

TRB 97th Annual Meeting January 7-11, 2018 Washington, D.C.

National Transportation Career Pathways Initiative Stakeholder Engagement: Scoping  
Transformative Technologies

## *The impact of disruptive/transformational technologies in transportation on the workplace and workforce*

**Workshop 873: Thursday, January 11, 2018, 8:00 AM-12:00 PM, Convention Center 204B**

Diana Long, Rahall Transportation Institute, presiding

*Sponsored by Standing Committee on Transportation Education and Training*

The pressures of technological advancement within the personal and freight mobility spaces has created unprecedented challenges for employers and workforce development practitioners. How can the skillsets of current and future transportation sector workers be developed to address the rapid pace of innovation and new technologies in an increasingly dynamic and demanding workplace?

To address this challenge, the Federal Highway Administration [Center for Transportation Workforce Development](#) funded an initiative to identify the education, curriculum, training, and experiential learning required for



post-secondary institutions to effectively deliver skilled and technically competent transportation workers for the next 15 years. Known as the [National Transportation Career Pathways Initiative](#), this effort brings together academic and industry leadership to identify future workforce needs and how education and training at the technical school, community college, and university levels can be best designed to address those for the long term. As these discipline leaders work to create a framework to test implementation strategies at the post-secondary level, how can we design pathways that will succeed in supporting a future positive path for the transportation sector? This workshop will set the context for the project and invite in depth opportunities for practitioners and educators to provide their insights, feedback and perspectives on this effort.

### AGENDA

#### Introduction

**Setting the Context** - Three guests will lay out perspectives on how transportation is radically changing in the coming decades, technology disruption is changing the way the industry does business and how all of this will require a differently trained and educated workforce.

**Eric Plosky**, Chief, Transportation Planning Division at the Volpe Center.

**Terry Bills**, ESRI, presenting advanced tools to help DOT's address strategic decision making through data-driven analysis and presentation.

**Eric Rensel**, VP, Gannett Fleming / National Operations Center of Excellence

#### Q&A

**Response panel: Tom O'Brien (CSULB), Stephanie Ivey (UMemphis), Steve Albert (Montana State), Teresa Adams (UWisconsin-Madison), Glenn McRae (University of Vermont)**

From the National Network for the Transportation Workforce (5 regional centers) centers, a discussion of how this future casting is reflected in the research results being conducted across five disciplines (Engineering, Safety, Environment, Operations, and Planning) and what it means as they seek to build new competency models, underlying critical career pathways for expanding occupations in each of the disciplines.

#### Q&A

*Workshop 873 Agenda (continued)*

**Working Session: Break-out groups by discipline**

**5 discipline groups: Environment, Engineering, Operations, Planning, Safety**

**Information Sharing:** What have we learned in each discipline

**Discussion –**

- How are transformational technologies impacting how we teach, learn and practice within the discipline?
- What are the most effective teaching and training methodologies to keep up with rapid changes in the field?
- How are employers responding to the changes in ways that they recruit, hire, on-board and provide professional development?
- How do educational programs remain current and relevant in addressing needed competencies in the field, as well as address emerging fields and innovations?
- What role does experiential learning play? What are models of experiential learning that are most successful in producing the best prepared workers?

Lead by NTCPI team leaders with special Discussants (invited)

**Report out summation** - Key take-aways to guide future implementation of effective career path design, program collaboration, targeting of key audiences of future workers, and strong engagement of employers.

**Workshop Breakout Group Leaders – Regional Workforce Centers**

<i>Center</i>	<i>Center Director</i>	<i>Center Associate</i>
SETWC <a href="http://memphis.edu/setwc">http://memphis.edu/setwc</a> OPERATIONS	Stephanie Ivey Associate Dean for Research, Herff College of Engineering; Director, Intermodal Freight Transportation Institute, University of Memphis	Martin Lipinski Director Emeritus, Intermodal Freight Transportation Institute The University of Memphis
SWTWC <a href="http://swtwc.org/">http://swtwc.org/</a> PLANNING	Tom O'Brien CITT Executive Director, METRANS Associate Director California State University at Long Beach	Tyler Reeb CITT Director of Research, Research and Communications California State University at Long Beach
WRTWC <a href="http://wrtwc.org/">http://wrtwc.org/</a> SAFETY	Steve Albert Director of the Western Transportation Institute (WTI) at Montana State University	Susan Gallagher Education & Workforce Program Manager of the Western Transportation Institute (WTI), Montana State U
MWTWC <a href="http://mtwc.org/">http://mtwc.org/</a> ENGINEERING	Teresa Adams Professor of Civil Engineering University of Wisconsin-Madison	Maria Hart Program Manager University of Wisconsin-Madison
NETWC <a href="http://netwc.net">http://netwc.net</a> ENVIRONMENT	Glenn McRae Outreach Manager, Transportation Research Center University of Vermont	Janet Leli Associate Director, Technology Transfer Center for Advanced Infrastructure and Transportation (CAIT) Rutgers University