



Unfinished Business: The Importance of Human Resources to National Transit Asset Management Program Development and Transit Safety Performance

The following article was authored by Beverly A. Scott, PhD, a Mineta Transportation Institute Research Associate

The Congress and this Administration's focus on the establishment of a national transit asset management program (estimated to have an \$85.9 billion state-of-good-repair backlog) and a first-time comprehensive safety performance program (including recognition of the inherent link between the two) is critical to the safety and performance of our public transportation systems. While that focus is a major move forward, this paper proposes the existence of unfinished business representing a remaining missing link that requires immediate attention: the *people* who operate, maintain, and build our transportation systems.

While the focus on establishing a strategic, systematic process and minimum standards for operating, maintaining, and improving public transportation's *physical* capital assets – most notably, its equipment, rolling stock, infrastructure and facilities – is essential, it is not a silver bullet. Just as important is the need to effectively address the well documented high risks to both safety and performance that have unfortunately resulted from the sector's failure to take a more strategic and systematic approach to its human capital assets (an area that also requires a strategic, comprehensive approach, systematic processes, serious attention and action).

Notwithstanding the best of intentions, agencies ultimately respect and prioritize those areas which rise to the level of sufficient importance to require explicit focus: minimum standards or “triggers,” resource allocation, monitoring, reporting, inspection, and consequences. Today, with few exceptions, minimal standardized “people” information is routinely requested, collected, or reported by the public transit sector to the United States Department of Transportation (USDOT) or others – not unlike the sector's well documented information gaps regarding physical asset condition, needs, and inadequate asset management practices. The result is a gaping lack of industry-specific information, transparency, and analytics for what is both the largest category of annual agency operating expenditure and our most valuable asset: the public transportation workforce.

The purpose of this paper is not to criticize Congress, the Administration, or the Department. It is to bring attention to the criticality of this extremely important missing

link and to chart a path forward to ensure that this gap is seriously and quickly addressed.

Three key elements are important:

- (1) Revisit the Transportation “Act” and include “human capital” as an element of the “capital asset” definition;
- (2) Advance the case; and
- (3) Begin the work to get it done – supported by facts with a sense of urgency and a coalition of champions.

Initial thinking around Next Steps is highlighted in the following section.

The Moving Ahead for Progress in the 21st Century Act (MAP-21), which initially established the requirement for a National Transit Asset Management Plan, defined a transit asset management system as a “*strategic and systematic process of operating, maintaining and improving public transportation capital assets through the life cycle of such assets* (emphasis added).” Critical to the safety and performance of a public transportation system is the condition of its capital assets – most notably, its equipment, rolling stock, infrastructure, and facilities.¹

From this definition and other provisions of the Act, the Federal Transit Administration’s (FTA’s) response in the Comment Review section of the Final Transit Asset Management (TAM) Plan Rule states: “... FTA recognizes that human capital assets are an essential component of implementing a TAM plan; *however, they do not meet the statutory definition of a ‘capital asset’* (emphasis added).” In the Notice of Proposed Rule-Making (NPRM), FTA proposed that a tier-one provider develop a nine-element TAM Plan and has maintained this requirement in the final rule. “*One of the nine elements was a specification of resources, including personnel needed to develop and implement the TAM plan* (emphasis added).”²

While an understandable first step, a singular focus on physical assets to the exclusion of human and other factors is a partial approach to best-in-class asset management. Taking the next step to implement a more comprehensive approach to TAM – beyond just physical assets – is consistent with the latest thinking regarding best practices in asset management, which recognizes that “assets” entail a greater scope than just physical assets and include human capital.³ That said, any serious asset-based approach must start with building the knowledge base – collecting the asset information.

It is foundational to explicitly recognize, elevate and integrate human capital management and strategic workforce planning into both the National Transit Asset Management Plan and the comprehensive safety plans under development by transit agencies, including amendments to the National Transit Database (NTD) regulations that can ensure basic workforce data is collected and reported as part of a systematic process. Most importantly, it will help to ensure that public transportation agencies have

the right mix of knowledge, skills and experience to safely and effectively operate daily service and implement their capital program responsibilities.

Particularly relevant supporting information is highlighted below.

- Since 2001, the U.S. Government Accountability Office (GAO) has identified human capital management as a government-wide “high-risk” area because “... federal agencies lack a strategic approach to human capital management that integrates human capital efforts with their missions and program goals.”⁴ Key challenges cited by GAO reports that are also well documented in the public transportation sector include ongoing and emerging skills gaps – particularly in highly skilled and specialized technical areas; the rapid deployment of new technologies requiring a workforce that can effectively maintain next-generation technology; large numbers of retirements leading to shortages of institutional knowledge and leadership; and an increasingly constrained fiscal environment.

The fact that Human Resources (HR) represents the largest ongoing expenditure in public transit agency budgets simply underscores the need for a more strategic and rigorous approach across the sector.

- Not surprisingly, as recently as 2014-15 the Conference Board, which provides trusted insights for worldwide business, identified Looming Labor Shortages, Closing Talent Gaps, Big Data & Human Capital Analytics, and Future Skilling the Workforce among the Top Challenges facing CEOs. Once again, these are major challenges that are well documented and face public transportation systems of all sizes in communities across the country.⁵
- In 2015, the U.S. Department of Education, Office of Career, Technical, and Adult Education prepared a national report on today’s Transportation Workforce based on analysis of U.S. Bureau of Labor Statistics, National Transit Database (NTD), and U.S. Census data.⁶ Key findings are as follows:
 - Nationally, it is projected that 126% of today’s Transit Workforce will have to be hired and trained in the next 10 years; 90% are frontline workers.
 - Transit has the highest percentage of older workers among all transportation sectors, i.e., age 45+ (63%).
 - Bus drivers, mechanics, dispatchers, and first-line supervisors have the largest long-term job demand in transit.
 - Projected annual job openings are 68% larger than annual completions of related educational programs across transportation job groups.
 - Public transit invests less than 1% of payroll in human capital, compared to 2% in all U.S. industries, 3.7% as a Federal Highway Administration (FHWA) goal, 4.5% in leading U.S. companies, and 8.4% in Paris Transit (RATP).

- The representation of women and minorities continues to seriously lag behind.
- Most relevant to the urgency of this recommendation are repeated public transportation safety infractions, incidents, and major accidents resulting from insufficient prioritization and understanding of people needs and resources and the lack of an organizational safety culture. Repeated documentation of similar causal factors, unfortunately coupled with several major transit accidents, contributed to moving public transit to the National Transportation Safety Board's (NTSB's) *Most Wanted List in 2015*, followed in 2016 with a call for heightened emphasis on the criticality of Improved Rail Transit Safety Oversight and Completion of Rail Safety Initiatives as top national priorities.⁷

Specifically, NTSB has highlighted the importance of all public transit agencies strengthening their organizational safety cultures and of providing greater attention to the deployment of advanced technologies. The NTSB has investigated many mass transit accidents and much too frequently has found that accidents stem from human issues. These include lapses in train operator's judgment; slow decision-making; lack of inspection or repair of track; poor leadership by senior management in prioritizing operational timeliness over safety; fatigue and excessive overtime; high employee vacancy rates; significant retirements and loss of institutional knowledge and experience; inadequate and ineffective employee training; and failure to maintain employee training and certification records.⁸

- Illustratively, USDOT/FTA's latest report, the Washington Metropolitan Area Transit Authority (WMATA) Safety Management Inspection 2015 Report, included a total of 44 findings and 78 Required Actions across eight major categories of Metrorail System Findings. Two major findings categories (heavily "people"- and "human factors"-centered) represented the majority of cited deficiencies: (1) Inadequate Rail Operations Control Center Staffing – 14 Findings/21 Required Actions; and (2) Ineffective Training, Operational Testing & Rules Compliance Programs – Eight Findings/22 Required Actions.⁹

As FTA moves aggressively to incorporate a Safety Management System (SMS) framework into the public transit sector's "DNA" and link transit asset management to safety planning, there is no escape from the fact that *people* are at the center of effective SMS – which once again underscores the criticality of incorporating human capital management into the Department's National Transit Asset Management Planning. To do otherwise will undermine the intended outcome of the Department's work in this area – to improve overall transit safety and performance.

Baking human capital considerations into agency TAM plans will help to bring more data-driven people-readiness factors into agency investment prioritization and decision-making. The added requirement for an accountable executive to approve these important plans also provides a valuable public accountability measure and safeguard.

As in the case of the physical capital asset-planning framework, the process for the inclusion of an HR component into TAM plans needs to be *feasible, actionable, and measurable*. The process should also be scalable; information to be reported must be readily available; and performance measures need to be reasonable in light of industry-specific or generally accepted business practice. Just as importantly, the process will certainly evolve over time.

As a point of departure, there are several recent studies conducted by the Transportation Research Board that are directly relevant, including *TCRP Report 162* and *NCHRP Report 693*.¹⁰ Additionally, there are numerous examples across business and government of “core” agency HR information which is collected by most organizations, such as Equal Employment Opportunity (EEO) Reports; basic Employee Profile Information; Retirement and Pension Plan Data; Hiring Plans/Vacancy Reports; Absenteeism Reports; Benefits Data; Safety Data; Overtime (scheduled and unscheduled); Workers Compensation Information; Attrition (Turnover); Training Spending, Courses and Hours; and Safety Certification Compliance. The availability of agency data, knowledgeable researchers, and practitioners will make it possible to fairly quickly assemble representatives from within the industry and from among other interested stakeholders, such as the Transportation Research Board, Transportation Learning Center, Society of Human Resources Professionals, the American Public Transportation Association’s (APTA’s) Asset Management Working Group, Human Resources and Standards Committees, National Transit Institute, and University Transit Centers. Technical support from USDOT and the NTSB can assist in reaching a reasonable consensus on an initial set of human resources asset categories and performance measures in short order.

In this regard, the FTA’s State of Good Repair White Paper published with the Advanced Notice of Proposed Rulemaking (APRM) provides a set of possible approaches for measuring state of good repair based on an assets’ (1) “age” – retirement eligibility and likelihood; (2) “condition” – knowledge, skills, and experience (skills proficiency and skills gap assessment); and (3) “performance” – or a combination of age, condition, and performance that is also useful in the human capital management context.¹¹

While none of the approaches is perfect, making a serious start at approaching “*people-readiness*” is critical. The integration of HR planning and thinking into overall agency decision-making and project prioritization processes will go a long way toward ensuring greater understanding of critical workforce needs and gaps (“risk assessment”); resource allocation for important workforce needs; greater C-suite/managerial accountability; and, most importantly, toward anchoring a genuine organizational safety culture.

Let’s move forward together to complete this important “Unfinished Business!” Action in this area will assist public transportation to take a quantum leap into 21st century best practices by ensuring that agencies take serious steps to institutionalize the saying “Our people are our greatest asset.”

Acronyms and Abbreviations

Advanced Proposed Rulemaking	APRM
American Public Transportation Association	APTA
Equal Employment Opportunity	EEO
Federal Highway Administration	FHWA
Federal Transit Administration	FTA
Government Accountability Office	GAO
Human Resources	HR
Moving Ahead for Progress in the 21 st Century Act	MAP-21
National Cooperative Highway Research Program	NCHRP
National Transit Database	NTD
National Transportation Safety Board	NTSB
Notice of Proposed Rule-Making	NPRM
Paris Transit	RATP
Safety Management System	SMS
Transit Asset Management	TAM
Transit Cooperative Research Program	TCRP
United States Department of Transportation	USDOT
Washington Metropolitan Area Transit Authority	WMATA

Endnotes

¹ Moving Ahead for Progress in the 21st Century, (MAP-21) (Public Law 112-141 (2012), codified at 49 U.S.C. section 5326), 49 U.S.C. section 5326 (a) (3).

² Federal Transit Administration, “National Transit Asset Management System Final Rule pdf,” (July 12, 2016): 30-31, <https://www.transit.dot.gov/regulations-and-guidance/asset-management/national-transit-asset-management-system-final-rule> (accessed September 7, 2016).

³ The International Organization for Standardization (ISO), PAS 55000 – 55001.

⁴ US Government Accountability Office, “Strategic Human Capital Management,” http://www.gao.gov/key_issues/strategic_human_capital_management/issue_summary (accessed September 2, 2016).

⁵ The Conference Board, “CEO Challenge 2014” and “CEO Challenge 2015,” www.ceochallenge.org (accessed August 19, 2016).

⁶ U.S. Department of Education, Office of Career, Technical and Adult Education, “Strengthening Skills Training and Career Pathways across the Transportation Industry”, Washington DC, (August 2015), <http://cte.ed.gov/initiatives/advancing-cte-in-state-and-local-career-pathways-system> (accessed November 1, 2016).

⁷ National Transportation Safety Board, “NTSB Most Wanted List of Transportation Safety Improvements 2016” and “NTSB Most Wanted List of Transportation Safety Improvements 2015,” <http://www.nts.gov/safety/mwl/Pages/default.aspx> (accessed September 15, 2016).

⁸ National Transportation Safety Board, “Major Investigations,” <http://www.nts.gov/investigations/Pages/default.aspx> (accessed August 20, 2015).

⁹ Federal Transit Administration, United States of America Department of Transportation, “Final Report: Washington Metropolitan Area Transit Authority, Safety Management Inspection (Examination Dates March 16 – April 3, 2015),” (June 17, 2015), https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/WMATA_SMI_Final_Report.pdf (accessed September 6, 2016).

¹⁰ Candace Blair Cronin et al., *TCRP Report 162: Building a Sustainable Workforce in the Public Transportation Industry – A Systems Approach*. Washington, DC: Transportation Research Board, 2013; Brian Cronin et al., *NHCRP Report 693: Attracting, Recruiting and Retaining Skilled Staff for Transportation System Operations and Management*, Washington, DC: Transportation Research Board, 2012.

¹¹ Federal Transit Administration, “State of Good Repair White Paper,” (2013), <https://www.transit.dot.gov/regulations-and-guidance/asset-management/state-good-repair/sgr-white-paper> (accessed November 20, 2015).

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About the Author

Beverly A. Scott, PhD, is a Mineta Transportation Institute Research Associate and CEO, Beverly Scott Associates, LLC. Dr. Scott's career in the public transportation industry spans more than three decades, including four appointments as General Manager/CEO – General Manager, Massachusetts Bay Transportation and Rail & Transit Administrator for the Commonwealth of Massachusetts, the Metropolitan Atlanta Rapid Transit Authority (MARTA), the Sacramento Regional Transit Authority (SRTD), and the Rhode Island Public Transit Authority (RIPTA), one of four statewide public transit systems. She has also served in senior level positions at New Jersey Transit Corporation (NJT), the Washington Metropolitan Area Transportation Authority (WMATA), Dallas Area Rapid Transit (DART), and the Houston Metropolitan Area Transit Authority (Houston METRO).

Dr. Scott is recognized throughout the U.S. and North American transportation industry for her visionary leadership, results driven management style; focus on people and communities; and progressive approach to labor management relations. Among her most notable industry contributions is her pivotal leadership role in the critical areas of workforce and leadership development and work to improve outcomes for people and communities – particularly our most vulnerable.

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