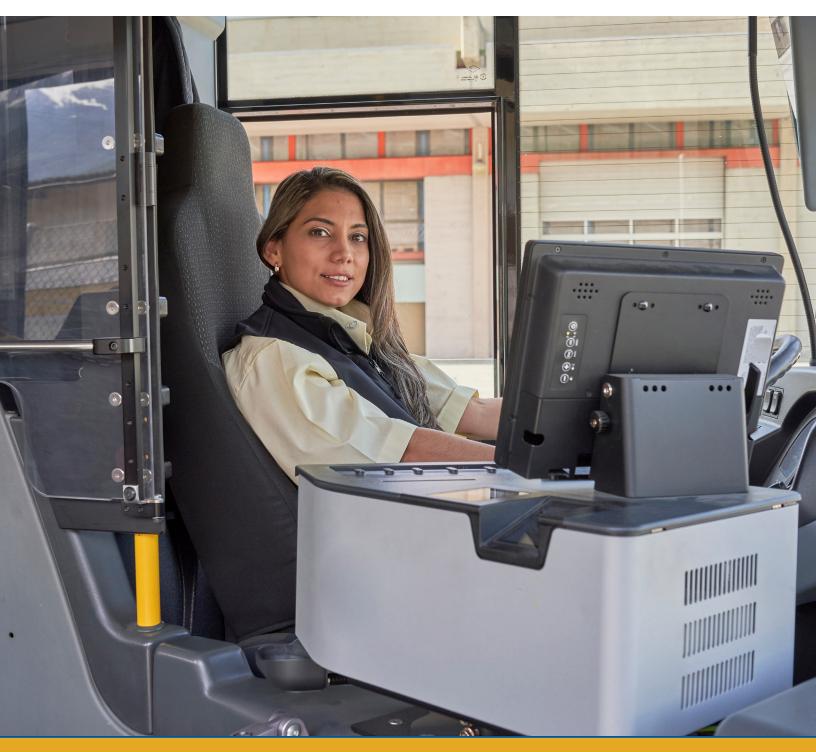




Pathway to Promote Diversity within Public Transit Workforce

Mehri Mohebbi, Ph.D. Sumita Raghuram, Ph.D. Ahoura Zandiatashbar, Ph.D.



Mineta Transportation Institute

Founded in 1991, the Mineta Transportation Institute (MTI), an organized research and training unit in partnership with the Lucas College and Graduate School of Business at San José State University (SJSU), increases mobility for all by improving the safety, efficiency, accessibility, and convenience of our nation's transportation system. Through research, education, workforce development, and technology transfer, we help create a connected world. MTI leads the Mineta Consortium for Transportation Mobility (MCTM) funded by the U.S. Department of Transportation and the California State University Transportation Consortium (CSUTC) funded by the State of California through Senate Bill 1. MTI focuses on three primary responsibilities:

Research

MTI conducts multi-disciplinary research focused on surface transportation that contributes to effective decision making. Research areas include: active transportation; planning and policy; security and counterterrorism; sustainable transportation and land use; transit and passenger rail; transportation engineering; transportation finance; transportation technology; and workforce and labor. MTI research publications undergo expert peer review to ensure the quality of the research.

Education and Workforce

To ensure the efficient movement of people and products, we must prepare a new cohort of transportation professionals who are ready to lead a more diverse, inclusive, and equitable transportation industry. To help achieve this, MTI sponsors a suite of workforce development and education opportunities. The Institute supports educational programs offered by the

Lucas Graduate School of Business: a Master of Science in Transportation Management, plus graduate certificates that include High-Speed and Intercity Rail Management and Transportation Security Management. These flexible programs offer live online classes so that working transportation professionals can pursue an advanced degree regardless of their location.

Information and Technology Transfer

MTI utilizes a diverse array of dissemination methods and media to ensure research results reach those responsible for managing change. These methods include publication, seminars, workshops, websites, social media, webinars, and other technology transfer mechanisms. Additionally, MTI promotes the availability of completed research to professional organizations and works to integrate the research findings into the graduate education program. MTI's extensive collection of transportation-related publications is integrated into San José State University's world-class Martin Luther King, Jr. Library.

Disclaimer

The contents of this report reflect the views of the authors, who are responsible for the facts and accuracy of the information presented herein. This document is disseminated in the interest of information exchange. MTI's research is funded, partially or entirely, by grants from the California Department of Transportation, the California State University Office of the Chancellor, the U.S. Department of Homeland Security, and the U.S. Department of Transportation, who assume no liability for the contents or use thereof. This report does not constitute a standard specification, design standard, or regulation.

Pathway to Promote Diversity within Public Transit Workforce

Mehri Mohebbi, Ph.D.

Sumita Raghuram, Ph.D.

Ahoura Zandiatashbar, Ph.D.

August 2022

A publication of the Mineta Transportation Institute Created by Congress in 1991

College of Business San José State University San José, CA 95192-0219

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No. 22-36	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle Pathway to Promote Diversity within Public Transit Workforce		5. Report Date August 2022
		6. Performing Organization Code
7. Authors Mehri Mohebbi: 0000-0001-6033-3526 Sumita Raghuram: 0000-0002-7093-0807 Ahoura Zandiatashbar: 0000-0001-8198-4619		8. Performing Organization Report CA-MTI-2135
9. Performing Organization Name and Address Mineta Transportation Institute		10. Work Unit No.
College of Business San José State University San José, CA 95192-0219		11. Contract or Grant No. 69A3551747127
12. Sponsoring Agency Name and Address U.S. Department of Transportation Office of the Assistant Secretary for		13. Type of Report and Period Covered Final Report
Research and Technology University Transportation Centers Program 1200 New Jersey Avenue, SE Washington, DC 20590		14. Sponsoring Agency Code
		*

15. Supplemental Notes

16. Abstract

There are many aspects of the transportation industry that can be focused on, but the lack of resiliency is one of the most urgent. Enhancing resiliency and creative problem-solving is essential to the industry's growth and survival. But it cannot happen without building a more diverse workforce. Women still make up a small fraction of transportation workers, and African American and Hispanic employees are even less represented. These disparities are increasingly pronounced in many senior positions, particularly in STEM fields. Meanwhile, the public transportation industry is experiencing a severe and worsening workforce shortage and many agencies have reported substantial difficulty recruiting, retaining, and developing skilled workers. Considering the transit industry's existing diversity and inclusion toolkits and guidelines, this project emphasizes lessons from in-depth interviews with leaders from 18 transit agencies across the country. The interviews illuminate the existing challenges and creative solutions around transit workforce diversity and inclusion. From the interviews, we discovered: 1) the critical factors that impact the current level of diversity and career mobility within transit agencies; 2) how diversity efforts help explore resources and provide opportunities for effective and robust employee engagement; and 3) the significance of evaluation systems in creating a more transparent recruitment process that initiates structural shifts, resulting in better recruiting. Moving towards inclusive and equitable workforce environments is a healing process that starts with understanding these gaps. We call this effort Healing the Workforce through Diversification.

17. Key Words	18. Distribution Statement		
Social Inclusion, Gender Equity,	No restrictions. This document is available to the public through The Nat		n The National
Meaningful Engagement, Societal	Technical Information Service, Springfield, VA 22161.		
Imbalance, Effective Communication,			
Career Mobility, Interagency Partnership			
19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	33	22. I HCC
Chelassified	Chelassifica	33	

Form DOT F 1700.7 (8-72)

Copyright © 2022

by Mineta Transportation Institute

All rights reserved.

DOI: 10.31979/mti.2022.2135

Mineta Transportation Institute College of Business San José State University San José, CA 95192-0219

> Tel: (408) 924-7560 Fax: (408) 924-7565

Email: mineta-institute@sjsu.edu

transweb.sjsu.edu/research/2135

ACKNOWLEDGMENTS

The authors extend their appreciation to the U.S. Department of Transportation's University Transportation Centers Program and the staff of the Mineta Transportation Institute staff, including Executive Director Karen Philbrick, Ph.D.; Deputy Executive Director Hilary Nixon, Ph.D., for funding and contributing to this study. Any opinions, findings, and conclusions or recommendations in this material are those of the authors and do not necessarily reflect the views of the U.S. Department of Transportation.

CONTENTS

Acknowledgments	.vi
List of Figuresv	/iii
List of Tables	.ix
1. Demographic Diversity within the Transit Industry	. 1
2. Data Collection and Engagement Methods	. 4
3. Diversity Policies and Practices	. 6
Existing Diversity and Career Mobility	. 6
Diversity Taskforces/Initiatives	. 8
Diversity Plans and Evaluation Systems	13
4. Healing the Workforce through Diversification	17
References	19
About the Authors	22

LIST OF FIGURES

Figure 1. Size of Agencies for Interviewed Transit Entities	4
Figure 2. Types of Service Provided by Interviewed Transit Agencies	5
Figure 3. The Least Diverse Job Categories within Interviewed Transit Agencies	7
Figure 4. Word cloud for Discussion on Career Mobility and Onboarding Training	8
Figure 5: The Main Themes Discovered from Each Discussion Point During the Interviews	. 15

LIST OF TABLES

Table 1. The Main Themes Discovered from Each Discussion Point During Interviews..... 10

1. Demographic Diversity within the Transit Industry

Generally, demographic diversity has been operationalized in limited terms, focusing on race and gender. Today, the usage of demographic diversity has been expanded to include many more variables, such as ethnicity, age, religion, national origin, disability, personality, sexual preferences, and gender identity, among others (Kermanshachi & Sadatsafavi, 2018). Diversity in the workforce is required by federal laws and regulations in the United States, and transit agencies receiving federal funds are required to ensure non-discrimination, equity, and inclusion of different groups across all aspects of their operations, including employment (Keen, 2020).

There are numerous federal laws that relate to discrimination in the workforce, including *Title VII* of the Civil Rights Act of 1964, which states: "No person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance" (Castillo, et al., 2021) and *The U.S. Equal Employment Opportunity Commission*, which published a series of laws prohibiting discrimination against a job applicant or an employee on the basis of race, color, religion, sex, pregnancy, gender identity, sexual orientation, national origin, age (40 or older), disability, or genetic information.

Although these laws have been in place for nearly 60 years, the growth of diversity in the U.S. workforce has been slow. Still, the general image of the U.S. workforce accurately reflects the slow but steady growth in the number of workers as well as the diversity of those workers (Bartlett et al., 2021). This growth in demographic diversity can also be seen in the statistics: women's representation in the workforce (47%) is nearly equal to that of men (53%), and the number of women in the workforce has increased by 12% since 2000 (U.S. Bureau of Labor Statistics, 2017). Racial and ethnic diversity is also increasing; it has been predicted that, by 2055, no single ethnicity will have a majority (Lopez et al., 2015). However, these changes are not consistent across all sectors.

Within the transportation workforce, women still make up a small fraction of workers. African American and Hispanic workers are even less represented than women in many senior-position transportation jobs, particularly those in science, technology, engineering, and mathematics (STEM) fields. With these disparities in mind, a diverse workforce must be recruited into and retained in the transportation industry to ensure there are enough workers for its future operations (Ivey et al., 2019). These efforts must start now because the U.S. workforce is experiencing a generational shift as the "baby boomer" generation (born from 1946 to 1964) retires (Bartlett et al., 2021).

To succeed during this generational shift and beyond, the transportation industry must focus on maintaining a *diverse* workforce since continuing down the current path of a homogenous workforce will result in a shrinking number of workers. More than 65% of job seekers indicate that workplace diversity is a critical factor in their decision-making process around accepting a job (Ivey

et al., 2019). This desire is borne out in a study conducted by the U.S. Department of Commerce, which documented increased employee retention within organizations that had higher levels of diversity (Trong Tuan et al., 2019; see also Gore, 2000; Hunt et al., 2018). This same study noted that public agencies also saw the added benefit of diversity in the workforce, as it resulted in better alignment of agency service delivery with community needs. More recent studies have shown that organizations with more diverse workforces enjoy improved decision-making, efficiency, innovation, and profitability compared to similar organizations with less-diverse workforces (Jayne & Dipboye, 2004). Until recently, the baby boomer generation was the largest cohort within the transportation workforce (Metro et al., 2021). According to the U.S Departments of Education, Transportation, and Labor (2015), more than 50% of transportation industry employees were older than 45 in 2014. In some rail transit agencies, close to 70% of skilled technical workers have reached retirement age (O'Brien et al., 2018). Nearly 50% of the current transportation workforce is expected to retire in the next 10 years, a rate that is double that of the overall U.S. workforce. With the retirement of older workers, "millennials" (born between 1981 and 1996) are now the largest cohort within the transportation workforce (Metro et al., 2021; see also Steiner, et. al., 2021; Dimock, 2019; Fry, 2018).

The public transportation industry is in the midst of a severe and worsening workforce shortage in which many agencies (and the industry as a whole) have reported substantial difficulty recruiting, retaining, and developing skilled workers (Bartlett et al., 2021). Not only will this result in a generational shift across the entire workforce, it could also leave gaps in experience—and staffing. One way to help fill these gaps is to hire and retain skilled, diverse workers. The need for a more diverse workforce is understood throughout the industry, but achieving this goal has proven more difficult (Young, et al., 2020). Further, many agencies are left to their own devices to determine the best path forward, resulting in a wide variety of approaches. To better appreciate these solutions, we reviewed the literature. Understanding transit workforce resiliency, exploring potential causes of the workforce shortage, identifying existing strategies to address issues related to recruitment and retention, and emphasizing the value of collaborative efforts to address the lack of diversity within the workforce have all been central foci of numerous workforce development studies. The following recommendations were extensively discussed in the reviewed literature:

- Establish and promote career mobility through mentorship opportunities
- Explore an achievable rewards and incentives system, such as monetary bonuses
- Align employee expectations with actual, daily responsibilities through the use of multiple communication strategies
- Invest in enhancing organizational culture
- Develop local outreach programs, including career fairs, to inform interested parties about opportunities with agencies at both the county and city levels

The American Public Transportation Association (APTA) recently published an online executive resource, the *Transit Workforce Readiness Guide* (APTA Workforce Development & Educational Services, 2021). The guide was created to assist transportation organizations looking to attract high school students from underserved communities into transit career opportunities. It can also be used to develop workforce readiness programs and build a more diverse pool of potential employees in order to sustain and diversify the transportation industry. The guide explores how to *identify needs and opportunities, collaborate with the communities* that transit agencies serve, and *develop and implement* workforce readiness programs or initiatives. Considering the existing toolkits and guidelines related to diversity and inclusion in the transit workforce, the research team sampled 18 transit agencies across the country and conducted in-depth interviews with leaders in the human resources departments. The interviews were conducted to understand the existing challenges and creative solutions related to workforce diversity and inclusion for the transit industry. The following section provides details on the recruitment processes and research instruments. The findings of the interview study will be presented in the last section of the report.

2. Data Collection and Engagement Methods

This project's aim was to: 1) gather information on existing diversity within the transit workforce; 2) document notable practices across the industry; and 3) explore the challenges and barriers to reaching the desired level of workforce diversity that agencies encounter. The interview study was based on a national sampling and the interviewees presented 18 states across the U.S. We used purposive sampling based on a set of preselected criteria relevant to the research questions: geographical locations, types of services, and size of agencies (Figure 1). The research team included agencies from underrepresented regions in transportation research in the sample (including Rocky Mountain and Plains). We obtained approval from the Institutional Review Board (IRB) of the University of Florida and San Jose State University prior to interview recruitment. Each participant was provided in advance with information about the project, types of questions, and their rights as a participant. Informed consent was obtained verbally, at the beginning of the interview, or via email before conducting any research activity involving individuals from transit agencies. We had one-time interviews with each agency, that were conducted via Zoom.

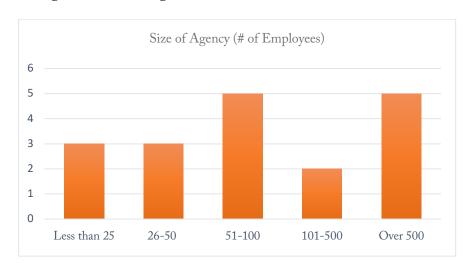


Figure 1. Size of Agencies for Interviewed Transit Entities

Recruiting enough participants is a critical step in any qualitative research project, as it helps ensure the findings can be extrapolated to a wider audience. Although APTA contacted member transit agencies to introduce the project, the research team encountered the same level of difficulty in recruiting APTA and non-APTA members for the interview study. Potential interview participants were contacted using the recruitment email from September 14, 2021 to December 10, 2021. The total number of potential interview participants contacted was 125. The number of participants that were scheduled for interviews was 20, 16% of the total number contacted. Three attempts were made to ensure that the invited agencies received the invitation letters. We were able to conduct interviews with 18 agencies, with one or two people per agency, depending on the size of the agency. Considering the financial challenges transit agencies faced

during the pandemic, and the resulting lack of human resources, it was foreseeable that outreach would be challenging.

In addition to external events impacting the feasibility of research (such as the limited interest we received from our outreach), scheduling was also a challenge. In several instances, interviews were rescheduled three times due to participants' time constraints. The interview contained 17 questions, including 11 open-ended questions. The questions were divided into two main categories: general information (existing diversity and demographic data) and diversity practices and policies. The Principal Investigator and a research assistant were present during most of the interviews. Supplementary notes were taken by the research assistant. Of the interviewees, 61% were women; from those, 45% were in leadership positions at their agency (such as an executive director). The interviews were video-recorded via Zoom, transcribed verbatim, and analyzed using NVivo software to identify key themes. The following graph shows the types of services provided by interviewed agencies (Figure 2). All interviewed agencies provided paratransit services, and less than 20% had bike share, ferry, and subway as their routine services. In addition to paratransit services, fixed-route buses, commuter buses, and microtransit were provided by more than 75% of interviewed transit agencies.

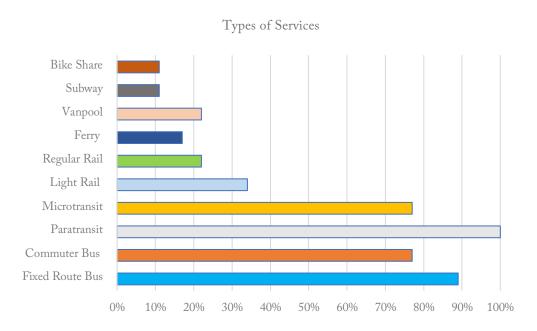


Figure 2. Types of Service Provided by Interviewed Transit Agencies

3. Diversity Policies and Practices

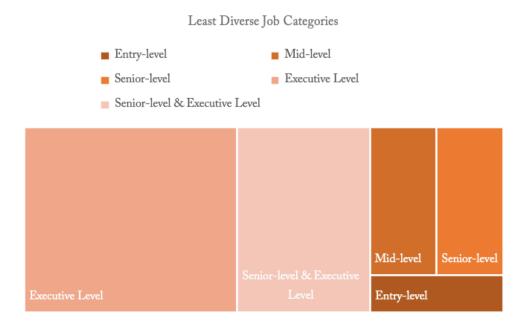
The interview included 6 multiple choice general questions and 11 open-ended questions on diversity policies and plans. The interview questions were designed to understand: 1) the existing level of diversity within the workforce across job levels; 2) barriers transit agencies face to achieve a desirable level of diversity and promote inclusion within their agencies; 3) notable practices; and 4) transit agencies' long- and short-term plans to achieve diversity, equity, and inclusion goals.

Existing Diversity and Career Mobility

Multiple studies have investigated specific aspects of demographic diversity (such as age and gender) that exist in segments of the transit industry. However, there is a research gap regarding a broad study of demographic diversity across job levels, from the drivers to the executives. In our literature review, we found a few examples of transit agencies across the country that have emphasized the importance of achieving demographic diversity in order for executive and senior-level employees to effectively communicate with the populations they serve, as well as to ease career mobility for underrepresented groups of employees within their agencies. Utah Transit Authority's (UTA's) leadership staffing is an example of such changes within a transit agency (MASS TRANSIT, 2021). UTA hired their first female executive director in 2019, and their six-member executive leadership team now includes four women, including a woman of color. The agency's three-member board also includes a female trustee.

Across the interviews, we discovered that a notable amount of transit agencies have successfully performed extensive work in the community to change the public's perception of transit job opportunities. These methods included expanding their recruitment techniques and actively participating in community events to discuss existing opportunities within transit agencies for community members. For our research team, it was also significant to understand the existing diversity within the transit workforce at different levels of seniority. The following figure shows the least diverse job categories within interviewed agencies: executive- and senior-level jobs. For some agencies, both levels suffered a lack of demographic diversity concurrently.

Figure 3. The Least Diverse Job Categories within Interviewed Transit Agencies



While the top-level jobs tend to be the least diverse, this is often an indicator of problems at lower levels of seniority—including the failure to train replacements or offer professional development opportunities. Types of training opportunities and also transparency of the internal promotion system were central discussion points related to easing career mobility and promoting diversity in leadership and management positions (Noland et al., 2021). The following figure shows the word cloud created from discussions on training and career mobility (Figure 4). The five most frequently used words were onboarding, orientation, benefits, safety, and prevention. The research team completed a context analysis for these words and learned that most agencies used training opportunities to provide general information about benefits, job responsibilities, and ethical training on subjects such as sexual harassment.

Out of the 18 agencies, 5 provided safety training, which included both job and workplace safety. Only one agency, with less than 25 employees, provided diversity and inclusion training. Another three agencies had optional training opportunities for existing employees to improve their soft skills, such as communication and management. There were also significant gaps in hard skills, or opportunities for job advancement, across every single studied agency. Some interviewed agencies had management positions that focused on diversity and inclusion; however, diversity and inclusion was not a subject considered for either new employee or career development trainings.

Figure 4. Word cloud for Discussion on Career Mobility and Onboarding Training



Diversity Taskforces/Initiatives

In the last decade, there has been a significant shift in the transportation industry's approach to equity, diversity, and inclusion. Many agencies began to revisit their approach to transportation decision-making and to evaluate their commitment to equity and inclusion through diversity's lens (Noland et. al., 2021). Diversity in the workforce has been a central focus for many agencies; however, it is a long-term commitment, and results will only be truly tangible years from now.

To understand where interviewed transit agencies are regarding their diversity-related activities, we asked five questions in order to:

- 1) identify their strategies to diversify and support diverse groups of individuals within their workforce;
- 2) explore what resources are lacking that need to be available to achieve diversity goals;
- 3) understand where the agencies are in regard to forming/initiating Equity, Diversity, & Inclusion (ED&I) committees, initiatives, or task forces;
- 4) investigate whether they have any policy or regulation in place that assists in retaining underrepresented employees.

The following table presents the main themes discovered from each discussion point, including direct quotes from the interviews (Table 1) (Figure 5). In the *Subject* column of the table, the interview questions related to each topic area are listed, and in the *Main Themes* column, exact quotes from interview participants were added to help understand the context for each theme. The majority of transit agencies (65%) did not have an ED&I committee, task force, or initiative, and

the rest of the agencies initiated their ED&I efforts using different frameworks that are summarized in the following table.

Table 1. The Main Themes Discovered from Each Discussion Point During Interviews

Subjects	3		Main Themes
Strategies to Diversify and Support	Is there any self-evaluation system in place to evaluate your agency/organization's commitment to promoting diversity within workforce?	What steps has your agency taken to attract a diverse group of employees in different job	 Communication & Outreach Developing internal diversity committees Launching employee resource groups Working with apprenticeship programs and trade schools Participating in community-led cultural events and job fairs Prioritization of Training Dedicating specific time for optional training opportunities (specifically for folks in operations, as their schedule is generally very busy) Hiring Practices Overcoming unions' hiring limitations Creating diversity-infused hiring panels Opening senior positions focused on training and development management
Existing ED&I Efforts	Does your agency/organization have any EDI committee, initiative, or task force?		 As a part of the leadership team (included in plans or a dedicated position) As a part of fair employment practices office ED&I leadership council ED&I employees committee (it was called awesome committee in one agency)
Required Resources to Diversify Workforce and Support	What changes might be made to better diversify the workforce in your agency/organization?	What resources are not currently available that ought to be or need to be?	- Data Availability " some of that pipeline issue starts with the resources of tapping into existing programs like I was saying about apprenticeships or trade schools where we can build that strong network and build that pipeline there. The other part, that I think is a resources data. We really struggle with data being able to get accurate and easily accessible demographic data; it tends to be kind of hidden in multiple systems so it's hard to sometimes get that information and see it in a snapshot and when you're ready to see it sometimes it takes time to pull that information together. And so, I think, from a resource perspective, being able to have a stronger system to be able to track that data would be helpful."

Subjects	Main Themes
Required Resources to Diversify Workforce and Support What changes might be made to better diversify the workforce in your agency/organization? What resources are not currently available that ought to be or need to be?	- Societal Imbalance "I think that primarily it does come down to training and continuing education. I think that recognizing the societal imbalance in terms of resources and accumulated wealth between people of different backgrounds, I think it necessarily carries that." - Social Connections & Community Engagement "You know people who know the Community can serve it better than I can, if I know culturally language communicating. As we become more diverse, of course, having folks that represented community would be a huge bonus and all and you know that just you know, based on ethnicity or gender, but sexuality also that's something that's my representative that I would have thought here." "[so we started hiring incarcerated individuals],working with our economic development, county supervisors, jail diversion, VOC rehab, community services, and so we all are having a meeting, our very first meeting in a few weeks. And this is what we're going to talk about, what are we missing to get people to us because they are the people that are working directly with people that need employment or need services and so that's where we're going to develop a committee and just kind of talk about this and how can we help each other with this stuff. - Human Resources "So I think there are resources available, what I think we struggle with is having the staff to actually do some of the things that we need to do, because we are a fairly small agency and we're quite busy with daily operations so that's where we're been looking at what can we do to I mean everybody needs to take a part in it for sure, but there are some specific things that absolutely have to be done, and getting some of these things done, especially with training and recruitment and some of that type of stuff so we're just trying to figure out who's the best person to put that into their job." - Funding Availability " we're going to need to make general accommodations to improve the work environment and meet the needs or we're not going to staff any

Subjects	Main Themes
Retention Policies for Underrepresented Groups (Such as pregnant women, caregivers, & etc.) Is there any policy or regulation in place that assists in retaining under-represented groups such as older employees, pregnant women, or minorities?	" we had an individual that came in, who was sight impaired to work in our call center and give directions for the region to sit, and people are like that's not possible I'm like, of course, it's possible there are technologies that a short-sighted view [can use], well, we use that equipment, and we were able to set it up. It's more of just a mentality we can't do that and I'm like wait a minute let's figure out how we can do this and that individual was very successful at the call center." "I will give you one case; we're about two and a half months removed from Hurricane which has devastated us down here. Those employees, who could come back to work, came back to work, and then eventually we got everybody back. But still, they were dealing with their homes, it was dealing with trying to get repairs or dealing with insurance adjusters, the claim, and a whole plethora of trying to get back to a normal life. So, in that alone, we must somehow let the human side come out and our supervisors work with our employees I know the Government put out there. I think it was 80 hours and gave you some money for that. In case if you need more than 80 hours, then we put some criteria in place so that you can still get paid past those 80 hours." —Case by Case Accommodation " within certain positions, it's harder to do as you can imagine, for e.g., bus operators and stuff I can't have a bus operator, leaving early easily but hopefully we can try and work with them as best as we can. At my position, we have people who have kids, and elderly parents that they take care of, so they need to leave early, or they need to come in late Nowadays, a lot of people are working from home." "For mom's coming back to the workforce, we have lactation programs, we have lactation rooms in all our buildings available for them too. We also give them also additional breaks. We provide work flexibility like instead of working five days a week, they can only work, four days, and they can do that for a whole year,

Subjects	Main Themes
	"We do have a paid parental leave policy but unfortunately, it's only available to our administrative employees and not for bargaining unit employees."

Diversity Plans and Evaluation Systems

To determine how the transit agencies in this study were progressing towards their diversity and inclusion goals, a comprehensive measurement of diversity efforts was required. However, because diversity plans and inclusion practices are still being developed and certain skills are still lacking, particularly at leadership and management levels, we had to adjust our measurements to consider progression towards their goals, rather than simply their achievement. There are notable examples of developing efforts to diversify the workforce and promote inclusion across the country, such as: 1) collaboration between schools and transportation agencies in curriculum development; 2) the establishment of employee recognition programs; 3) the development of incentives and professional development plans to increase retention; and 4) student recruitment plans. Specifically, the Seeds Program at the Minnesota Department of Transportation is an example of existing efforts that provide a career path to attract minority college students, veterans, persons with disabilities, or those who are otherwise disadvantaged. We asked participating transit agencies the following two questions to evaluate their progress, their commitment to diversity, and their short- or long-term plans for diversifying their workforce:

- How do you know if your agency is meeting diversity goals?
- Does your organization/agency have a transparent short-term/long-term plan for promoting diversity within the workforce?

This section summarizes the findings from the resulting conversations, which revealed five main themes related to diversity plans and evaluation systems: 1) recruit for better outcome; 2) structural shifts; 3) transparency in recruitment; 4) context-based solutions; and 5) robust employee engagement. Overall, interviewed human resource directors or managers hinted at the importance of being intentional in the recruitment for better outcomes and in initiating structural shifts within the agency instead of only adding individuals from underrepresented groups to different levels of jobs to 1) make the numbers work in regard to diversity measures and 2) not seeking long-lasting changes within agencies. This relates to the third principle of a nationwide health equity initiative called, PHEAL (Planning for Health Equity, Advocacy, and Leadership), healing through leadership, which centers on "transforming institutional beliefs, structures, policies, and practices to ensure long-lasting, positive impacts" (PHEAL, 2020). Transforming institutional structures was central in interviews with about 33% of transit agencies. Recruit for better, as discussed during interviews, means recruiting for the best retention outcomes, which helps transit agencies better serve their communities.

Roughly one-third of interviewed transit agencies had an evaluation system in place to measure their commitment to diversity and inclusion through the lens of their employees and also, to monitor their workforce demographics and career mobility within their agencies. An agency in the southeast of the U.S. explained how these two evaluation tools assist them to move towards an equitable and diverse work environment:

I think the [way] to measure is looking at your workforce demographics, so we keep an eye on that and look for changes; but the entirety of diversity, equity and inclusion is so much bigger than just your raw demographics. We do an employee engagement survey every three years. Used to be every two, but I think we skipped a year due to COVID. So we did our first one in 2018. And then we'll be doing another one next summer, so we'll have a baseline to compare that to. Those are probably the main two ways that we get insight into how we're doing.

Besides sporadic evaluations every two- or three-year, two agencies provided opportunities for their employees to be in constant contact with their leadership through online tools and already-existing employee focus groups:

We follow that [two-year survey] up with employee focus groups and so that does give us also further insight into the employee experience, as well as our suggestion box program. That's another way that we must communicate and get feedback from employees. We also have an online social pinpoint site where employees can give feedback and things of that nature, so all of those are kind of in development in there, like a little bit more informal ways, but we can use that to get data also.

Two other agencies spoke about signing APTA's racial equity commitment form, which provides an opportunity to participate in a two-year pilot program:

We also just recently signed APTA's racial equity commitment form so we're going through that two-year pilot. And then after that taking the data and experiences from the pilot program, I think will also help us to make it, solidified in the organization moving forward so we're getting there.

Figure 5: The Main Themes Discovered from Each Discussion Point During the Interviews



Although interviewed transit agencies, in general, considered frequent evaluations a necessity, a lack of human resources and other day-to-day operations priorities prevented agencies from developing an internal evaluation system, and pushed them to only satisfy the minimum diversity and inclusion in the workforce requirements. More than 80% of interviewed transit agencies were in the process of developing long-term diversity plans; however, the volatile economic situation and lingering health concerns caused by the pandemic have impacted long-term plans. Thus, at the time of the interviews, many agencies focused on short-term objectives towards economic recovery:

I think it's been a shock... route changes and [drivers] shortages... I don't think our plan is long-term right now... it's a very short-term focus.

Diversity plans include the three main areas of recruitment, retention, and promotion, but for the most part, *Recruitment for better Outcome* was an overarching theme for our discussion on transit

agencies' diversity plans. Effective communication and engagement with communities' everyday lives help transit agencies achieve diversity goals while creating a long-term relationship with the communities they serve. The following tools mentioned by a number of interviewed agencies can be beneficial for other transit agencies across the country to maximize their impact by providing services that address minoritized communities' needs:

1) Close Relation with Grassroots Organizations:

The idea of *helping each other out* was mentioned by a West-Coast, mid-sized transit agency:

We're helping each other out, we also reached out to some nonprofit organizations that are veterans, and so they are helping veterans to go back to the workforce. We just connected with one organization that works in a different county which is maybe like a 45-minute drive but they are willing to work with us, and so we are also sending our suppliers to them so that's kind of what we are doing.

Agencies that constantly communicate with grassroots organizations have found it rewarding in both the recruitment process and in the changed public perception about available opportunities in the transit industry, especially for the younger generation and people with specific needs.

2) Collaboration with Charitable Entities:

As discussed in the reviewed literature, forming outreach partnerships with the communities that agencies serve is a critical step to creating and implementing inclusive workforce retention programs that attract and retain younger generations and those rejoining the workforce. One of the discussed topics during interviews was the critical role that charitable entities play in communities' lives and how they can help transit agencies maximize their outreach. For example, a mid-size transit agency emphasized the importance of being intentional in seeking advice from local and regional charitable foundations that work with people who are rejoining the workforce:

... we need to make sure that we are aggressive when we are trying to recruit for better ... and I'm going to give you an example, so one of the things we're doing today is there are some women's shelters in our county that care for women [and they are] going back to the workforce, so we are making sure that we connected with them, we are posting our job flyers in their Facebook account and

Being in frequent contact with charitable foundations was considered a means to explore the needs of the vulnerable populations within communities regarding the transit workforce and also to create a welcoming environment throughout the recruitment process and beyond.

4. Healing the Workforce through Diversification

The lack of diversity and inclusion within the transit workforce has long been considered a weakness of the transit system. Understanding communities' needs and concerns is central in transit discourse; however, the role of a diverse and inclusive workforce in changing the public's views on the transit system has not been extensively studied. Our study aimed to decipher the existing barriers transit agencies face when attempting to diversify the workforce and to report on notable practices already in use by transit agencies. The existing societal imbalance is an issue that is interconnected with a lack of diversity in the workforce. One obvious roadblock for many members of society is being unable to receive the education needed to enter the workforce—this barrier adversely impacts different sectors across the entire transit industry.

In conclusion, seven main steps should be taken to assist transit agencies in developing and fully implementing a diversity and inclusion plan, three first steps of which include all employees:

- Comprehensive assessment of existing conditions prior to initiating a diversity plan
- Constant communication with employee groups to develop an inclusive plan
- Establishment of a diversity leadership team outside of employees' committees
- Meaningful engagement in community activities to change public perception of transit
- Close collaboration with local/regional educational centers and grassroots organizations
- Participation in existing national programs such as APTA's racial equity commitment
- Learning from innovative practices/policies across the country to ensure an equitable approach to recruitment, retention, and promotion that considers each individual's specific needs

Due to the pandemic, the transit industry has suffered a steep decline in ridership over the last few years. One of the essential lessons from this study is the importance of a transit agency's understanding of its communities' lives. For that, we need to create a transit workforce that includes community members from all backgrounds. Some of the notable practices mentioned in this report show the significance of partnerships between transit agencies and other governmental and non-governmental sectors in their area. The examples of women in the county shelter or incarcerated individuals demonstrate how such connections can accelerate the employment of those individuals and enrich their sense of community. Such efforts not only benefit transit agencies by connecting them to potential employees, but also connect the community to agencies when those individuals find a new life through new employment opportunities. We suggest that further research should focus on gathering notable examples of diversity practices and policies from across the country. Such a document will play an impactful role in changing the workforce

environment in the transit industry and moving towards a more equitable and inclusive workplace that provides a friendly environment—specifically for underrepresented individuals, such as women and racial/ethnic minorities.

References

- APTA Workforce Development & Educational Services. (2021). *Transit Workforce Readiness Guide*. Washington, D.C.: American Public Transportation Association (APTAU).
- Bartlett, K., Collins, J., Hart-Mrema, T. S., & Valesano, M. (2021). Workforce Planning and Human Resource Development Strategies for Minnesota's Public Transportation Agencies.

 Minneapolis, MN: Minnesota Department of Transportation Office of Research & Innovation.
- Castillo, J., Farr, R., Giron, W., Hanefeld, M., Schnathorst, D., Stritch, D., & Ulibarri, K. (2021, 12 1). *Diversity, Equity and Inclusion in Public Transportation*. Retrieved from National RTAP (Rural Transit Assistance Program): https://irp.cdn-website.com/270961f6/files/uploaded/Diversity_Equity_and_Inclusion_in_Public_Transportation%20%283%29.pdf.
- Dimock, M. (2019, January 17). Defining generations: Where Millennials end and Generation Z begins. Retrieved from Pew Research Center: https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/.
- Fry, R. (2018, April 11). *Millennials are the largest generation in the U.S. labor force*. Retrieved from Pew Research Center: https://www.pewresearch.org/fact-tank/2018/04/11/millennials-largest-generation-us-labor-force/.
- Gore, A. (2000). Best practices in achieving workforce diversity. Washington, D.C.: U.S. Department of Commerce.
- Hunt, V., Prince, S., Dixon-Fyle, S., & Yee, L. (2018). *Delivering through Diversity*. McKinsey & Company.
- Ivey, S., Powers, M., & Clark, A. (2019). Building a Business Case for Increasing Diversity in the Transportation Workforce. Washington, D.C.: TR News.
- Jayne, M. E., & Dipboye, R. L. (2004). Leveraging Diversity to Improve Business Performance: Research Findings and Recommendations for Organizations. *Human Resource Management*, 409–424.
- Keen, D. J. (2020). Resource Guide for Improving Diversity and Inclusion Programs for the Public Transportation Industry (TCRP Project J-11(035)). Washington, D.C.: The National Academies of Sciences, Engineering, and Medicine.

- Kermanshachi, S., & Sadatsafavi, H. (2018). Predictive modeling of U.S. transportation workforce diversity trends: A study of human capital recruitment and retention in complex environments. *International Conference on Transportation and Development* (pp. 105-114). Pittsburgh, PA: ASCE.
- Lopez, M. H., Passel, J., & Rohal, M. (2015, September 28). *Modern Immigration Wave Brings*59 Million to U.S., Driving Population Growth and Change Through 2065. Retrieved from
 Pew Research Center: https://www.pewresearch.org/wpcontent/uploads/sites/5/2015/09/2015-09-28_modern-immigrationwave_REPORT.pdf.
- MASS TRANSIT. (2021, February 26). *UTA supports the Utah Compact on Racial Equity, Diversity and Inclusion*. Retrieved from MASS TRANSIT Management: https://www.masstransitmag.com/management/press-release/21211994/utah-transit-authority-uta-supports-the-utah-compact-on-racial-equity-diversity-and-inclusion.
- Metro, K., Harper, C., & Bogus, S. M. (2021). Factors Affecting Workforce Resilience in Public Transportation Agencies. *Journal of Management in Engineering*.
- Noland, R. B., DiPetrillo, S., & Lubin, A. (2021). *Identifying Current and Future Training Needs of the Public Transportation Industry*. Washington, D.C.: Federal Transit Administration (FTA) Research.
- O'Brien, T., Tyler, R., & Jaishankar, S. (2018). Changing Workforce Development Needs for Regional Transportation Planning Agencies in California. Davis, CA: National Center for Sustainable Transportation.
- PHEAL. (2020, July). Planning for Health Equity, Advocacy, and Leadership (PHEAL) Principle #3 (Healing through Leadership). Retrieved from State of Place: https://www.stateofplace.co/pheal-principle-3.
- Steiner, R. L., Hadi, M., Sisiopiku, V. P., Click, S. M., Mohebbi, M., Martin, J. B., . . . Brown, K. (2021). *Transportation Workforce Development for State DOTs to Address Congestion for the Southeast Region*. Tallahassee, FL: Florida Department of Transportation.
- Trong Tuan, L., Rowley, C., & Thanh Thao, V. (2019). Addressing employee diversity to foster their work engagement. *Journal of Business Research*, 303–315.
- U.S. Bureau of Labor Statistics. (2017, April 12). Women in the labor force: a databook (Report 1065).

 Retrieved from U.S. BUREAU OF LABOR STATISTICS: https://www.bls.gov/opub/reports/womens-databook/2016/pdf/home.pdf.

Young, C., Jones, R. N., Ooi, D., Lung, S., Parry, N., & Heenetigala, K. (2020). Reimagining the workforce: building smart, sustainable and safe public transport. Workshop context paper. Melbourne, Australia: Rail Manufacturing Cooperative Research Centre.

About the Authors

Mehri Mohebbi, Ph.D.

Dr. Mohebbi is the director of the Transportation Equity Program at the University of Florida Transportation Institute (UFTI). She received her Ph.D. from the University of Cincinnati in Urban and Regional Planning. She has more than 15 years of experience addressing equity and inclusion in transportation policy and practices. Her work focuses on promoting an inclusive workforce and developing effective community engagement methods toward equitable transportation decision-making. She is interested in the equitable engagement of diverse (and sometimes contradictory) ideas to enhance people's sense of attachment to their community and promote accountability for key players in transportation policymaking and planning. Since 2006, she has been involved in international professional organizations (such as American Planning Association) in different capacities. Presently, she serves on Transportation Research Board (TRB) International Coordinating Council, TRB Committee on Women and Gender in Transportation, and TRB Committee on Accessible Transportation and Mobility.

Sumita Raghuram, Ph.D.

Dr. Raghuram is the Endowed Professor of Human Resource Management at San Jose State University, USA. She received her Ph.D. from University of Minnesota in Human Resource Management. In her early career she was a faculty member at Fordham University, New York and at Pennsylvania State University, Pennsylvania. She is a pioneer in studying remote work and hybrid work and has been researching this area for past 30 years. In addition, she examines international human resource management and careers of tech workers. Topics such as employee identity, diversity, employee turnover and engagement, well-being and impact of tech work on human resource management are of particular interest to her. She has had a high impact in the field of management and has published her research in the top-tier journals. Sumita has also been a visiting faculty at international business schools such as Copenhagen Business School, Bologna Business School, and Indian School of Business.

Ahoura Zandiatashbar, Ph.D.

Dr. Zandiatashbar is an Assistant Professor of Urban and Regional Planning and co-director/co-founder of Spatial Analysis and Visualization institute (SAVi) at San José State University (SJSU). He has a rich experience in application of geospatial analytics and statistical modeling and mapping. His research activities have resulted in multiple publications in top ranked journals, two national awards and more than 20 presentations and talks. Prior to joining SJSU, Dr. Zandiatashbar was a key member in developing Illinois Map the Count 2020, Illinois COVID-19 Vulnerability, and Chicago's Tap Water web-maps through the Urban Data Visualization Lab at the University of Illinois at Chicago. Dr. Zandiatashbar received his doctoral degree from University of Texas Arlington in Urban Planning and Public Policy with a focus on transportation

planning and built environment, where he was also an interdisciplinary urbanist researcher at the Institute of Urban Studies and Center for Transportation, Equity, Decisions and Dollars (CTEDD). He also has a Master's in Architecture and Urbanism from Rensselaer Polytechnic Institute.

Hon. Norman Y. Mineta

MTI BOARD OF TRUSTEES

Founder, Honorable Norman Mineta***

Secretary (ret.), US Department of Transportation

Chair

Will Kempton

Retired Transportation Executive

Vice Chair, Jeff Morales

Managing Principal InfraStrategies, LLC

Executive Director, Karen Philbrick, PhD*

Mineta Transportation Institute San José State University

Winsome Bowen

President

Authentic Execution Corporation

David Castagnetti

Co-Founder Mehlman Castagnetti Rosen & Thomas

Maria Cino

Vice President America & U.S. Government Relations Hewlett-Packard Enterprise

Grace Crunican**

Owner Crunican LLC

Donna DeMartino

Retired Transportation Executive

John Flaherty

Senior Fellow Silicon Valley American Leadership Form

Stephen J. Gardner*

President & CEO Amtrak

Rose Guilbault

Board Member San Mateo County Transit District (SamTrans)

Kyle Christina Holland

Senior Director, Special Projects, TAP Technologies, Los Angeles County Metropolitan Transportation Authority (LA Metro)

Ian Jefferies*

President & CEO Association of American Railroads

Diane Woodend Jones

Principal & Chair of Board Lea + Elliott, Inc.

Therese McMillan

Executive Director Metropolitan Transportation Commission (MTC)

Abbas Mohaddes

CEO

Econolite Group Inc.

Stephen Morrissey

Vice President – Regulatory and Policy
United Airlines

Toks Omishakin*

Secretary
California State Transportation
Agency (CALSTA)

Takayoshi (Taki) Oshima

Chairman & CEO Allied Telesis, Inc.

Marco Pagani, PhD*

Interim Dean Lucas College and Graduate School of Business San José State University

April Rai

President & CEO
Conference of Minority
Transportation Officials (COMTO)

Greg Regan*

President Transportation Trades Department, AFL-CIO

Paul Skoutelas*

President & CEO American Public Transportation Association (APTA)

Kimberly Slaughter

CEO Systra USA

Tony Tavares*

Director California Department of Transportation (Caltrans)

Jim Tymon*

Executive Director American Association of State Highway and Transportation Officials (AASHTO)

* = Ex-Officio

** = Past Chair, Board of Trustees
** = Deceased

Directors

Karen Philbrick, PhD

Executive Director

Hilary Nixon, PhD

Deputy Executive Director

Asha Weinstein Agrawal, PhD

Education Director
National Transportation Finance
Center Director

Brian Michael Jenkins

National Transportation Security Center Director

