



Growing Future Talent

TRB Executive Committee

Policy Session Briefing

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How did we get here?

- You?
- Me?
- The industry?

National Network for the Transportation Workforce

nntw.org



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Growing Future Talent

- *Girls Experiencing Engineering, 2003-2024+*
- Transportation-STEM Academy Playbook, SETWC 2023
- Visualizing Equality in the New Mobility Workforce. In. E. Ozdenerol (ed.), *Gender Inequalities: GIS Approaches to Gender Analysis.* – CRC Press 2021
- Empowering the New Mobility Workforce: Educating, Training, and Inspiring Future Transportation Professionals – Ed. Tyler Reeb, Elsevier 2019
- Building a Business Case for Increasing Diversity in the Transportation Workforce - *TRR News* 2019
- Navigating the Peer Mentoring Relationship: A Handbook for Women and Other Underrepresented Populations in STEM. Ed. A. Rockinson-Szapkiw, J. Wendt, and K. Wade-Jaimes – Kendall Hunt 2020
- NCHRP 20-07/Task 408: Transportation Systems Management and Operations (TSMO) Workforce Guidebook
- NCHRP Synthesis 54-20: Advancing Gender Equity in the DOT Workforce
- FRA, NSF, DOL, TDOT, NOCoE



Workforce of the Future

Diverse

Tech-savvy

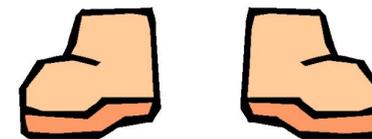
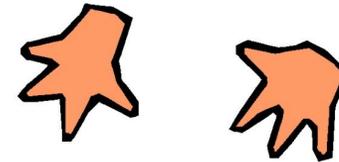
Sense of purpose

Sense of belonging



Pipeline Challenges

- Career awareness
- Misperceptions
- Finding 'fit'
- Understanding the K-12 community
 - Students
 - Teachers
 - PARENTS
- Competition from other industries





Workforce of the Future

- Rapid evolution of technology transforming system operations and how work is done
- Transform data into information – and other data considerations
- Complexity of problems blurs lines between disciplines
- Lifelong learning is essential



Strategies for Attracting Talent



Comprehensive pipeline efforts
(that start EARLY!)

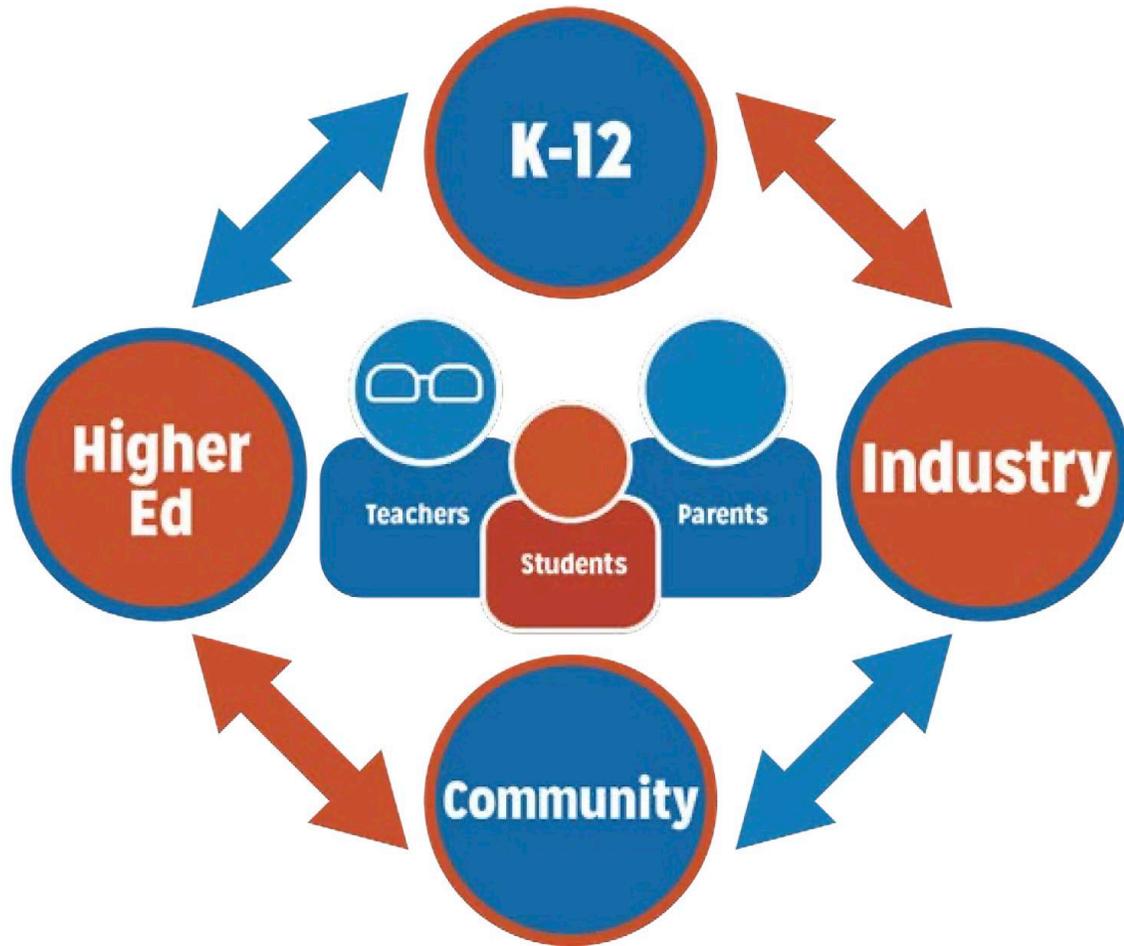


**Strong industry-education
partnerships**



Innovative immersive
experiences

What works well...and why?



- Transportation-STEM Academy at East High School – Shelby County Schools (Memphis, TN)
- Engineering Apprenticeship Program - University of Memphis

Transportation-STEM Academy (

A playbook for developing transformational education through industry-academ



LAUNCHING IN 2017...

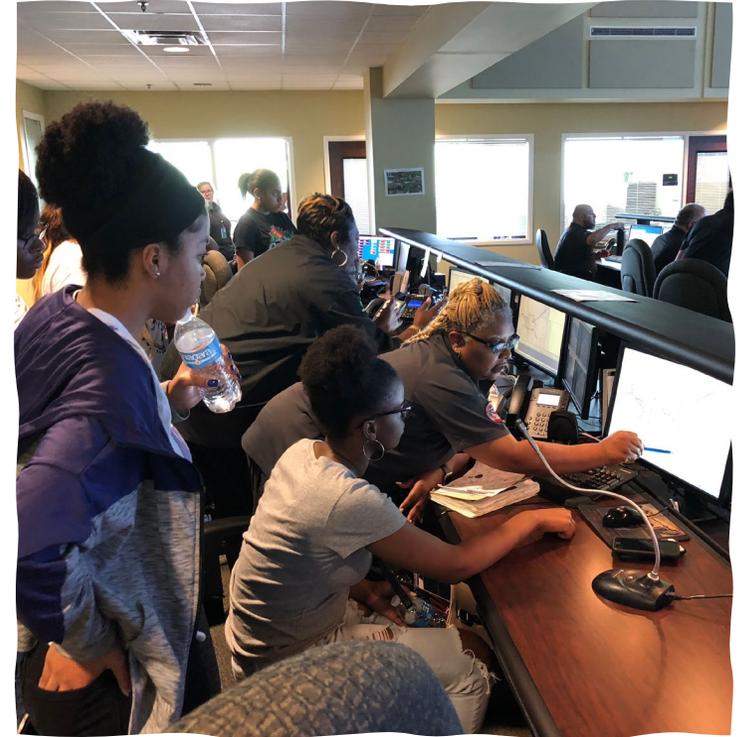
A one-of-a-kind Optional high school connecting students to cutting-edge degrees & careers!

The NEW Transportation-STEM Academy at Historic East High School!

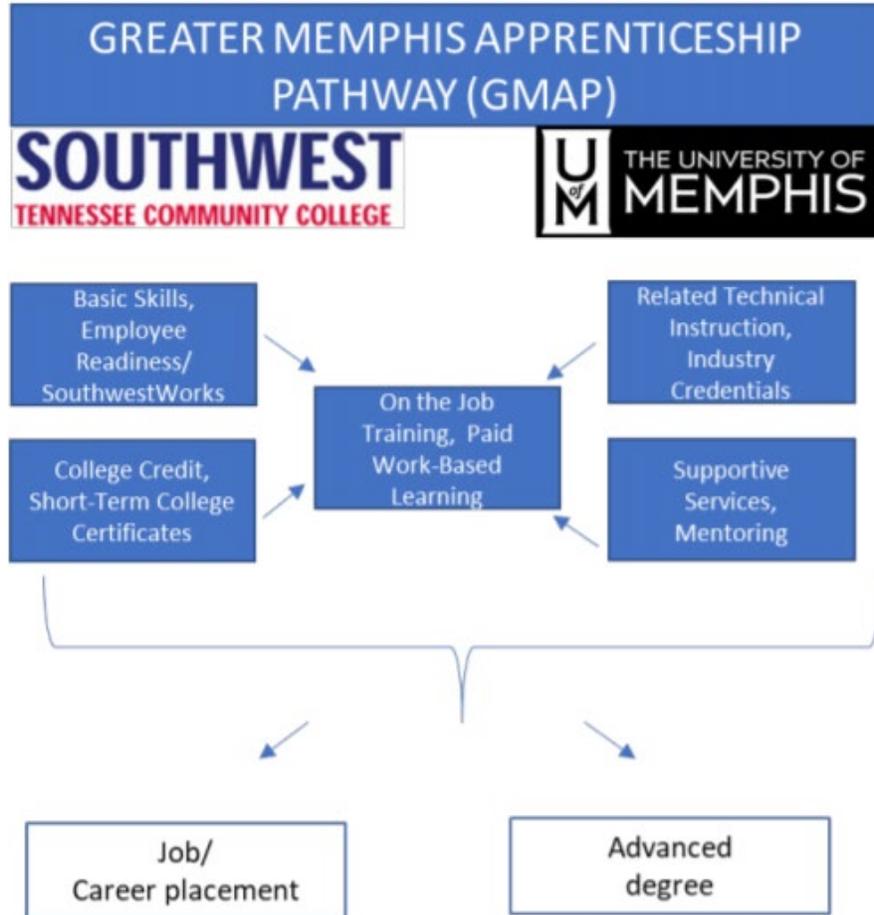
SHELBY COUNTY SCHOOLS

Transportation-STEM Academy at East High School

- Industry engagement from inception
- Higher ed engagement (all levels)
- Unique and immersive experiences
- Year-round learning opportunities
- **From failing school (2016-17) to #13 in TN, #1 in district (2023-24)**



UofM Engineering Apprenticeship Program



Engineering Apprenticeship Program (EAP)

- Transformative Technologies in Engineering Course
 - Interdisciplinary
 - Significant industry engagement
 - Team Innovation Projects – NOCoE Transportation Technology Tournament
- Work-based learning experience
 - Paid work experience
 - Faculty help select apprentices
 - Employers provide mentoring
- Students find their 'fit'!



Growing Future Talent

- Reach students EARLY and often
- Elevate awareness of (and respect for) all transportation jobs – STEM for all
- Create **inclusive** pipeline approach
- Tell the story
- Think strategically
- **Build Productive Partnerships!**



Building Productive Partnerships

- Research or data-based engagement
- Value proposition – for all stakeholders
- Understanding communication and systems
- Identify strategies for ‘quick wins’
- Building relationships and trust
- Recognize it is a long-term game
- Make sure to develop a sustainable model



What does success look like?

- Excitement!
- Developing individual interests
- Understanding of real-world connections
- **Building career identity**
- **CHOOSING TRANSPORTATION!**





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