

# Midwest Transportation Workforce Center



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**Challenges and Opportunities in Transportation**

**MPO/RPC/DOT Conference**

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# National Network for the Transportation Workforce



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# **Midwest Transportation Workforce Center**

**HOW WE CAME ABOUT AND  
WHAT WE WANT TO DO**





# Critical Issues for the Transportation Workforce

## Demographic Changes

- “Baby Boomer” retirements
- 50 percent of the transportation workforce eligible to retire in ten years
- Loss of specialized knowledge and experience
- New generation of young workers and leaders have different expectations and needs

## New Technologies

- Increasing rate for technological innovation in transportation planning and management
- More technically complex operating systems require high skilled operators and managers
- Traditional technicians become obsolete

# Need for Transportation Workforce Centers

- Many good programs are disconnected
- Need for strategic/coordinated efforts
- Leverage existing resources
- Stimulate partnerships across transportation, education, workforce, labor communities
- Promote successful practices at all levels
  - Grades 6-12, Community Colleges, Technical Schools, University, Post Graduate, Professional Development



# Key Activities and Deliverables

- Job Needs/Priorities Report
- Facilitate Partnerships for Workforce Development and Practices
- Compendium of Transportation Workforce Resources
- Maintain a Website and Clearinghouse
- Establish Engagement Group to Advise Center
- Develop Strategic Plan
- Develop Annual Program Plans



# **Midwest Transportation Workforce Center**

**PARTNERSHIPS FOR TRANSPORTATION  
WORKFORCE DEVELOPMENT**



# Possible Types of Partnerships

TYPE	DESCRIPTION	ATTRIBUTES of PARTNER's ROLES
Networking	Sharing information and ideas	<ul style="list-style-type: none"> <li>Parties exchange basic information (e.g. contact info, organizational goals, intended outcomes, possible joint opportunities)</li> <li>Door open for follow-up opportunities</li> </ul>
Cooperating/ Facilitating	Helping members accomplish their separate individual goals	<p>All of the networking attributes, plus:</p> <ul style="list-style-type: none"> <li>Share advice, resources, information, and contacts to help with goal attainment in a spirit of cooperation</li> <li>May also include shared website information, promotional material and other media links</li> </ul>
Coordinating	Working separately on shared goals	<p>All of the cooperating attributes, plus:</p> <ul style="list-style-type: none"> <li>Identify shared, overlapping goals</li> <li>Coordinate efforts to mutual benefit with minimal duplication</li> <li>Sign letters of support or other public endorsement for projects and activities</li> </ul>
Collaborating	Working together toward a common goal but maintaining separate resources and responsibilities	<p>All of the coordinating attributes, plus:</p> <ul style="list-style-type: none"> <li>Agree on common and clearly articulated goals</li> <li>Define how actions and responsibilities of one party support efforts of the collaborator(s)</li> <li>Work is often done together, not separately</li> </ul>
Full Partnership	Shared goals, decisions, and resources within a single entity	<p>All of the collaborating attributes, plus:</p> <ul style="list-style-type: none"> <li>Signed document that defines roles, responsibilities and expectations for each partner</li> <li>Timelines and milestones for joint work, evaluation and retooling</li> </ul>





# MTWC MISSION

- Building partnerships to develop tomorrow's transportation workforce
- The MTWC will increase awareness of career opportunities in all sectors of the transportation industry and promote development of high-skilled, high-demand transportation workers by facilitating partnerships, and improving communication and sharing across all levels of workforce development organizations.



# Strategy for making an Impact

## Collective Impact

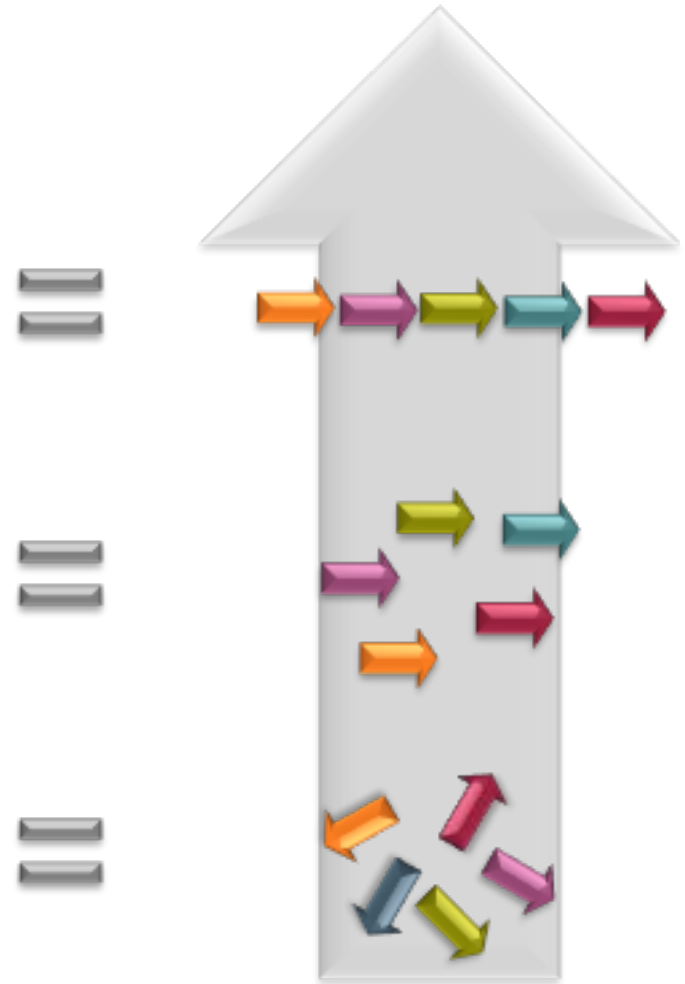
- A group working towards the same outcome,
- Looking at the same data,
- To continuously improve practices over time

## Coordinated Impact

- A group working on the same issue,
- Sharing information about what they do
- To better coordinate efforts

## Individual Impact

- Individual practitioners working on specific issues
- Collecting qualitative and quantitative data
- To demonstrate impact with individual students



# 5 elements of collective impact

**COMMON  
AGENDA**

**SHARED  
MEASUREMENT**

**MUTUALLY  
REINFORCING  
ACTIVITIES**

**CONTINUOUS  
COMMUNICATION**

**BACKBONE  
ORGANIZATION**





# Midwest Transportation Workforce Center

High-demand, High-skill, High-wage  
**TRANSPORTATION OCCUPATIONS IN THE  
MIDWEST**



# What is a Transportation Job?

## **Occupations Requiring Transportation Knowledge (O\*NET):**

Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.

**National Association of State Directors of Career Technical Education** -Transportation, Distribution and Logistics: Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.



# Transportation Job Share in Projected Employment 2022

Table 4: Projected Transportation Jobs as a Percent of all Jobs

State	Transportation Jobs*	All Jobs	% Transportation Jobs
IA	206930	1955480	11%
IL	765142	6678572	11%
IN	301819	3148886	10%
KS	153983	1609566	10%
MI	382530	4497030	9%
MN	217956	3120400	7%
MO	281351	3086278	9%
OH	533310	5957100	9%
WI	311813	3269173	10%

\*Excludes Air Transportation jobs, and transportation sector jobs not requiring transportation knowledge

# Data Analysis Sources

State	Organization
IA	Iowa Workforce Information Center
IL	Illinois Department of Employment Security
IN	Indiana Department of Workforce Development
KS	Labor Information Center
MI	Michigan Department of Technology, Management and Budget
MN	Department of Employment and Economic Development
MO	Missouri Economic Research and Information Center
OH	Department of Job and Family Services
WI	Wisconsin Department of Workforce Development

# High-Demand Occupations

Occupation having more than the median number of total openings for statewide or particular region.

# High-Wage Occupations

Pay more than the industry median wage for the state.

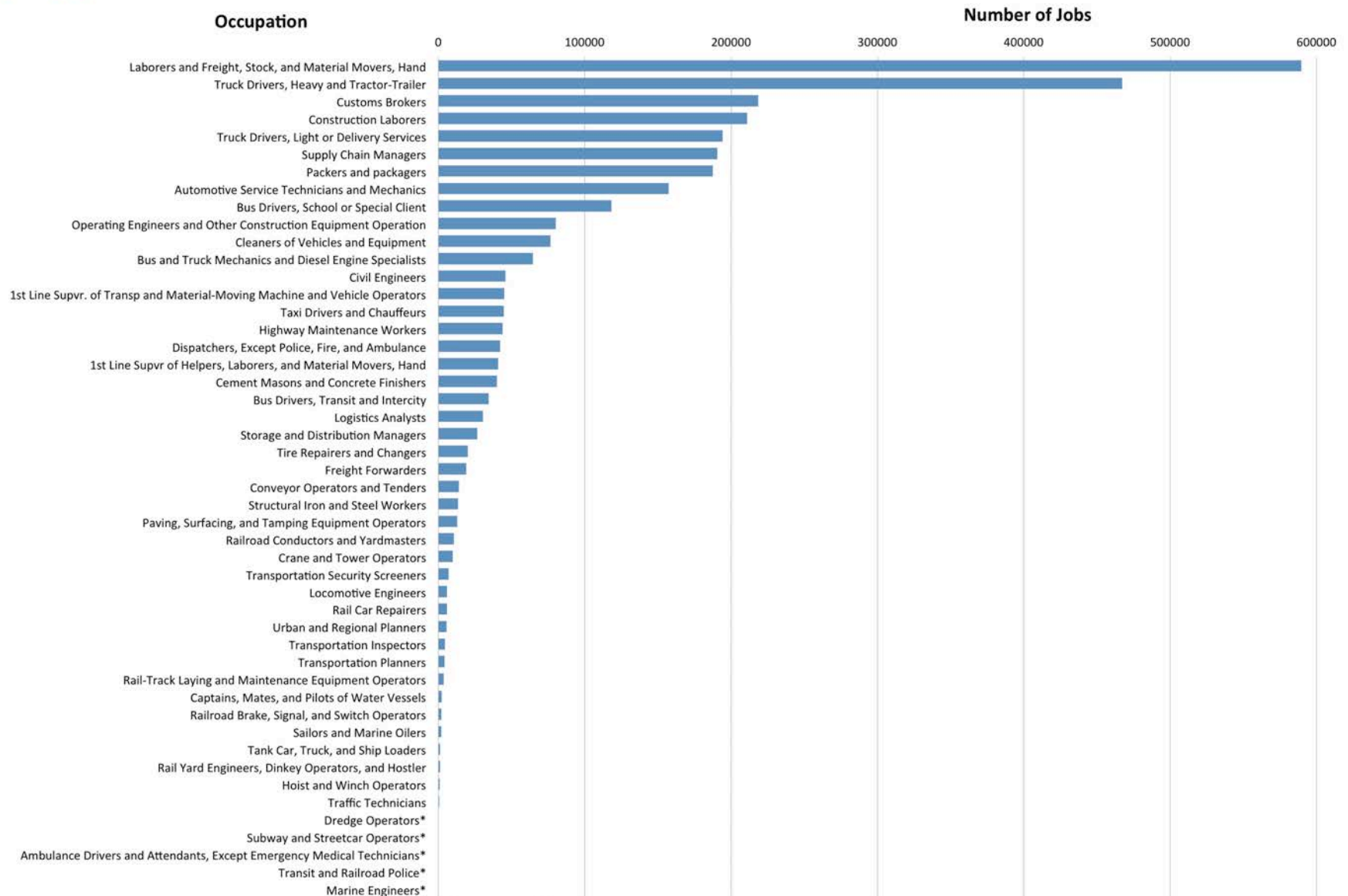
# High-Skill Occupations

Require post-secondary training or higher and long-term on the job training or related work experience.





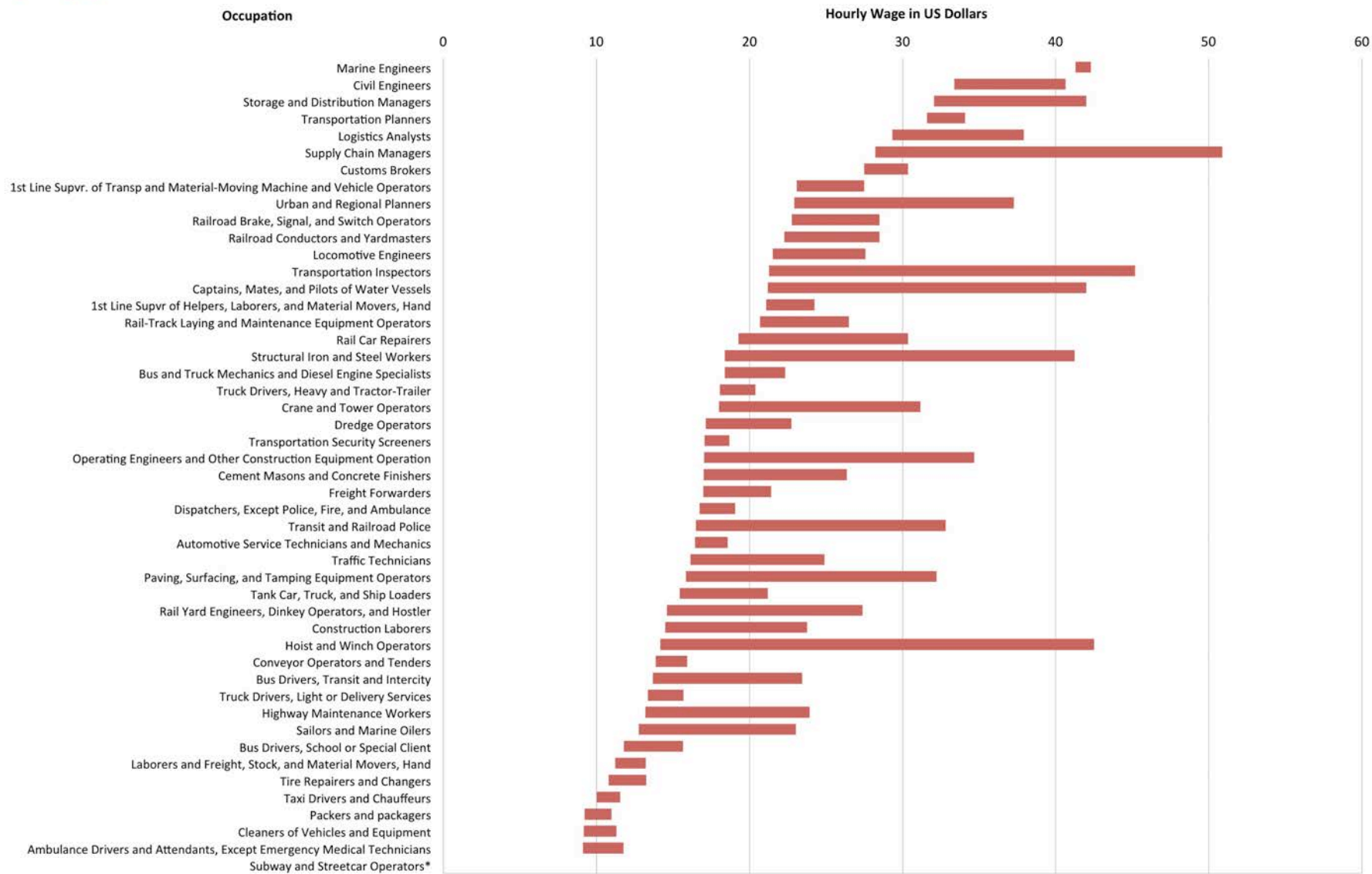
# Demand for Transportation Jobs in the Midwest Region (2022)



\* Estimate not available.



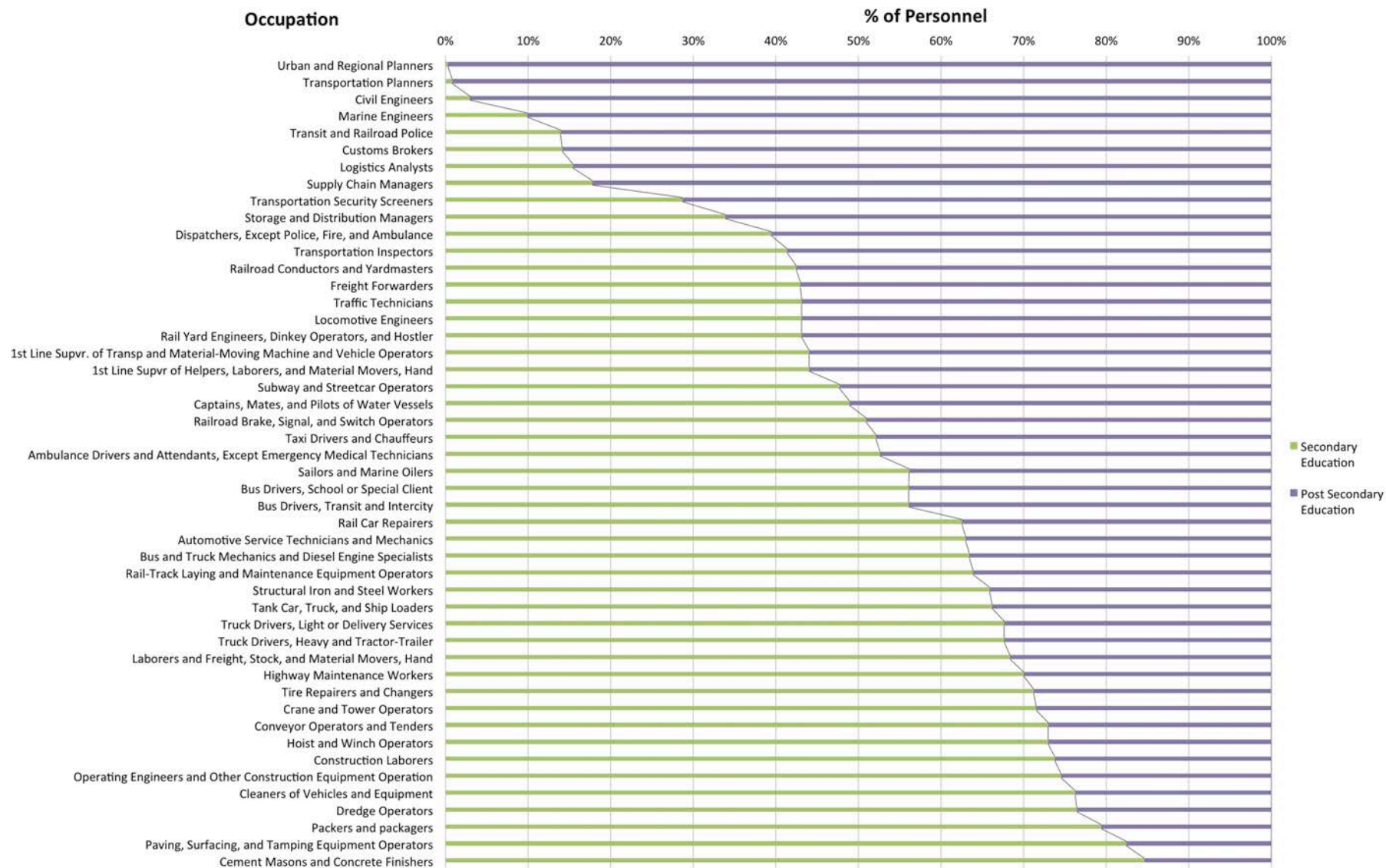
# Hourly Salaries for Transportation Jobs in the Midwest



\* Estimate not available.

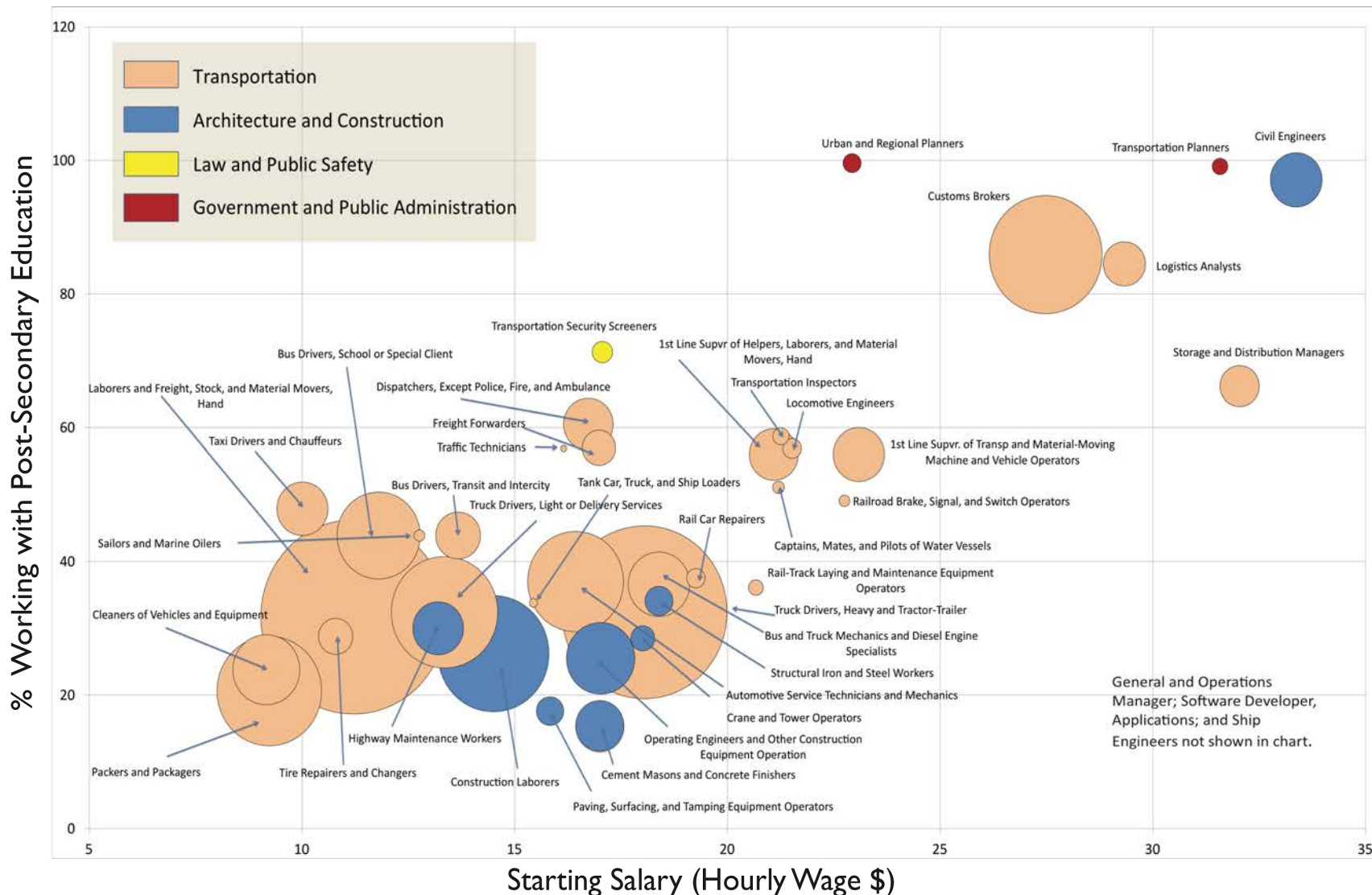


# Educational Attainment of Incumbent Transportation Workers in the US (2010-2011)





# Demand Comparison for Transportation Jobs in the Midwest Region (2022)



# Job Needs and Priorities Report - Midwest Priority Occupations

SOC Code	SOC Occupation Title	Midwest Percent Change 2012-2022	National Percent Change 2012-2022 <sup>b</sup>
53-1031	1 <sup>st</sup> Line Supervisor of Trans and Material Moving Machine and Vehicle Operators	8.09	8.6
49-3031	Bus and Truck Mechanics, Diesel Engine Specialists	7.7	8.6
17-2051	Civil Engineers	15.2	19.7
47-2061	Construction Laborers	17.8	24.3
13-1199	Custom Brokers*	7.7	7.4 <sup>c</sup>
11-1021	General and Operations Manager	9.6	12.4
53-3032	Heavy and Tractor-Trailer Truck Drivers	21.3	11.3
13-1081	Logisticians	20.7	21.9
53-5021	Mates - Ship, Boat and Barge**	8.6	13.8
47-2073	Operating Engineers and Other Construction Equipment Operation	14	18.9
53-5031	Ship Engineers	--	7.8
15-1132	Software Developers, Applications	18.6	22.8





# **Midwest Transportation Workforce Center**

**Draft Plan of Activities 2017-2018**

# “Growing our Own”

- Goal: Develop transportation expertise within immigrant groups.
- Where: Twin Cities - immigration gateway
- Tasks:
  - What are the cultural views of transportation jobs?
  - Attract students to pathways in Diesel Mechanics as a start.
  - Develop materials into a path of future technologies- What is probable?
- Initial partners: City of Minneapolis – Fleet Office, U of Minnesota - Center for Transportation Studies, Minnesota DOT



# “Disrupting the System”

- Goal: Career Awareness
- Reach students as they are using Career Information Systems Vendor Software
- Tasks:
  - Blogging
  - Identify Transportation content to include in Occupations description



# Credentials for Maritime Workforce

Goal: Create stackable credentials for maritime (blue and brown water) workforce

- New practices such Container-on-Barge, and new technologies in maritime.
- Initial partners: Ohio DOT, Southeast Maritime Transportation Center (SMART)
- Initial Tasks:
  - Develop questions for Ohio Maritime Study



# DOT HR Managers Community of Practice

- Goal: Convene roundtable discussion meetings to share issues and share practices
- Big Issue: Recruitment of critical jobs, occupations vary from state to state
- Long-term issue: Diversity and inclusion



# MTWC Activities Fall 2016

- Facilitated Conversations among Stakeholders
- Continue Success Stories Campaign
- Begin Clearinghouse Campaign
- Webinar

# National workforce: FHWA Transportation Workforce Strategic Initiative

- Establish, Engage, and Facilitate Discipline Working Groups
  - Planning, environment, engineering, safety, and operations
  - Public agency and private sector transportation organizations, technical schools, community colleges, and university representatives
  - Inform stakeholder organizations
- Identify and Document Critical Occupations, Education, Training, Skills, Competencies, Experiential Learning programs.
  - Experiential Learning and Innovative Experiential Learning Programs
  - Needs for 5-15 years
  - Define Career Pathways
- Identify and Document Career Pathways, Conduct Demonstration Programs, and Recommendations for Nationwide Implementation
  - Identify Barriers to Implementation
  - Legislative, Policy, Funding Recommendations



# What can planners do?

- Develop a human capital strategic plan.
- Start the conversation about workforce with your industry stakeholders.
- Broaden your transportation plans to include workforce estimates.
- Help build the literature on transportation workforce. Use your SPR dollars for workforce research.
- Be a Mentor.



# What can planners do?

- Share your resources or Success Stories so that we can include them in MTWC Clearinghouse.
- Work with your feeder schools to include the skills you need in the university curriculum.
- Look into apprenticeships as a way to get people to work in your organization.
- Increase awareness of planning among young people by contributing an article to Transportation Today WI.

# Resources

- Illinois Human Capital Strategic Plan

<http://www.idot.illinois.gov/assets/uploads/files/transportation-system/manuals-guides-&-handbooks/opp/idot%20human%20capital%20strategic%20plan.pdf>

- National Transportation Workforce Summit 2012 (CUTC)

[http://www.mycutc.com/wp-content/uploads/2014/09/NTWS\\_Summary-of-Results.pdf](http://www.mycutc.com/wp-content/uploads/2014/09/NTWS_Summary-of-Results.pdf)

- A Plan for Growing Southwest Indiana's Logistics Sector

<https://conexusindiana.files.wordpress.com/2015/06/2015-swrlc-strategic-plan-final-6-10-15.pdf>



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