



U.S. Department of Transportation
Federal Highway Administration



State of the ITS Workforce

Perspectives from the Public Sector

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March 27, 2019

Draft Competencies

FHWA Operations Discipline Competencies

- Connected / Automated Vehicles
- Manual on Uniform Traffic Control Devices
- Transportation Systems Management and Operations
- Managing Disruptions

Each contains a Competency Definition, Key Behaviors, and Recommended Learning Opportunities – draft provided for reference



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Sample content of draft Competency

Competency	Definition
Connected/Automated Vehicles	Demonstrates, understands and promotes the application of connected/automated vehicle technologies into the roadway network. This includes aspects of cybersecurity related to this technology as well.
Key Behaviors	
<ul style="list-style-type: none">• Demonstrates an expert-level of understanding of and uses consistent CAV terminology• Advances innovative concepts and early adoption of new vehicle technologies and best practices• Provides expert-level guidance in the development, procurement, implementation, operation, and maintenance of hardware and software used to support transportation operations• Provides expert-level guidance in the integration of CAV technologies and applications into existing infrastructure• Interprets use of and partners with states in deploying CAV applications• Leads or identifies sources for technical assistance in the development, procurement, operation, and maintenance of telecommunication systems including wired and wireless communications• Interprets and communicates laws, policies, and institutional issues related to the use of C/AV hardware, software and telecommunications (both wired and wireless)• Maintains situational awareness of and leads technical assistance in responding to cybersecurity threats impacting the transportation system	

Sample content of draft Competency

Key Behaviors (cont.)

- Interprets, provides expert technical guidance, and communicates accepted ITS and C/AV standards (many ITS standards will still apply as C/AV are implemented)
- Provides expert guidance on the Systems Engineering and Agile processes as they pertain to CAV deployment and operations
- Interprets, provides expert-level guidance, and communicates the National ITS Reference Architecture for Cooperative and Intelligent Transportation (Arc-IT)
- Advocates CAV operations strategies designed to achieve established performance goals

Sample content of draft Competency

Recommended Learning Opportunities

- See 24/7 Professional Development portal on Sharepoint - <http://our.dot.gov/office/fhwa.dss/operations/Page%20Library/Training.aspx>
- [2016 and 2018 Operations Boot Camp ITS Technology sessions](#)
- ITS Professional Capacity Building standards training - <https://www.standards.its.dot.gov/>
- ITS JPO resources for Connected Vehicles - https://www.its.dot.gov/deployment_resources.htm
- ITS JPO Compendium of resources for Automated Vehicles - https://www.its.dot.gov/automated_vehicle/index.htm
- CAV V2I website
- National Dialogue on Highway Automation - <https://ops.fhwa.dot.gov/automationdialogue/index.htm>
- T3 Webinars on CAV/emerging ITS Technologies- https://www.pcb.its.dot.gov/t3_archives.aspx
- Contractor information on ARC-IT - <https://local.iteris.com/arc-it/>

Perspectives from the Public Sector

Emphasis on key knowledge, skills and abilities for the workforce

- Clint Smith – Florida Department of Transportation
- Beth Alden – PLAN Hillsborough
- Shannon Haney – HART



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Session Format

- Short Presentation
- Time for immediate questions for each presenter
- 10-15 minutes for panel questions / discussion at the end



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