

Preparing the **W**orkforce for the **E**ra of **A**utonomous **V**ehicles



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Objectives

- Changing nature of driving jobs and knowledge, skills, & abilities (KSA) requirements in response to automated vehicles (AVs)
- Workers' willingness and ability to adapt to AVs
- Anticipated downstream impacts of AVs
- Impacts of COVID-19 on transportation jobs and AV perceptions

Major Activities

Focus groups



Trucking

- Drivers: 12
- Supervisors: 9
- Managers: 12



Ride-hailing & delivery

- Ride-hailing: 2
- Delivery: 4
- Both: 11



Taxi (recruiting)

- Drivers: 3
- Dispatchers: 0
- Managers: 0

Data Collection & Analysis

Newly collected data

- Survey of truck drivers' preferences for alternative occupations
- Social media posts (Twitter)

Analyzing existing data

- O*NET
- Occupational Employment and Wage Statistics
- Current Population Survey
- American Community Survey
- State of the State Survey (MSU)

Ongoing activities

- Survey of industry perceptions of AV adoption & impacts

Research Areas

AV Adoption & Impacts

- AV perceptions & political ideology
- Barriers & facilitators to AV deployment
- AV impacts on occupations
- Driver reactions to AVs

Occupations

- KSA mapping
- Occupation clustering
- Alternative occupations
- Occupation data downscaling
- Reskilling the driving workforce
- Technology and occupational aging & mobility

COVID-19 Impacts

- Trucking industry
- Gig drivers (e.g. ride hailing and delivery drivers)
- Transportation employment

Key Findings: Workforce Impacts and Development

1. Most job changes due to technological change will occur in low-skill, low-wage occupational groups
2. Truck drivers expressed interest in alternative occupations identified using both shared skills and work/industry job search methods

Key Findings: COVID-19

1. Trucking industry disrupted by COVID-19 and companies constantly adapted to reduce costs and accommodate employees' concerns
2. Workers in the transportation industry were more likely to be unemployed than non-transportation industries during COVID-19
3. Positive public perception of truck drivers and gig drivers increased on Twitter during COVID-19
4. Political ideology predicts individuals' intent to adopt AVs

Connection to IATR Guiding Principles

1. **Workforce Development & Monitoring Labor Displacement**
2. **Governance: standardization of laws and regulations, foster demand**
3. **Risk, Liability and Insurance: dedicated lanes for autonomous trucks**

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