Transportation

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Advisors

Cesar Portugal, Department Chair, Aviation Science, California Baptist University
Gonzalo Garcia, Technical Trainer, Velocity Truck Centers
Jazmin Jaime, Automotive Instructor, San Bernardino Valley College
Kimberly Benson, Administrator, UAS Center - San Bernardino International Airport
Lisbeth Sanchez, CX Training Supervisor, Velocity Truck Centers
Mike Inghram, General Manager, Guardian Jet Center

K12 Educational Participants

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Antonio Alvarado, Automotive Technology Teacher, San Gorgonio High
August McIntosh, Auto Shop Teacher, Cajon High
Cameron Singh, Director of Curriculum, Assistant Professor, California Baptist University
David Aman, K12 Pathway Coordinator, Colton Redlands Yucaipa ROP
Devin Baze, Teacher/Aviation, Colton Redlands Yucaipa ROP
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Mike Rosano, Teacher/Automotive Technology Teacher, Yucaipa High
Robert Velasquez, Teacher/Automotive Technology Teacher, Bloomington High

Minutes

The Transportation Advisory panel included industry representatives from aviation operations, diesel technology training, automotive education, unmanned aircraft systems, and fleet service management. The following summarizes key discussion themes and recommendations shared during the advisory.

Question 1: What emerging trends and technologies do you believe will drive the most change in this industry over the next 3-5 years, and what should teachers and students focus on to stay ahead?

Mike Inghram: Explained that artificial intelligence and automation are rapidly becoming more integrated into aviation operations, including systems such as automated landing capabilities and advanced autopilot functions. While these technologies can improve safety and efficiency, he emphasized that overreliance on automation can create risks if foundational skills are not maintained. He stressed the importance of teaching students core aviation fundamentals such as manual flight skills, aircraft systems knowledge, and operational awareness.

Mike noted that as technology becomes more sophisticated, students must still understand how to perform essential tasks that computers cannot fully replace, including aircraft fueling, inspection procedures, and situational decision-making. He also highlighted the growing concern that students may become complacent due to increased dependence on technology and AI tools. Educators should reinforce critical thinking, independent problem-solving, and verification of information rather than assuming digital outputs are always accurate. Maintaining strong foundational training alongside technological exposure will help students adapt to future aviation advancements.

Cesar Portugal: Emphasized that artificial intelligence, automation, and advanced vehicle technologies are transforming transportation industries broadly, including aviation and automotive sectors. He stressed that while students may be eager to engage with emerging technologies such as coding for AI-driven systems, it is essential that educators prioritize discipline, structure, and foundational technical knowledge first.

He explained that aviation careers require a high level of commitment and accountability, and that technical competence must be supported by professional behaviors such as punctuality, consistency, and adherence to safety protocols. Cesar highlighted the importance of building structured training programs that develop foundational understanding before introducing advanced technologies. This includes teaching core principles such as mechanical systems, operational procedures, and aviation theory. He noted that students who develop strong discipline and work ethic are more likely to succeed in highly regulated and safety-critical transportation careers.

Gonzalo Garcia: Discussed how rapid technological advancements in commercial vehicles are transforming the diesel and heavy-duty truck industry. Modern trucks increasingly function as "rolling computers," incorporating advanced electronic systems, automated safety features, and complex diagnostic technologies. He emphasized that students entering the field must develop a basic understanding of electronics, communication networks, and system inputs and outputs to effectively diagnose and repair modern equipment.

He suggested that CTE programs should introduce students to the fundamentals of how onboard computer systems interact with mechanical components. While students may not need to master highly advanced diagnostics immediately, understanding system logic and electronic schematics will become increasingly important over the next several years. Gonzalo noted that preparing students to keep pace with evolving vehicle technologies will be critical to maintaining workforce readiness in the transportation sector.

Kimberly Benson: Explained that the unmanned aircraft systems (UAS) industry is experiencing significant growth and technological evolution. The role of drone operators is shifting from basic flight tasks toward managing complex operations involving multiple drones simultaneously. Emerging applications include package delivery in urban environments, medical supply transport, search and rescue missions, and integration of unmanned aircraft into shared airspace with traditional aviation operations.

She emphasized that future workforce preparation must include understanding regulatory requirements, risk management, and the development of standard operating procedures for drone operations. Students will need skills related to scaling operations, coordinating airspace use, and ensuring compliance with increasingly complex aviation regulations. Kimberly noted that safety and operational planning will remain central to successful drone deployment as the industry continues to expand.

Jazmin Jaime: Highlighted the growing complexity of automotive software systems and the importance of teaching students how to effectively navigate digital service information and onboard vehicle diagnostics. She explained that technicians must carefully review manufacturer service procedures before performing repairs to avoid missed steps that could compromise vehicle safety or performance.

She encouraged educators to emphasize attention to detail, technical reading comprehension, and systematic diagnostic approaches. As vehicles incorporate more integrated software systems, technicians must be comfortable working within digital platforms while maintaining strong mechanical understanding. Jazmin noted that balancing traditional hands-on skills with software literacy will be essential for preparing students for modern automotive careers.

Lisbeth Sanchez: Emphasized that adaptability will be one of the most important skills for students entering transportation careers. She noted that diesel trucks and other commercial vehicles are increasingly dependent on advanced software systems and electronic schematics, requiring technicians to continuously update their knowledge.

She also highlighted the growing relevance of alternative fuel technologies and the need for students to understand evolving powertrain systems. Preparing students to adapt to changing technologies, new diagnostic tools, and emerging environmental standards will help ensure long-term career sustainability in the transportation industry.

Question 2: How should our Career Technical Education (CTE) pathways adapt to ensure students are well-equipped to meet future demands and changes in this industry?

Kimberly Benson: Explained that in the unmanned aircraft systems (UAS) field, students must go beyond earning basic certifications such as the FAA Part 107 license in order to be truly employable. While certification requirements may focus on written examinations, industry readiness depends heavily on hands-on operational experience. She noted that students often need significant post-certification flight time, sometimes 30–50 hours, to develop the practical skills required by employers.

She emphasized that CTE programs should prioritize applied learning experiences that allow students to understand and follow formal operational procedures, including standard operating procedures (SOPs) required in aviation environments. Preparing students to manage real-world scenarios involving airspace coordination, risk management, and mission planning will strengthen workforce readiness. Kimberly also encouraged educators to incorporate capstone-style projects that simulate authentic job tasks, enabling students to demonstrate problem-solving, planning, and performance evaluation skills.

Jazmin Jaime: Emphasized the importance of developing students' patience, attention to detail, and persistence when diagnosing technical problems. She noted that automotive technicians must often work through complex troubleshooting processes where initial assumptions may be incorrect. CTE pathways should help students build resilience and adaptability by reinforcing that failure and revision are natural components of technical learning.

She encouraged educators to guide students in developing systematic diagnostic habits, including careful review of service documentation and willingness to revisit procedures when solutions are not immediately clear. Strengthening these problem-solving skills will help students become more confident and capable in rapidly evolving automotive environments.

Cesar Portugal: Emphasized that effective CTE pathways begin with early exposure to career options at the junior high and high school levels. He explained that students benefit from structured opportunities to explore technical trades before making long-term career decisions. Building strong foundational skills, professional discipline, and commitment to learning during these formative years can significantly improve long-term success.

He also highlighted the importance of developing partnerships between secondary education programs and postsecondary institutions or industry facilities. Providing students with opportunities to visit training sites, interact with professionals, and observe real work environments helps create clear career roadmaps. Cesar noted that structured pathways should help students understand both college and direct-to-workforce options, enabling them to make informed decisions about their next steps after graduation.

Lisbeth Sanchez: Emphasized the importance of strong partnerships between CTE programs and industry employers. She noted that collaboration with dealerships and transportation companies can provide students with greater visibility into career opportunities, workplace expectations, and advancement pathways. Helping students understand that technical careers offer long-term growth potential, leadership opportunities, and financial stability can increase motivation and engagement.

She encouraged educators and industry partners to work together to align training with real workforce needs and to provide students with opportunities for mentorship, internships, and career exploration experiences.

Gonzalo Garcia: Discussed the need for increased hands-on learning opportunities within CTE pathways. He noted that some training environments rely too heavily on theoretical instruction, videos, or online information sources, which may not fully prepare students for real-world technical challenges. He emphasized that students benefit most when they can physically work with equipment, practice repairs, and apply diagnostic procedures in supervised settings.

He also raised concerns about the reliability of online technical advice and stressed the importance of teaching students to follow manufacturer guidelines and verified technical literature. Strengthening experiential learning components within pathways can help ensure students develop both technical competence and confidence.

Mike Inghram: Emphasized the importance of preparing students for workplace dynamics, including working in multi-generational environments and accepting constructive feedback. He explained that young employees may need support in developing professional communication skills, emotional resilience, and teamwork behaviors required in high-responsibility transportation careers.

He noted that safety-critical industries require strong accountability and openness to continuous learning. Encouraging students to listen to experienced colleagues, contribute ideas respectfully, and remain focused on doing tasks correctly the first time can help prevent costly or dangerous errors. Mike also stressed that CTE programs should reinforce real-world expectations, including the importance of precision, responsibility, and collaboration in technical fields.

Question 3: What essential skills, educational qualifications, and certifications are currently required to gain employment in your industry, and how might these requirements change in the near future?

Mike Inghram: Explained that educational requirements within aviation are evolving as industry demand increases and workforce shortages continue. While a bachelor's degree was once widely expected for pilot careers, some employers are shifting away from strict degree requirements due to the high cost of education and the need to attract more candidates. He noted that students can pursue alternative pathways such as aviation maintenance programs, line service roles, or operational support positions that provide strong earning potential without requiring four-year degrees.

He also highlighted opportunities for career advancement through hands-on experience, travel assignments, and military training programs that can support flight training costs. Mike emphasized that strong interpersonal and customer service skills are especially valuable in private aviation environments, where employees frequently interact with high-profile clients. Professionalism, positive attitude, and the ability to build relationships can lead to unexpected career opportunities and advancement.

Jazmin Jaime: Emphasized that strong foundational academic and communication skills remain essential for automotive technicians. She noted that technicians must be able to read technical manuals, document repairs clearly, and communicate effectively with customers and supervisors. Writing repair orders accurately is particularly important, as these records often serve as legal documentation.

She also highlighted the value of earning Automotive Service Excellence (ASE) certifications, which are widely recognized across the automotive industry and can improve employment prospects and earning potential. These certifications typically require both formal testing and documented work experience. Jazmin explained that achieving recognized credentials helps technicians qualify for manufacturer-specific training programs and demonstrates professional competence to employers.

Cesar Portugal: Discussed the significant workforce demand projected within the aviation sector, including pilots, maintenance technicians, dispatchers, operations managers, and other support roles. He emphasized that career preparation in aviation requires strong discipline, long-term commitment, and careful consideration of return on investment when pursuing education or training pathways.

While pilot careers may still require advanced certifications and substantial flight training, he noted that many aviation occupations offer competitive salaries with shorter training timelines. Cesar encouraged students to evaluate career goals thoughtfully and understand that structured progression through certifications, instructional roles, or regional airline experience can lead to

high-earning positions. He stressed that professional success in aviation is strongly influenced by motivation, work ethic, and persistence.

Lisbeth Sanchez: Explained that technician shortages have prompted many employers to develop alternative entry pathways into diesel and transportation careers. She described apprenticeship programs that allow students to enter the workforce directly after high school with foundational technical knowledge gained through CTE pathways. These programs may be accredited through organizations such as the U.S. Department of Labor and can provide paid training while employees build practical skills.

She noted that structured apprenticeship programs can lead to industry-recognized certifications and long-term employment opportunities. Students who demonstrate mechanical aptitude, familiarity with tools, and basic understanding of engine systems can often transition successfully into these programs without needing to attend traditional trade schools.

Gonzalo Garcia: Shared that hiring expectations within the diesel industry have shifted over time due to workforce shortages. While technicians previously needed to complete trade school and gain prior work experience before entering the field, many employers now prioritize willingness to learn and foundational knowledge over formal credentials.

He explained that students can begin working while continuing their education, gaining valuable experience that strengthens their long-term career prospects. Gonzalo emphasized that technical growth often occurs through mentorship, hands-on training, and exposure to evolving vehicle technologies rather than solely through classroom instruction.

Kimberly Benson: Emphasized that emerging roles within the drone industry increasingly require data analysis and technology-focused skills. While some positions may only require an associate degree, employers are seeking candidates with competencies in areas such as geographic information systems (GIS), data processing, quality assurance, and computer science.

She noted that as drone operations become more complex, students will benefit from developing both operational flight skills and technical abilities related to data interpretation and mission planning. These interdisciplinary skill sets are expected to become more important as the unmanned aviation sector continues to expand.

Question 4: What are a few occupations within the industry that do not require advanced degrees yet offer a living wage? Additionally, what advice would you give to a recent high school graduate that would help them gain employment in your industry?

Gonzalo Garcia: Explained that entry-level roles such as apprentices and technicians in the diesel and heavy-duty truck industry can provide competitive wages without requiring advanced degrees. He noted that apprenticeship programs allow students to begin earning income while developing technical skills, with wages increasing as they progress toward fully qualified technician roles. He shared that technicians in the field can earn strong hourly wages and build long-term careers that provide financial stability.

He also emphasized the importance of maintaining motivation and continuing to learn throughout one's career. Gonzalo advised recent graduates to avoid complacency, remain open to mentorship, and take advantage of advancement opportunities. He highlighted that many leaders within transportation companies began their careers in entry-level shop positions and advanced through dedication and skill development.

Lisbeth Sanchez: Added that transportation companies offer a variety of career pathways beyond technician roles, including parts specialists, service advisors, and sales positions. These occupations can provide stable wages and opportunities for advancement without requiring four-year degrees. She emphasized that exposure to different operational areas within a company can help students identify career interests and build long-term professional growth.

Mike Inghram: Explained that aviation offers multiple entry-level positions such as line service technicians, ground operations staff, and aviation maintenance support roles that can lead to living wages over time. He noted that employees often need to be willing to work overtime, travel, or accept irregular schedules in order to increase earnings and gain experience.

He advised recent graduates to live within their means, remain flexible, and take advantage of opportunities that provide exposure to different aspects of aviation operations. Mike emphasized that career progression often requires dedication and willingness to start in foundational roles while building technical knowledge and industry connections.

Kimberly Benson: Explained that entry-level positions in the drone industry may involve supporting mission operations, data collection, or technology-based tasks rather than traditional piloting roles. She noted that individuals who demonstrate reliability, attention to safety procedures, strong documentation skills, and comfort with technology can be competitive candidates for these opportunities.

She emphasized that students who can show experience completing structured projects or operational tasks are more likely to succeed in securing employment. Developing technical

competence alongside professional work habits can help graduates transition into emerging aviation technology careers.

Jazmin Jaime: Shared that entry-level automotive positions such as service technicians can provide stable wages and career advancement opportunities. She emphasized that professional behaviors including punctuality, responsibility, and respect are essential for success in the workplace.

She also noted the importance of maintaining personal accountability and understanding the serious responsibilities associated with technical repair work. Jazmin encouraged recent graduates to complete tasks thoroughly, demonstrate reliability, and remain focused on building a positive reputation with employers.

Audience Questions

Audience Question 1: *What oversight exists for self-driving vehicles, and how is the industry monitoring safety, decision-making, and system failures as this technology becomes more common?*

Gonzalo Garcia: Explained that, from the dealership perspective, Velocity Truck Centers primarily sells, services, and provides parts support for vehicles rather than manufacturing autonomous systems. Because of that, he could not speak in detail about how self-driving vehicle technology is monitored or controlled at the manufacturer or software-development level. He noted that autonomous vehicle oversight would more likely fall to the companies developing the technology, including their engineering, information technology, and management teams. Gonzalo acknowledged the seriousness of the issue, particularly when considering large commercial vehicles that may be transporting heavy loads or hazardous materials, and agreed that the growing presence of autonomous systems raises important safety concerns.

Audience Question 2: *What are some things high schools and colleges could do better to prepare students for the workforce, especially when many students are not fully ready for industry expectations?*

Mike Inghram: Explained that one of the most effective ways schools can better prepare students is by increasing access to pathway-based internships and real workplace experiences. He described Guardian Jet Center's summer internship model for high school students and noted that the program has already led to successful hires. He emphasized that these experiences help students understand both the nature of the work and whether the field is a good fit for them.

Mike also stressed the importance of honesty, follow-through, and effort. He noted that employers invest significant time and money in onboarding and training new employees, so students need to present themselves truthfully in interviews and understand the realities of the role they are pursuing. He added that students who volunteer, take initiative, and consistently demonstrate effort are the ones most likely to stand out and succeed.

Audience Question 3: *At what age can students begin participating in internships or employment opportunities with your organizations, and what do those early experiences look like?*

Lisbeth Sanchez: Explained that Velocity Truck Centers has hired students as young as 18 who recently graduated from high school. She shared that new apprentices begin with orientation processes such as uniforms, onboarding, and computer-based training before moving into hands-on learning in the shop. Students are gradually introduced to the work under the guidance of trained staff and gain exposure to both the technical and procedural aspects of the role.

Mike Inghram: Explained that Guardian Jet Center's summer internship program is coordinated in partnership with local education contacts and is typically designed for high

school students. He noted that students are selected before summer and generally begin around June 1. The program has been structured flexibly, including four-week options, to accommodate student availability and family obligations.

He emphasized that students who continue showing initiative after the internship often distinguish themselves. Mike shared that some students continue to return, volunteer, or support work beyond the formal internship period, and those behaviors strongly influence hiring decisions. He explained that Guardian has had success identifying highly motivated future employees through this process.

Audience Follow-Up Comment/Clarification: An audience member shared that, in aviation and aviation maintenance programs, students are intentionally prepared through résumé development, interview practice, and skill-building activities so they can present themselves professionally and competitively for these opportunities.

Deidra Puentes, Facilitator – Additional Clarification: Clarified that internship implementation can vary significantly by district because each district has its own policies and procedures. She explained that some Regional Occupational Program (ROP) systems may already have structured community classroom or internship processes in place, while district-based programs may operate differently. She noted that internship expansion across additional districts would likely require direct relationship-building and district-level coordination.

Audience Question 4: *Could internship opportunities be expanded to students from additional school districts, and what would be required to make that happen?*

Mike Inghram: Shared that he would welcome the opportunity to expand the internship model to include students from additional districts. He explained that the larger issue is not a lack of interest, but rather ensuring coordination, communication, and reliability among all parties involved. He noted that Guardian leadership supports the concept and values community engagement, but scaling the effort requires intentional planning and trusted partnerships.

Deidra Puentes, Facilitator – Additional Response: Added that expansion across districts depends heavily on local district policies, internship structures, and administrative processes. She explained that no single county-level process governs all districts equally, which means employers and educators often have to build relationships individually and determine what is feasible within each local system.

Mike Inghram – Additional Response: Added that workers' compensation and liability coverage are also important considerations. He explained that Guardian has been able to work through those requirements for student interns, but those details must be addressed clearly when building similar partnerships.

Audience Question 5: *Have you considered sharing your internship model with other aviation employers so they might adopt similar student workforce-development approaches?*

Deidra Puentes: Asked whether the internship structure being used at Guardian Jet Center could eventually become a model that might be shared with other companies in aviation.

Mike Inghram: Explained that expanding the model across other aviation employers can be difficult because many fixed-base operators (FBOs) are privately owned and differ significantly in leadership priorities, staffing capacity, and willingness to invest time in student development. He noted that success often depends on whether a site leader is personally committed to community engagement and workforce development. Mike shared that not all employers are equally willing or able to devote the time needed to develop student internship pathways, even when the workforce need exists.

Audience Question 6: *How often do your organizations bring in interns or apprentices, and is there a set schedule for hiring and training them?*

Lisbeth Sanchez: Explained that the timing of apprenticeship hiring is based largely on dealership needs rather than a fixed annual calendar. She noted that the previous year was the first time Velocity Truck Centers formally brought students directly from high school into the program. Hiring decisions depend on workforce demand at specific dealership locations.

She also shared that the company is working with additional partners to create more opportunities for students who want to continue in the industry. Beyond apprenticeships, Velocity has also begun supporting micro-internship experiences through its training center, where high school and community college students can participate in short, hands-on learning sessions. Lisbeth emphasized that the company is open to partnering in a variety of ways depending on school needs and program goals.

Audience Question 7: *Why do so many students seem unsure about their futures, and what role do internships and industry exposure play in helping them find direction?*

Mike Inghram: Reflected that many students appear uncertain about their career direction and may not be having meaningful conversations at home about their futures. He suggested that technology, social media, remote work culture, and changing post-COVID habits may all be contributing to lower levels of direction, motivation, and in-person communication skills among young people.

He emphasized that internships, training experiences, and direct industry exposure are especially important because they give students something tangible to pursue and help them see that real opportunities exist. Mike expressed strong support for increasing these types of experiences and encouraged greater industry participation so more students can connect classroom learning to real workforce pathways.

Jazmin Jaime – Additional Response: Added that she has also seen a noticeable shift in students' transition to work since COVID. She observed that, prior to that period, more students

seemed to move directly from school into employment or training pathways, while more recent students often spend additional time in unrelated service jobs before gaining access to industry opportunities. She agreed that internships and earlier exposure to career pathways can help students gain clarity and momentum sooner.

Audience Question 8: Is it normal for a vehicle to use about a quart of oil between oil changes, and what should a customer do if they believe the dealership is delaying warranty-related documentation or repair steps?

Deidra Puentes, Facilitator: Asked a consumer-focused question based on her own vehicle experience, explaining that her car had been using oil between oil changes and that she was concerned the dealership was delaying action while her warranty period continued to decrease.

Gonzalo Garcia: Explained that some manufacturers have established technical procedures for monitoring oil-consumption concerns, including having customers return after a set mileage interval so the issue can be documented and measured accurately. He noted that certain manufacturers have addressed these concerns through formal repair processes when oil usage exceeds acceptable limits. Gonzalo suggested that there may be a technical service bulletin or manufacturer guidance related to the issue and emphasized that proper documentation is important.

Audience/Panel Additional Response: An additional response clarified that manufacturers often issue technical service bulletins for mechanics and dealerships rather than sending recall-style notices directly to vehicle owners. Because of that, customers may need to raise the concern proactively and ensure it is noted in the service record.

Audience Question 9: *What resources shared today can help educators strengthen employability skills instruction and identify schools offering transportation-related pathways?*

Deidra Puentes: Highlighted several resources available to attendees, including the advisory document folder, the SBCSS Employability Skills curriculum, and the K12 Career Education Navigator. She explained that the employability skills resource includes presentations, worksheets, assessments, and related materials focused on soft skills such as communication and punctuality. She also noted that the Career Education Navigator can be used to identify schools offering pathways in areas such as automotive technology and other industry sectors, which may help employers and educators build stronger regional connections.

Cross-Panel Key Takeaways

These are the themes that appeared consistently across the full four questions AND the audience Q&A.

1. **Technology is rapidly transforming transportation careers.** Panelists emphasized that artificial intelligence, automation, advanced vehicle systems, and drone operations are reshaping industry expectations. Students must understand both emerging technologies and the foundational principles that support them.

2. **Strong technical fundamentals remain essential despite technological advances.** Across aviation, automotive, diesel, and unmanned systems, panelists stressed that students must first develop core knowledge and hands-on skills before relying on automation or digital tools.

3. **Hands-on learning and real-world exposure significantly improve workforce readiness.** Internships, apprenticeships, job shadowing, and project-based learning experiences were identified as critical in helping students understand workplace expectations and develop employable skills.

4. **Industry partnerships play a vital role in building effective Career Technical Education pathways.** Panelists highlighted the importance of collaboration between schools, colleges, and employers to create structured entry points into transportation careers.

5. **Soft skills and professional behaviors are as important as technical skills.** Communication, punctuality, teamwork, adaptability, honesty, and the ability to receive feedback were repeatedly cited as key factors influencing hiring and long-term career success.

6. **Multiple career pathways exist that do not require advanced degrees but still offer living wages.** Entry-level positions in aviation operations, automotive service, diesel technology, drone operations, and logistics can lead to financially sustainable careers with opportunities for advancement.

7. **Students benefit from early exposure to career options and clearly defined pathways.** Panelists emphasized the importance of introducing career exploration at the junior high level and providing students with a clear roadmap that includes education, training, and employment steps.

8. **Workforce shortages create significant opportunities for motivated students.** Industry representatives noted ongoing demand for technicians, pilots, operations staff, and other transportation professionals, reinforcing the value of preparing students for these high-need careers.

Cross-Panel Action Items

These action items synthesize the most actionable guidance from the full advisory. These are the steps teachers can embed into coursework, lesson plans, or pathway design.

1. Increase hands-on learning opportunities within transportation pathways.

- Incorporate structured lab activities using industry tools and equipment.
- Design troubleshooting exercises that require students to diagnose and solve real-world technical problems.
- Use simulations, mock repair scenarios, or operational tasks that reflect workplace expectations.

2. Integrate employability skills instruction intentionally throughout coursework.

- Embed lessons on punctuality, communication, teamwork, and professionalism into daily classroom routines.
- Provide opportunities for students to practice documentation, reporting procedures, and workplace communication.
- Include evaluation criteria that assess both technical performance and professional behavior.

3. Expand internship, apprenticeship, and industry partnership opportunities.

- Collaborate with local employers to develop job shadowing, micro-internships, or summer work experiences.
- Invite industry representatives to speak with students about workplace expectations and career pathways.
- Work with district leadership to develop structured processes that support student placement and supervision.

4. Introduce career exploration earlier in the educational pipeline.

- Provide transportation career awareness lessons at the middle school level.
- Offer pathway exploration activities that help students understand different industry roles.
- Support students in developing individual career roadmaps that include education, training, and employment steps.

5. Balance emerging technology instruction with strong technical fundamentals.

- Teach students how to use AI, automation, and digital diagnostic tools responsibly.
- Reinforce foundational knowledge such as mechanical principles, safety procedures, and system operations.
- Encourage critical thinking so students can perform tasks effectively even when technology fails.

6. Help students understand multiple postsecondary entry points into transportation careers.

- Provide guidance on certifications, apprenticeships, military training, and community college programs.

- Discuss the relationship between education costs, earning potential, and career advancement.
- Highlight opportunities to earn while learning through structured workforce programs.

7. Implement real-world capstone or mission-based projects.

- Create culminating assignments that simulate workplace responsibilities and decision-making.
- Require students to follow procedures, meet deadlines, and present project outcomes.
- Partner with industry professionals to review or provide feedback on student work.

8. Strengthen ongoing communication with industry partners.

- Participate in advisory meetings and industry tours to stay current on workforce trends.
- Share pathway curriculum and student outcomes with employers to build long-term collaboration.
- Use regional workforce data and program maps to identify new partnership opportunities.

Key Takeaways and Action Items by Panelist

These key takeaways and action item lists highlight each respondent's insights, concerns, and suggested actions to address industry trends and to prepare students for the evolving landscape within their respective industries.

Jazmin Jaime, Automotive Instructor, San Bernardino Valley College
Key Takeaways:

- Foundational technical knowledge and attention to detail are critical for success in automotive careers.
- Students must develop patience and persistence when diagnosing mechanical issues, as problem-solving often requires multiple attempts.
- Strong communication and documentation skills are essential because repair orders serve as legal and professional records.
- Industry certifications such as ASE credentials can improve employment opportunities and earning potential.

Action Items:

- Provide students with structured troubleshooting exercises that require step-by-step analysis.
- Incorporate writing tasks such as repair documentation and service reports into technical coursework.
- Encourage students to pursue industry-recognized certifications aligned with pathway goals.

Cesar Portugal, Department Chair, Aviation Science, CBU
Key Takeaways:

- Discipline, structure, and commitment are essential traits for long-term success in aviation careers.
- Early exposure to aviation pathways helps students understand career expectations and training requirements.
- Workforce demand for pilots and aviation professionals is expected to continue growing significantly.
- Students must understand return on investment considerations when choosing educational and training pathways.

Action Items:

- Introduce aviation career awareness activities at the middle school and early high school levels.
- Develop partnerships with colleges and industry organizations to provide campus visits and facility tours.
- Reinforce expectations for professionalism and accountability within classroom instruction.

Lisbeth Sanchez, CX Training Supervisor, Velocity Truck Centers

Key Takeaways:

- Apprenticeship programs provide valuable opportunities for students to earn income while building technical skills.
- Transportation companies offer a wide range of career options beyond technician roles.
- Workforce shortages create strong demand for entry-level employees with basic technical knowledge.
- Adaptability and familiarity with digital diagnostic tools are increasingly important in modern vehicle service.

Action Items:

- Connect students with apprenticeship or training programs that allow them to transition directly into employment.
- Provide instruction on reading schematics, software navigation, and alternative fuel technologies.
- Invite employer representatives to present career opportunities and hiring expectations.

Gonzalo Garcia, Technical Trainer, Velocity Truck Centers

Key Takeaways:

- Technology in transportation systems continues to advance, increasing the need for electronics and diagnostic knowledge.
- Hands-on learning is essential for building technician confidence and competence.
- Many industry leaders began their careers in entry-level shop roles and advanced through experience.
- Continuous learning and professional growth are necessary to remain competitive in the field.

Action Items:

- Incorporate electronics fundamentals and system input/output concepts into technical lessons.
- Provide students with opportunities to work directly with equipment and tools whenever possible.
- Encourage mentorship relationships between experienced technicians and students.

Mike Inghram, General Manager, Guardian Jet Center

Key Takeaways:

- Entry-level aviation roles can lead to strong earning potential and career advancement without requiring advanced degrees.
- Internships and real-world exposure help students determine career interests and develop workplace readiness.
- Soft skills such as honesty, reliability, and the ability to accept feedback influence hiring decisions.

- Overtime, travel, and flexible schedules are often necessary to build experience and increase earnings in aviation careers.

Action Items:
- Develop internship programs that allow students to observe and participate in aviation operations.
- Teach students how to prepare for interviews and communicate honestly about their skills and experience.
- Provide guidance on financial literacy and workplace expectations for entry-level employees.

Kimberly Benson, Administrator, UAS Center
Key Takeaways:
- The drone industry is expanding rapidly, creating new roles related to operations management, data analysis, and safety compliance.
- Students must understand regulatory requirements and standard operating procedures for aviation technology careers.
- Mission-based projects can help students develop practical skills and industry-relevant experience.
- Reliability, technological competence, and safety awareness are critical employability factors.

Action Items:
- Implement capstone or mission-based projects that simulate real-world drone operations.
- Provide instruction on aviation regulations, risk management, and documentation procedures.
- Encourage students to build technical skills in data analysis, GIS, and computer science applications.

Labor Market Information

The following labor market information was sourced from https://www.onetonline.org/ on March 18, 2026.

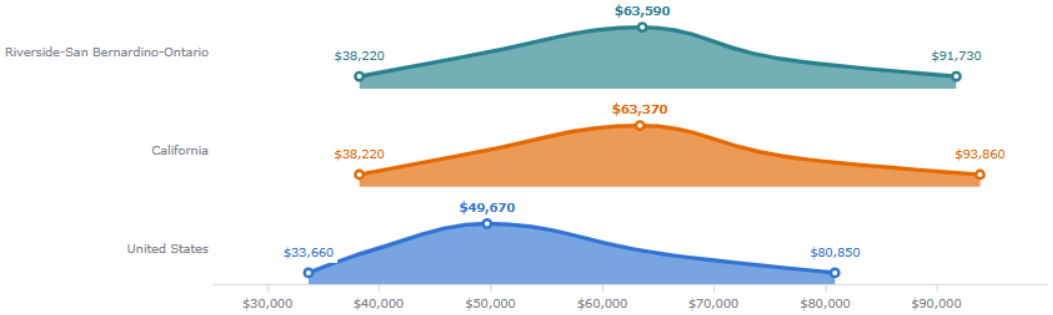
Local Wages

49-3023.00 - Automotive Service Technicians and Mechanics

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

- Workers on average earn **$63,590**.
- 10% of workers earn **$38,220 or less**.
- 10% of workers earn **$91,730 or more**.

In California:

- Workers on average earn **$63,370**.
- 10% of workers earn **$38,220 or less**.
- 10% of workers earn **$93,860 or more**.

In the United States:

- Workers on average earn **$49,670**.
- 10% of workers earn **$33,660 or less**.
- 10% of workers earn **$80,850 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

49-3023.00 - Automotive Service Technicians and Mechanics

View trends for state: California Go

In California:

Employment (2022)	64,200 employees
Projected employment (2032)	66,300 employees
Projected growth (2022-2032)	3%
Projected annual job openings (2022-2032)	5,700

In the United States:

Employment (2024)	805,600 employees
Projected employment (2034)	839,200 employees
Projected growth (2024-2034)	4% Average
Projected annual job openings (2024-2034)	70,000

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

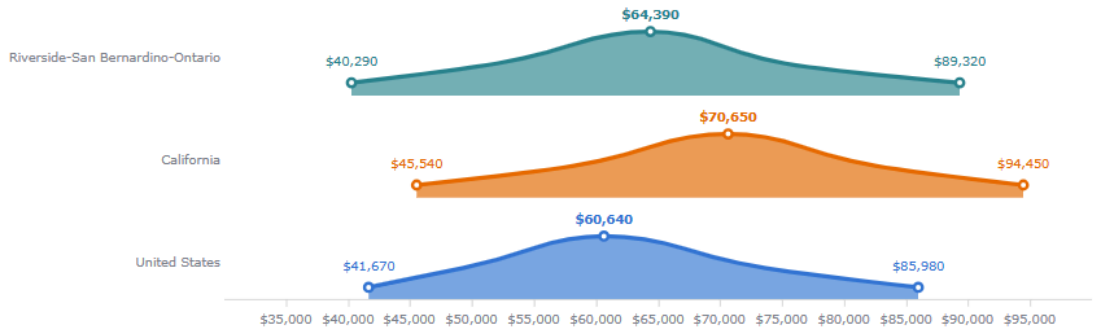
Local Wages

49-3031.00 - Bus and Truck Mechanics and Diesel Engine Specialists

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

- Workers on average earn **$64,390**.
- 10% of workers earn **$40,290 or less**.
- 10% of workers earn **$89,320 or more**.

In California:

- Workers on average earn **$70,650**.
- 10% of workers earn **$45,540 or less**.
- 10% of workers earn **$94,450 or more**.

In the United States:

- Workers on average earn **$60,640**.
- 10% of workers earn **$41,670 or less**.
- 10% of workers earn **$85,980 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

49-3031.00 - Bus and Truck Mechanics and Diesel Engine Specialists

View trends for state: California Go

In California:

Employment (2022)	27,300 employees
Projected employment (2032)	28,700 employees
Projected growth (2022-2032)	5%
Projected annual job openings (2022-2032)	2,440

In the United States:

Employment (2024)	319,900 employees
Projected employment (2034)	327,700 employees
Projected growth (2024-2034)	2% Slower than average
Projected annual job openings (2024-2034)	26,500

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

Local Wages

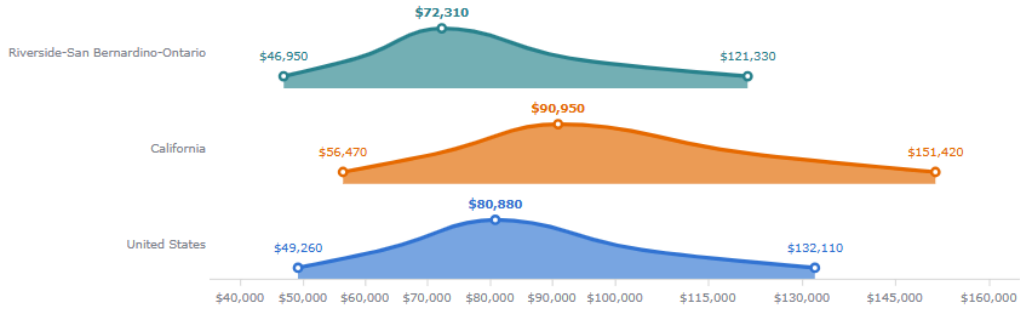
13-1081.01 - Logistics Engineers Bright Outlook

Wage data collected from **Logisticians**.

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

Wage data for **Logisticians**.

- Workers on average earn **$72,310**.
- 10% of workers earn **$46,950 or less**.
- 10% of workers earn **$121,330 or more**.

In California:

Wage data for **Logisticians**.

- Workers on average earn **$90,950**.
- 10% of workers earn **$56,470 or less**.
- 10% of workers earn **$151,420 or more**.

In the United States:

Wage data for **Logisticians**.

- Workers on average earn **$80,880**.
- 10% of workers earn **$49,260 or less**.
- 10% of workers earn **$132,110 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

13-1081.01 - Logistics Engineers Bright Outlook

View trends for state: California Go

In California:

Employment data for **Logisticians**.

Employment (2022)	30,400 employees
Projected employment (2032)	36,800 employees
Projected growth (2022-2032)	21%
Projected annual job openings (2022-2032)	3,290

In the United States:

Employment data for **Logisticians**.

Employment (2024)	241,000 employees
Projected employment (2034)	281,300 employees
Projected growth (2024-2034)	17% Much faster than average
Projected annual job openings (2024-2034)	26,400

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

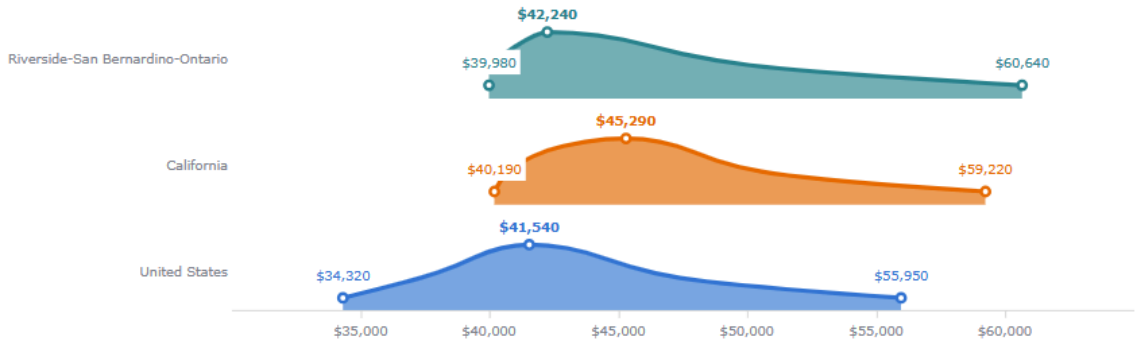
Local Wages

53-6032.00 - Aircraft Service Attendants Bright Outlook

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

- Workers on average earn **$42,240**.
- 10% of workers earn **$39,980 or less**.
- 10% of workers earn **$60,640 or more**.

In California:

- Workers on average earn **$45,290**.
- 10% of workers earn **$40,190 or less**.
- 10% of workers earn **$59,220 or more**.

In the United States:

- Workers on average earn **$41,540**.
- 10% of workers earn **$34,320 or less**.
- 10% of workers earn **$55,950 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

53-6032.00 - Aircraft Service Attendants Bright Outlook

View trends for state: California Go

In California:

Employment (2022)	2,200 employees
Projected employment (2032)	2,700 employees
Projected growth (2022-2032)	23%
Projected annual job openings (2022-2032)	410

In the United States:

Employment (2024)	28,000 employees
Projected employment (2034)	29,500 employees
Projected growth (2024-2034)	5% Faster than average
Projected annual job openings (2024-2034)	4,300

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

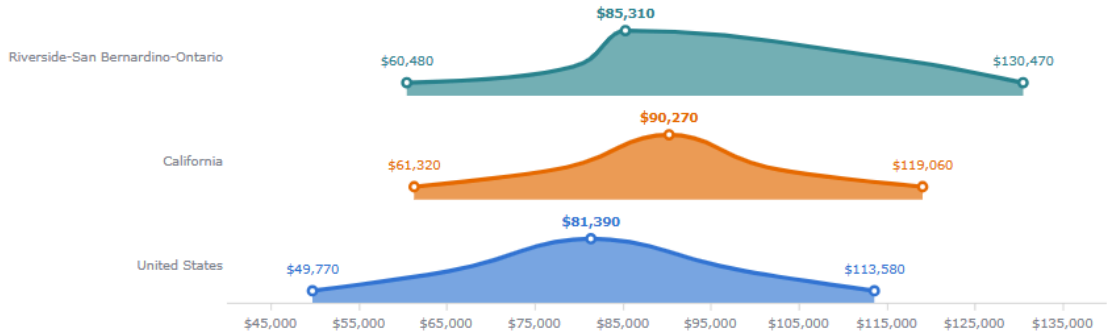
Local Wages

49-2091.00 - Avionics Technicians Bright Outlook

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

- Workers on average earn **$85,310**.
- 10% of workers earn **$60,480 or less**.
- 10% of workers earn **$130,470 or more**.

In California:

- Workers on average earn **$90,270**.
- 10% of workers earn **$61,320 or less**.
- 10% of workers earn **$119,060 or more**.

In the United States:

- Workers on average earn **$81,390**.
- 10% of workers earn **$49,770 or less**.
- 10% of workers earn **$113,580 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

49-2091.00 - Avionics Technicians Bright Outlook

View trends for state: California Go

In California:

Employment (2022)	1,800 employees
Projected employment (2032)	2,200 employees
Projected growth (2022-2032)	22%
Projected annual job openings (2022-2032)	210

In the United States:

Employment (2024)	21,400 employees
Projected employment (2034)	23,100 employees
Projected growth (2024-2034)	8% Much faster than average
Projected annual job openings (2024-2034)	1,800

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

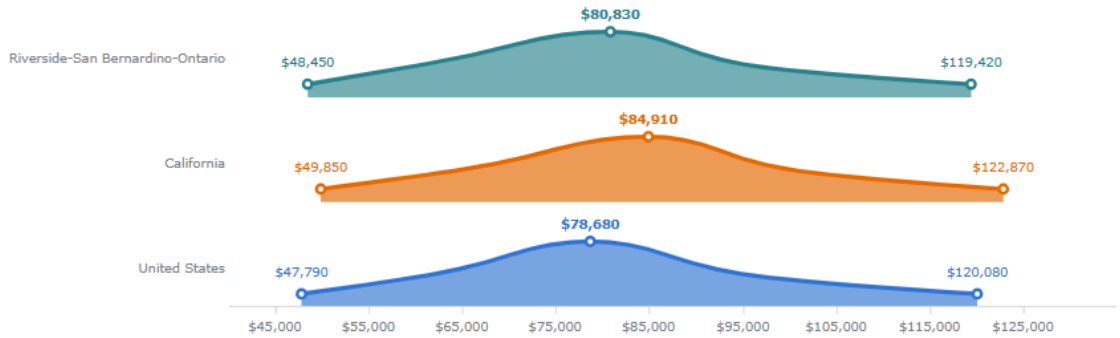
Local Wages

49-3011.00 - Aircraft Mechanics and Service Technicians

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

- Workers on average earn **$80,830**.
- 10% of workers earn **$48,450 or less**.
- 10% of workers earn **$119,420 or more**.

In California:

- Workers on average earn **$84,910**.
- 10% of workers earn **$49,850 or less**.
- 10% of workers earn **$122,870 or more**.

In the United States:

- Workers on average earn **$78,680**.
- 10% of workers earn **$47,790 or less**.
- 10% of workers earn **$120,080 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

49-3011.00 - Aircraft Mechanics and Service Technicians

View trends for state: California Go

In California:

Employment (2022)	12,500 employees
Projected employment (2032)	14,900 employees
Projected growth (2022-2032)	19%
Projected annual job openings (2022-2032)	1,230

In the United States:

Employment (2024)	139,400 employees
Projected employment (2034)	145,000 employees
Projected growth (2024-2034)	4% Average
Projected annual job openings (2024-2034)	11,300

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.

Local Wages

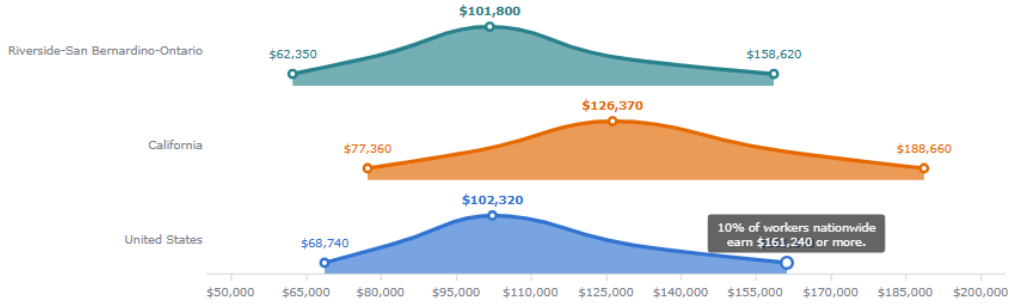
17-2141.02 - Automotive Engineers Bright Outlook

Wage data collected from **Mechanical Engineers**.

Wages for state: California Go

Wages near ZIP Code: 92408 Go

Annual Wages | Hourly Wages



In Riverside-San Bernardino-Ontario, CA:

Wage data for **Mechanical Engineers**.

- Workers on average earn **$101,800**.
- 10% of workers earn **$62,350 or less**.
- 10% of workers earn **$158,620 or more**.

In California:

Wage data for **Mechanical Engineers**.

- Workers on average earn **$126,370**.
- 10% of workers earn **$77,360 or less**.
- 10% of workers earn **$188,660 or more**.

In the United States:

Wage data for **Mechanical Engineers**.

- Workers on average earn **$102,320**.
- 10% of workers earn **$68,740 or less**.
- 10% of workers earn **$161,240 or more**.

Source: Bureau of Labor Statistics 2024 wage data.

California Employment Trends

17-2141.02 - Automotive Engineers Bright Outlook

View trends for state: California Go

In California:

Employment data for **Mechanical Engineers**.

Employment (2022)	27,700 employees
Projected employment (2032)	31,700 employees
Projected growth (2022-2032)	14%
Projected annual job openings (2022-2032)	2,020

In the United States:

Employment data for **Mechanical Engineers**.

Employment (2024)	293,100 employees
Projected employment (2034)	319,600 employees
Projected growth (2024-2034)	■■■■ 9% Much faster than average
Projected annual job openings (2024-2034)	18,100

California source: Projections Central 2022-2032 long-term projections. United States source: Bureau of Labor Statistics 2024-2034 employment projections. "Projected growth" represents the estimated change in total employment over the projections period. "Projected annual job openings" represent openings due to growth and replacement.