

ITS PCB Community College Workshop

Session 8: Wednesday, August 12, 2020 | 1:00 p.m. - 2:30 p.m. ET

Series Conclusions

Andy Berthaume (U.S. Department of Transportation) summarized conclusions as well as gaps and challenges identified through the ITS PCB Community College Workshop Series:

- Community colleges (CCs) are well positioned to prepare a new generation to meet the challenges of the ITS workforce.
 - They can deliver the foundational competencies and skills needed.
 - They can forge long term partnerships with multiple employers.
 - They can demonstrate pathways to on-the-job training, apprenticeship, and other avenues of continued learning.
 - They can develop certificates and credentialing to maintain and upskill the existing workforce.
 - Many positions in ITS in the public and private sector do not require a 4-year degree for entry.
- Two different models for CC and tech school graduates to begin enhancing our transportation workforce:
 - Direct pipeline between a CC/tech school and transportation agency(s) or companies. Involves identifying CC and tech school programs that already teach what these agencies need, modifying the curricula, and/or adding classes or labs so that the transportation components are integrated and sufficiently taught, and explaining to the students that the transportation industry is a viable place to find a great job. Partnerships, formal co-ops, etc. could help cement a pipeline.
 - DOTs and agencies recruit from CCs and tech schools to fill critical gaps in workforce. If the job market is slow in areas (such as some rural areas) and DOTs only need to hire once in a while, they should think about CC graduates for these positions and should attend CC job fairs, etc.
- Additional training may be needed to bridge technical gaps. DOTs could do this in-house as part of their onboarding. Tech schools or CCs could offer certificate programs.
- Major outreach would be needed to departments of transportation (DOTs), agencies, and the private sector, making folks aware of the opportunities and staffing solutions available through CCs.

Gaps and Challenges

Andy Berthaume summarized the gaps and challenge identified during the workshop:

- Bringing an equity lens to program development and reaching underserved populations.
- Adjusting CC courses and teaching content will not be easy. CCs will face financial and stakeholder coordination challenges.
- The ITS job market needs to be better understood.
- DOTs, agencies, and the transportation industry need to recognize opportunities for strengthening the ITS workforce.
- DOTs, agencies, and transportation industry may need support in transitioning to a model that benefits from CCs, tech schools, and their graduates—for example, by coordinating with their metropolitan planning organization (MPO).
- There are potential Human Resources hurdles for hiring non-engineers

Proposed Working Groups

Andy Berthaume described potential working groups (WGs) that could focus on specific action items. Participants were invited to recommend changes to potential WGs, suggest additional WGs, and express interest in participating one or more of the WGs.

- All Attendees
- Define the ITS Technician Job Market

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- Scoping and Developing Employer-Educator Pipeline (EEP)
- Strengthening the ITS Workforce with CC and Tech School Graduates
- Outreach and Recruitment
- Develop and Refine Training Materials and Products for Classrooms (focus on Connected and Automated Vehicle environment (CAVe)-in-a-box and vehicle-to-everything (V2X) Hub)

National Operations Center of Excellence (NOCoE)

Patrick Son presented on NOCoE's work studying gaps and challenges in the ITS workforce:

- Has looked at job descriptions and other sources to help understand the ITS workforce.
- HR departments often do not know how to write job descriptions in the way we need and we do not how to provide the employees they need. The practitioners need help understanding how to hire the right people.
- There are a lot of people in the field who are on their second or third career.

ITS America (ITSA)

Carlos Alban presented on ITSA's work studying gaps and challenges in the ITS workforce:

- Have been looking at key areas members are most interested in. One area they would like us to pursue is establishment engagement in student careers.
- We could use participants' help responding to an online survey that we will be sending to provide an initial baseline of ITS opportunities available to students. Hopefully that will also help us see gaps and needs for student engagement. Could identify gaps in student outreach or workplace initiatives.
- We will also conduct phone interviews with select people to learn more.

Open Discussion

Trying to bring all this work together and focus it in the CC domain.

- What do you think are the needs? What are you looking for? How can we help?
 - CAVe-in-a-box sounds great. We are going to try to be all in. It seems best suited to the mechatronics programs due to the programming aspect, more than the automotive courses.
- Is there a list of participating community colleges that includes their curriculum?
 - The ITS PCB program is updating an existing list of ITS courses that will include CC ITS courses.
- I think the idea of developing a website for DOTs and agencies to post their ITS Technician staffing needs is terrific!
- There is a need to build out a study based on a national study that is specific to the job needs and opportunities in your region. We are going to want to keep building case studies of examples of programs that partner the CC program with the jobs, and/or between disciplines at a CC.
- We are looking for student groupings, clubs that form their own identity as a learning community that will make professional contacts in the employment and job field.
- It would be helpful to try to bring in the private sector to the conversation.
- Has anyone incorporated virtual reality or simulations into their courses?
 - Not yet, but have thought about it.
- Developing a new program and/or curriculum that can lead to multiple industry areas of employment but that overlap in terms of content can make proposals for new programs more palatable for governing bodies in higher ed. Glad to contribute/help as is beneficial.
- It is very helpful to share descriptions of lessons learned and successes.

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- Small things can lead to big benefits – for example, removing “civil” from the “civil engineering” requirement in a job description can have a significant impact on increasing the applicant pool.
- Usually when the workforce is lacking in something, we have companies come to us. This has not happened yet. I think we know it is coming.
- Are all state DOTs equally involved in ITS development?
 - They are not all equal in their ITS maturity. Some are more advanced than others are.