and prospective employees through school programs and social media

---

Does your employer have a fair remuneration policy or equivalent?
Note: *A fair remuneration policy refers to a policy guaranteeing a living wage to all employees. It does not refer to board/executive remuneration policies or minimum wage compliance.*

- Yes
- No
- I am not aware of

Does your employer have a strategy, or has it acted, to close any **gender pay gap** identified?

- Yes
- No
- I am not aware of

Do you feel that your compensation is fair, relative to similar roles at your agency/organization?

- Yes, it is fair
- No, it is higher
- No, it is lower than it should be

Does your organization/agency have a **long-term plan** for diversifying the workforce?

Does your agency/organization have any **EDI committee, initiative, or task force**? If yes, please provide us with more details such as when it started, who is leading the effort, its vision, steps taken, website, and etc.

Which aspect of diversity (such as gender, race, age, or skills diversity) is a top priority for your agency/organization?

From your perspective, which *institutional policies and practices* need to be transformed to promote diversity and enhance inclusion in the transportation workforce?

What role does *professional training* play in promoting diversity within the transportation workforce?

Please provide your feedback regarding this workshop.

I found the workshop interesting and informative.

- ○ Strongly agree
- ○ Agree
- ○ Neither agree nor disagree
- ○ Disagree
- ○ Strongly disagree

I will use the information presented in this webinar in my future work.

- ○ Yes, definitely
- ○ No
- ○ Maybe

I will encourage other practitioners, engineers, and policymakers to participate in this webinar.

- ○ Yes, definitely
- ○ No
- ○ Maybe

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Thank you for sharing your valuable insights. If interested, please contact *Dr. Mehri "Mehrsa" Mohebbi* at *mmohebbi@ufl.edu* regarding the results of the research.

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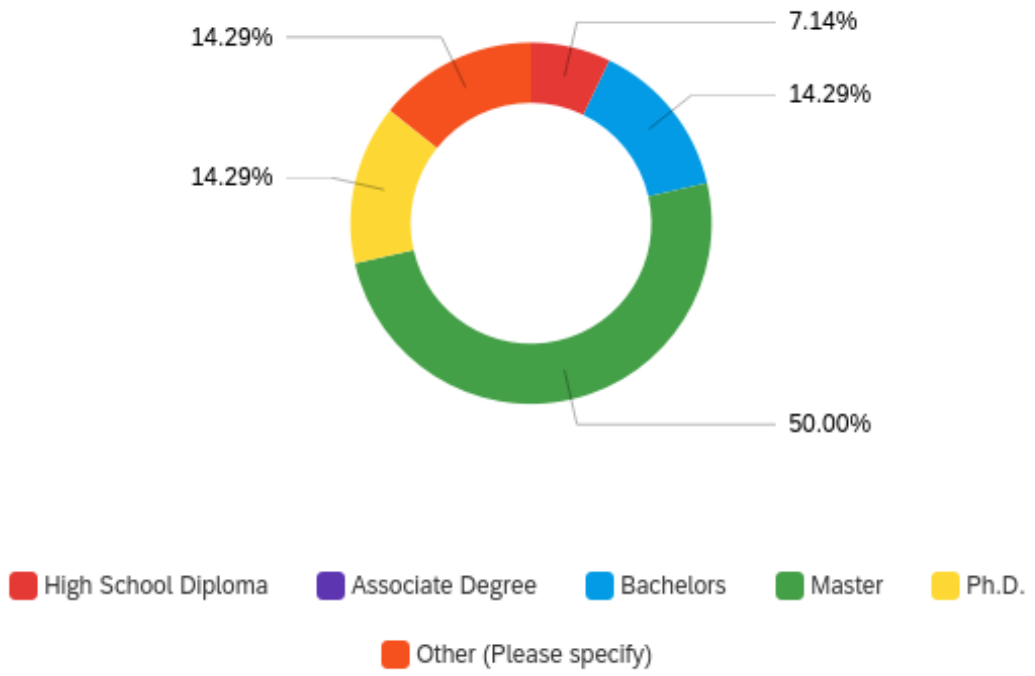
9.5 Workshop Survey Results

Diversity and Inclusion in Transportation Workforce Development

Q1 - Job Title:

Job Title:
Employee Relations Manager
HR Assistant Director
Director
Associate Professor
Part-time Student
Traffic Operations Manager
general engineer
Transportation Specialist
Manager
Graduate Trainee
CHRO
HR Manager
Traffic Engineer
Operations Manager

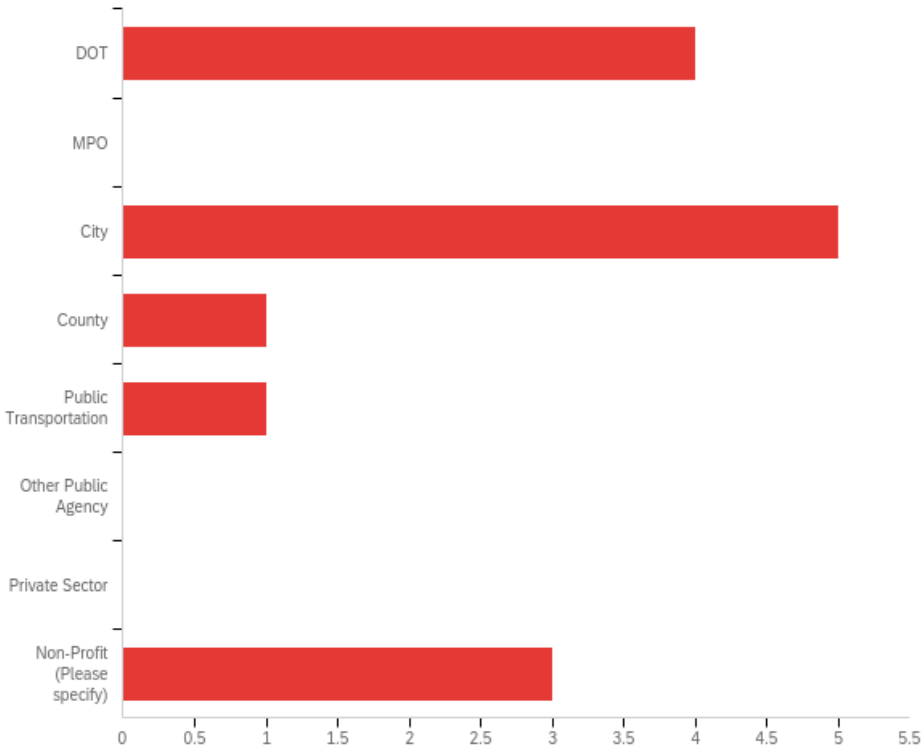
Q2 - Educational Level:



#	Answer	%	Count
1	High School Diploma	7.14%	1
2	Associate Degree	0.00%	0
3	Bachelors	14.29%	2
4	Master	50.00%	7
5	Ph.D.	14.29%	2
6	Other (Please specify)	14.29%	2
	Total	100%	14

Other (Please specify) - Text
JD
JD

Q3 - Type of Organization:

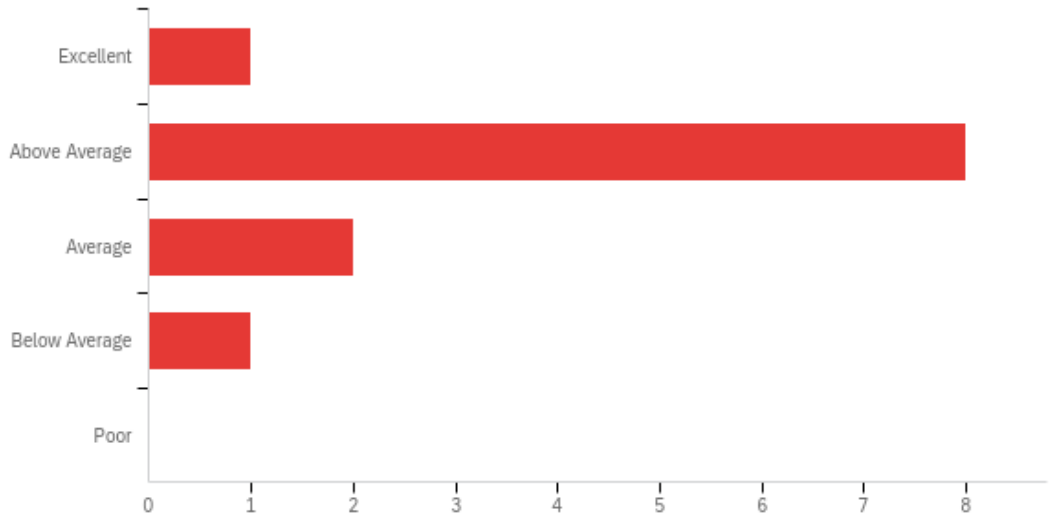


#	Answer	%	Count
1	DOT	28.57%	4
2	MPO	0.00%	0
3	City	35.71%	5
4	County	7.14%	1
5	Public Transportation	7.14%	1
6	Other Public Agency	0.00%	0
7	Private Sector	0.00%	0
8	Non-Profit (Please specify)	21.43%	3
	Total	100%	14

Non-Profit (Please specify) - Text

High Ed, Advocacy, University

Q4 - From your e, ' addressing EDI (Equity, Diversity, & Inclusion) in the transportation workforce development.



#	Answer	%	Count
1	Excellent	8.33%	1
2	Above Average	66.67%	8
3	Average	16.67%	2
4	Below Average	8.33%	1
5	Poor	0.00%	0
	Total	100%	12

Q5 - What steps has your agency/organization taken to attract a diverse group of employees in different levels of jobs? (choose more than one if applicable)

#	Answer	%	Count
1	Created a diversity-balanced hiring panel	10.00%	1
2	Invests in employees' training to assist them to advance in their career	30.00%	3
3	Provides flexibility in work schedule and/or flexible work locations	10.00%	1
4	Provides benefits that support work-family balance (e.g. paid family leave, daycare services, telework options)	30.00%	3
5	Connects with young people and prospective employees through school programs and social media	20.00%	2
	Total	100%	10

Created a diversity-balanced hiring panel (10%)

Invests in employees' training to assist them to advance in their career (30%)

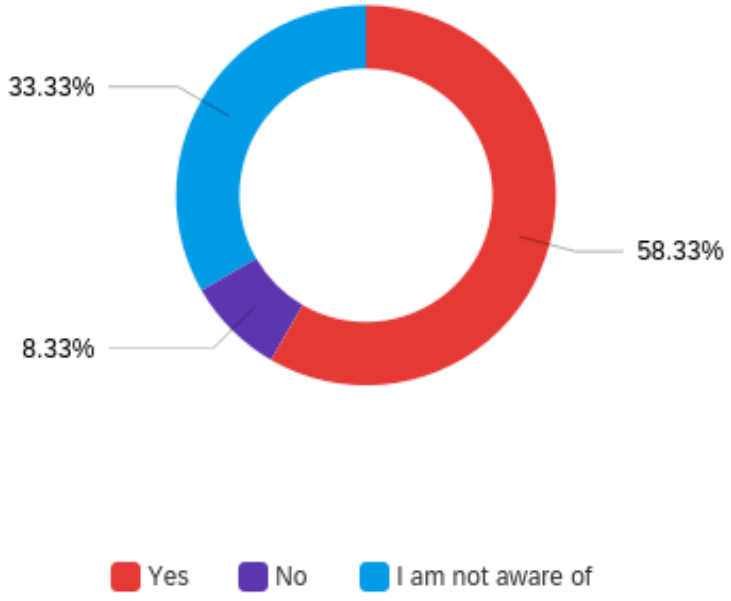
Provides flexibility in work schedule and/or flexible work locations (10%)

Provides benefits that support work-family balance (e.g. paid family leave, daycare services, telework options) (30%)

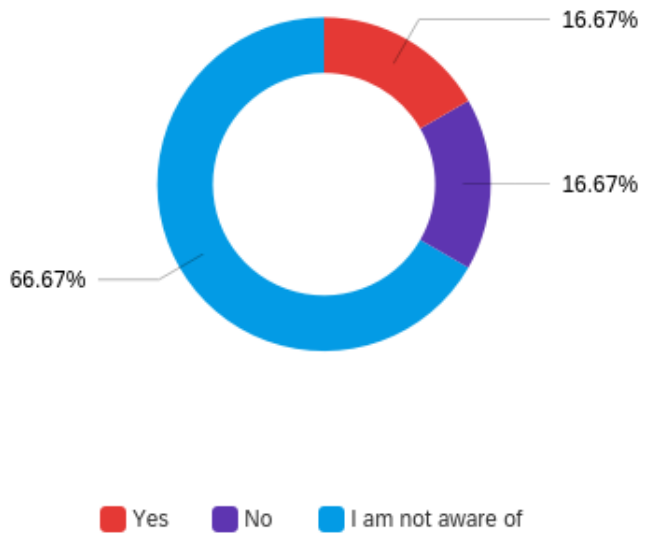
Connects with young people and prospective employees through school programs and social media (20%)

Q6 - Does your employer have a fair remuneration policy or equivalent? Note: A fair remuneration policy refers to a policy guaranteeing a living wage to all employees. It does not refer to board/executive remuneration policies or minimum wage compliance.

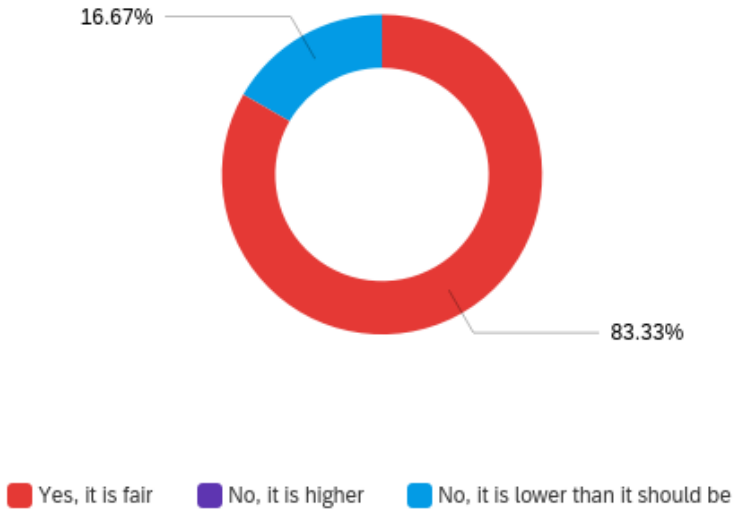
#	Answer	%	Count
1	Yes	58.33%	7
2	No	8.33%	1
3	I am not aware of	33.33%	4
	Total	100%	12



Q7 - Does your employer have a strategy, or has it acted, to close any gender pay gap identified?



Q8 - Do you feel that your compensation is fair, relative to similar roles at your agency/organization?



Q9 - From your perspective, what are the main barriers your agency/organization face in diversifying the workforce?

From your perspective, what are the main barriers your agency/organization face in diversifying the workforce?
Efforts in reaching out to organizations that represent minority groups
Time - it will take time to adjust percentages. Lack of diversity in people going into the industry and studying in university. The applicant pool and future applicant pool numbers do not appear to be moving in the right direction.
Distrust in people, rather than people's race or ethnicity.
Signal technicians are always on call. 24/7 and also they need to work with electricity, heights and heavy equipment
I am not aware of anything like this.
Lower wages compared to the private sector; difficult to recruit for professional and technical positions

Q10 - Does your organization/agency have a long-term plan for diversifying the workforce?

Does your organization/agency have a long-term plan for diversifying the workforce?
no
We have a DE&I team and they are working on the long-term plan. We have several on-going efforts.
Yes, we intend to share more about what we do, welcoming trustworthy like-minded individuals onboard to join us.
Don’t know
I believe so but I am not aware of the details.
Yes at the org level

Q11 - Does your agency/organization have any EDI committee, initiative, or task force? If yes, please provide us with more details such as when it started, who is leading the effort, its vision, steps taken, website, and etc.

Yes. A Diversity committee advises the President
Yes. A Section within our HR Division that has an agency-wide reach. We have Employee Resource Groups stood up that help engage different groups and create sense of community. These groups also help provide feedback and inform future policy.
No but we put a heavy emphasis on the issue.
Not sure

Q12 - Which aspect of diversity (such as gender, race, age, or skills diversity) is a top priority for your agency/organization?

Gender
Race - we have too many Chinese as compared to other minority races, myself included (a Chinese).
Not sure.
All except skills

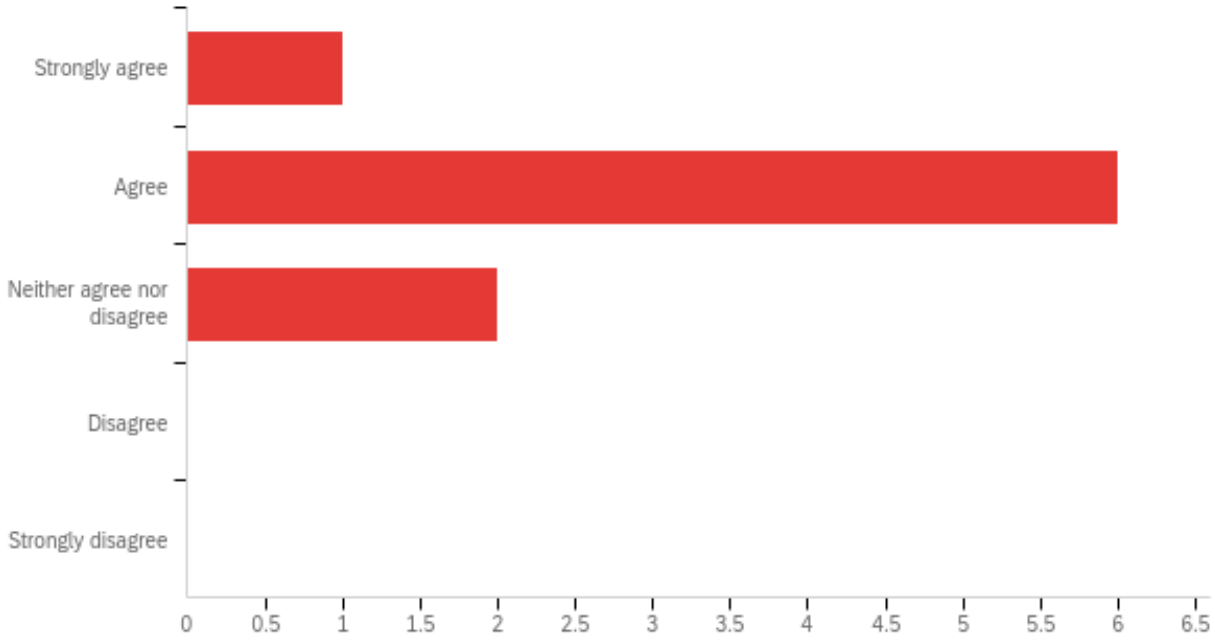
Q13 - From your perspective, which institutional policies and practices need to be transformed to promote diversity and enhance inclusion in the transportation workforce?

Change in culture
Structural racism needs to be acknowledged and slowly brought down.
Not sure

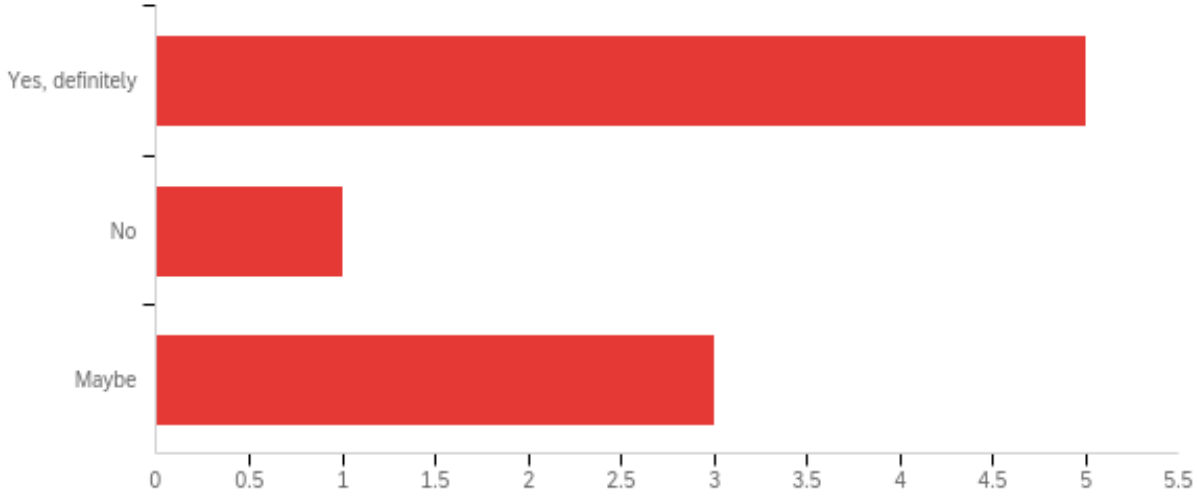
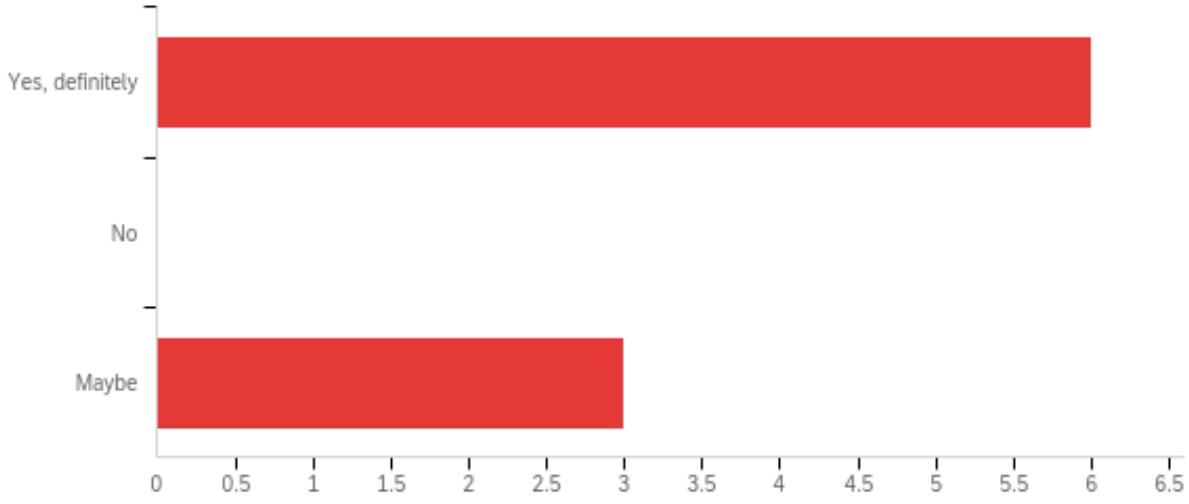
Q14 - What role does professional training play in promoting diversity within the transportation workforce?

It is a requirement that feels like a check box, not real effort
I think we need to integrate DE&I fundamentals into many levels of training.
Not much.

Q15 - I found the workshop interesting and informative.



Q16 - I will use the information presented in this webinar in my future work.



Q17 - I will encourage other practitioners, engineers, and policymakers to participate in this webinar.