

Opportunity Now Regional Talent Summits

Denver Metro Summit Outcomes Report

May 2025

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Introduction

The Regional Talent Summits Act, enacted by <u>House Bill 24-1365</u>, seeks to address workforce shortages by convening state and regional stakeholders to discuss economic and talent needs, and the programs and resources that might address those regional needs. These industry-led convenings focus on three regionally identified industries, resulting in tactical workforce plans to develop career pathways in specified fields facing regional workforce challenges.

The workforce plans that emerge will provide a framework for each region to collaboratively address specific workforce challenges over the next five years and will be published in the 2025 Colorado Talent Pipeline Report. Workforce plan implementation will be led by local workforce development boards and regional partners. Annual progress reports will be published in the Colorado Talent Pipeline Report through 2030 to ensure ongoing accountability.

Organized by the Office of Economic Development and International Trade (OEDIT) and hosted by the Greater Arvada Chamber of Commerce, the Denver Metro Regional Talent Summit was held on March 18, 2025. The region, comprising nine counties - Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, Gilpin, and Jefferson - centered around three industries: Advanced Manufacturing, Aerospace & Defense, and Renewables & Clean Energy. This report summarizes industry insights, key findings, and next steps. The appendices include a detailed overview of each priority occupation industry discussed, with related challenges, solutions, risks, and existing resources to leverage.

Regional Insights and Collaboration

Over 100 industry representatives and public partners (education and training professionals, workforce intermediaries, chamber leaders, etc.) registered for the Denver Regional Summit. Prior to the summit, all attendees were given a regional landscape analysis on Advanced Manufacturing, Aerospace and Defense, and Renewables and Clean Energy. Attendees also received a pre-work survey designed to complement the landscape analysis, gathering feedback from industry representatives and public partners. The survey received 53 responses - 16 from industry representatives and 37 from public partners.

The survey responses were then used at the summit to initiate dialogue around challenges and opportunities related to the select industries. Several themes were prominent across all industries, such as the need to increase youth awareness and education, enhance industry-driven collaboration, and develop spaces and opportunities for ongoing public-private partner collaboration and innovation.

In alignment with the Regional Talent Summits Act, the summit discussions shaped each industry's two- and five-year goals and related tactical steps.

Key Findings & Outcomes

Advanced Manufacturing

Industry Overview

Data from February 2025 Regional Landscape Analysis

The Denver Metro region has approximately 93,500 advanced manufacturing jobs across a diverse range of industries that integrate cutting-edge technology and specialized production processes. These industries include aerospace and defense-related manufacturing, medical and pharmaceutical manufacturing, precision machining and fabrication, food and beverage production, and more.

Most of these jobs are concentrated in Boulder, Denver, and Jefferson Counties, with over 20,000 jobs each. Adams and Arapahoe follow with smaller but notable shares of approximately 14,500 and 9,500, respectively.

While many jobs require only on-the-job training, specialized roles such as software developers, business operations specialists, engineers, industrial machinery mechanics, and machinists benefit from formal education and training. The region already has many related K-12 and postsecondary programs that support skills development, with approximately 100 postsecondary programs and nearly 300 high school Career & Technical Education (CTE) programs related to engineering, manufacturing, welding, aeronautics, business, computer, and hospitality and food production. There are numerous relevant apprenticeship opportunities in the region.

The industry's current workforce is predominantly white (66%) and Hispanic (21%). Approximately 68% of workers within the industry are male, although certain sectors, such as surgical and medical instrument manufacturing, commercial printing, medicinal and botanical manufacturing, have higher female representation. Around 26% of current advanced manufacturing workers are aged 55 and older, with sectors such as commercial printing, commercial and industrial machinery and equipment repair and maintenance, and machine shops tending to have higher levels of older employees nearing retirement.

Summit Findings

Advanced manufacturing industry representatives identified four priority occupations:

- Production Operators
- Maintenance Technician/ Mechanic
- Machinist
- Quality Inspector

Industry representatives worked alongside public partners to identify the primary challenges to hiring, risks to industry if the talent pool does not improve, solutions to address talent needs, and existing resources to support those solutions. The following lists consolidate these findings. Review the full table of occupation-specific findings in <u>Appendix A</u>.

Hiring Challenges

- Industry Misperception: While there is a general lack of awareness about potential pathways across advanced manufacturing, the industry's generally outdated and negative perception may be a larger issue. The group believes people often think of the "dirty, dusty, and dangerous" manufacturing work settings of the past, not recognizing the evolved, high-tech work environments that exist today.
- Limited Training & Upskilling: There are limited accessible and flexible training programs for current and potential workers to upskill.
- **Physically Demanding Work:** Many roles require manual labor and shift work, which can be hard on the body and reduce long-term retention.
- Aging Workforce: The workforce is aging, and it has been challenging to effectively engage and recruit young candidates. This is creating gaps in both experience and workforce sustainability.
- **Economic Barriers**: Cost of living, transportation and childcare access often influence worker choices.

Risks to Industry (& Region)

- Safety Concerns: Staff inexperience or burnout in physically demanding settings can increase the risk of injury, affecting workers and company liability.
- **Diminished Work Product**: Inexperienced or overworked staff may produce lower-quality products, affecting business reputation and contracts.
- Costly Equipment Downtime: Machine inoperability can be extremely costly when skilled technicians are unavailable to promptly repair the necessary machines needed to complete tasks.
- **Decreased Production:** A shortage of skilled workers can lead to production delays or stoppages, impacting overall output.
- Business Relocation: High operational costs and talent shortages may lead businesses to relocate or offshore operations.

Regional Strengths & Resources

- Rocky Mountain Tooling & Machining Association: Through the RMTMA, 30 employers created a machinist apprenticeship program, followed by a quality control apprenticeship that is currently being enhanced. A tool and dye apprenticeship is underway. This model could be scaled and informed by other industry priorities.
- Community Supports: Resources from government, education, and community partners can potentially provide funding, training, and job placement support. Existing earn and learn models can be scaled.
- **Employer Engagement:** The regional advanced manufacturing industry already comes together through existing partnerships that can provide mentorship, program support, and advocate for industry-wide improvements.

Goal Development

Advanced manufacturing industry representatives identified two priorities:

- 1) "Rebranding" to increase awareness of modern advanced manufacturing
- 2) Promoting industry-driven skills standards

The below draft solutions will guide further discussion, informing the region's 2- and 5-year goals that will be included in the resulting workforce plan.

- "Rebranding" Advanced Manufacturing: The general public and potential candidates for employment should understand that modern manufacturing is innovative and technologically advanced compared to previous perceptions of manufacturing. The current generation of young candidates seeks out meaningful careers, requiring the industry to demonstrate its broader impact.
- K-12 Awareness: Early exposure to potential candidates and their support networks is key. Outreach efforts like family nights and engaging PTA and counselor networks can spark early interest and change outdated perceptions. The group shared examples of this work such as Illinois' commitment to Manufacturing Day and Pennsylvania's "What's So Cool About Manufacturing?" are good examples of what is possible and could be tried in Colorado.
- Industry-Driven Education & Skills Standards: Industry and education partners will be strengthened by creating and adhering to a shared definition of required skills, how they are developed and assessed in training, and how employers validate them. This will allow industry-wide adoption of flexible and stackable credentials that match job functions, reduce skills gaps, and support career pathway growth once on the job.

Aerospace & Defense

Industry Overview

Data from February 2025 Denver Metro Regional Landscape Analysis

The Denver Metro region is home to over 22,700 jobs in the aerospace and defense industry, which includes aircraft and spacecraft production, navigation and communication systems, electronic components and maintenance, and geospatial technologies, driving advancements in aviation, defense, and space exploration. It should be noted that there is no singularly agreed-upon definition for this industry, which is an issue experienced across the nation.

The majority of these jobs are concentrated in Jefferson, Boulder and Arapahoe Counties, which have over 8,500, 5,300, and 4,200 jobs, respectively. Adams, Denver, and Douglas Counties follow with smaller but notable shares of approximately 2,100, 1,100, and 950 jobs, respectively.

Many jobs require only on-the-job training, while others, such as aerospace engineers, software developers, business operations specialists, industrial engineers, electronics engineers, and mechanical engineers, require formal education, licensure, or apprenticeship. The region offers nearly 100 postsecondary programs and nearly 250 related high school CTE programs. The Colorado Registered Apprenticeship Program Directory lists potentially relevant regional apprenticeship opportunities. Existing programs would most likely align with roles supporting the industry's manufacturing functions.

The industry's current workforce is predominantly white (76%). Approximately 71% of workers within the industry are male, although some sectors, like printed circuit assembly and search, detection, navigation, guidance, aeronautical, and nautical system and instrument manufacturing, have higher female representation. About 25% of workers are 55 or older, with industries like radio and television broadcasting and wireless communications equipment manufacturing, and other communications equipment manufacturing employing a higher number of older employees.

Summit Findings

Summit participants identified four priority occupations within the region's aerospace & defense industry:

- Positions Requiring Security Clearance
- Systems and Electrical Engineering
- Cybersecurity
- Machinist

Industry representatives worked alongside public partners, focusing on each occupation individually to identify the primary challenges to hiring, risks to the industry if the talent pool does not improve, solutions to address talent needs, and existing resources to support those solutions. The following lists consolidate these findings. Review the full table of occupation-specific conclusions in Appendix B.

Hiring Challenges

- Barriers to Entry: Complicated entry processes like security clearances and unclear career growth pathways hinder potential workers from initial engagement and existing workers from subsequent upskilling within the industry.
- Aging Workforce & Generational Perceptions: The workforce is aging, and it has been challenging to effectively engage and recruit young candidates. Additionally, younger candidates do not appear to possess the same pride in contributing to US space exploration and advancement as previous generations.
- Lack of Awareness: Students and candidates are often unaware of or do not have an accurate understanding of the roles within the industry, their impact, and the long-term pathways.
- Industry & Education Collaboration: Roles that require post-secondary credentials, such as Systems and Electrical Engineering, rely on effective partner collaboration to confirm nuanced curricula and increase candidate awareness.
- **Employee Poaching:** Employers face significant challenges in retaining skilled workers, which is only amplified when other employers compete for talent and poach trained staff.

Risks to Industry (& Region)

- Innovation Stagnation: Delays or gaps in hiring and production can slow modernization of legacy systems and general innovation across high-tech and defense sectors.
- Loss of Local Industry: The inability to fill or retain roles may result in lost contracts, decreased funding, and companies moving out of state.
- Reduced National Security: A lack of skilled labor, such as machinists or security-cleared positions, can directly impact national defense readiness.

Regional Strengths & Resources

- Military & Veteran Communities: A robust pool of individuals familiar with security clearance processes and applicable technical skills can be engaged to fill critical roles.
- **Security Clearance:** CDLE, in collaboration with related businesses, has developed an asynchronous course to help Coloradoans more confidently navigate the security clearance process.
- Regional Apprenticeship Models: Existing apprenticeship programs provide smaller businesses with replicable models.
- **Desire to Collaborate:** There already are and continue to be collaborative spaces and partnerships for employers, educators and government.

Goal Development

The aerospace and defense group identified Positions Requiring Security Clearance as the priority occupation. When asked to narrow their scope, the group identified two potential solutions to address their overall talent pipeline needs:

- 1) Maintain Colorado's status as the top aerospace employer in the country
- 2) Fill talent needs with Colorado-based talent

The draft solutions below will guide further discussion, informing the region's 2- and 5-year goals that will be included in the resulting tactical workforce plan.

- Centralized Aerospace & Defense Resource: The group seeks to develop a centralized statewide resource that consolidates workforce, training, and partnership information and connects employers, educators, and job seekers. The hub would house tools like best practices, grant and tax credit information, internship/apprenticeship templates, and would serve as a matchmaking platform for mentorship, collaboration, and innovation.
- Security Clearance Classes: The newly developed CDLE security clearance course needs to be adopted. The class can be standalone or integrated into a larger training program. Ideally, students would receive the curriculum early in their training, allowing them to make advanced decisions on their interest in proceeding and then start the clearance process while still enrolled in training.
- **K12 Exposure:** Potential candidates and their support networks need to know about the industry's quality career opportunities based here in Colorado. Early exposure to personal stories and pre-apprenticeship opportunities can enhance the K12 talent pipeline efforts.
- "Turnkey" Internship & Apprenticeship Strategies: Larger employers more experienced in earn and learn models can collaborate to develop model materials and templates for other employers to replicate (e.g., program structure, checklists, guides, etc.). These materials could be housed within the previously mentioned centralized resource.
- Municipal Managed Security Service Provider (MSSPs): Developing municipal MSSPs can allow cities that lack a cybersecurity workforce to develop cyber-safety programs staffed by interns enrolled in or recently graduated from industry-led training programs. This public/private collaboration could create a sustained pipeline of graduates with real-world experience positioned to move into the private sector.

Renewables & Clean Energy

Industry Overview

Data from February 2025 Denver Metro Regional Landscape Analysis

The Denver Metro region has approximately 9,800 jobs in renewables & clean energy, The largest segments of the sector are in environmental consulting services and electric power distribution. The next largest areas are in semiconductor manufacturing, solar power generation, and motor and generator manufacturing.

The majority of renewables & clean energy jobs are concentrated in Denver, Boulder, and Jefferson Counties, with over 3,350, 2,380, and 1,830 jobs, respectively. Other counties, such as Adams and Arapahoe, each have smaller but notable shares of over 700 jobs in the industry.

Some positions, such as customer service representatives, various assemblers and fabricators, do not require postsecondary education beyond on-the-job training. However, most roles within the 20 largest occupation groups require specialized education and licensure, such as management analysts, electrical power-line installers, market research analysts, electrical engineers, and software developers. The region has numerous postsecondary programs and over 280 related CTE programs. There are many relevant apprenticeship opportunities across the region, focusing on occupations such as various electrical line-worker and electrician roles, as well as manufacturing-related roles.

The industry's current workforce is predominantly white (78%) and Hispanic (13%). Approximately 65% of workers within the industry are male, although the environmental consulting services field tends to have higher female representation. About 23% of workers are aged 55 or older, with some specialties, such as semiconductor and related device manufacturing and miscellaneous electrical equipment and component manufacturing, tending to have higher levels of older employees nearing retirement.

Summit Findings

Summit participants identified three priority occupations within the region's renewables and clean energy industry. Prior to occupation selection, the group agreed that due to the industry being incredibly broad with multiple, unique sub-industries within it, the best course of action would be to capture general roles that tend to be applicable across all sub-industries. The group selected the following three priority occupations:

- Skilled Trades
- Technician/Entry Level Roles
- Engineering

Industry representatives worked alongside public partners, focusing on each occupation individually, to identify the primary challenges to hiring, risks to the industry if the talent pool does not improve, solutions to address talent needs, and existing resources to support those solutions.

The following lists consolidate the findings. Review the full table of occupation-specific conclusions in Appendix C.

Hiring Challenges

- Lack of Early Exposure & Clear Pathways: Many candidates, especially youth, are unaware of the career opportunities or how to navigate into the skilled trades or technician roles due to unclear or underdeveloped pathways.
- **Stigma:** Some roles face a social stigma or are perceived as less prestigious, while others suffer from a general lack of public understanding of their purpose.
- Access to Candidate Supports: Limited support for refugee, justice-involved, or rural
 candidates, and a shortage of wraparound services for these populations, such as childcare,
 can hinder recruitment and retention.
- Specialization & Security Clearance Barriers: Engineering roles can be difficult to fill due to very specific requirements or the need for federal security clearance, which limits the candidate pool. The group also highlighted a need for state-level licensure for HVAC roles.
- High Cost of Living & Low Entry-Level Pay: Entry-level roles often do not offer wages that
 can offset the high cost of living, deterring potential candidates from pursuing or remaining
 in these roles.

Risks to Industry (& Region)

- **High Turnover:** In entry-level technician roles, a lack of support and clear advancement leads to burnout, which affects productivity and retention.
- Decreased Innovation & Production: Failing to address talent shortages in engineering, the trades or technician roles may lead to reduced output, slower innovation and weaken Colorado's competitive edge.
- Environmental Complications: Gaps in skilled labor can result in critical issues such as grid failure, lack of clean energy implementation, and heightened environmental risks.
- Loss of Industry Momentum: Companies may relocate or decrease investments in Colorado due to talent shortages, resulting in funding losses and/or industry stagnation.

Regional Strengths & Resources

- Quality Sector Partnerships: Collaboration between industry, education, nonprofits and public agencies offers alignment between training and talent needs.
- Earn & Learn Models: Opportunity to learn from and scale structured programs like Project SCALE, registered apprenticeships and pre-apprenticeship models provide accessible entry points and build long-term talent pipeline stability.
- Regional Clean Energy Infrastructure: Colorado benefits from entities like the National Renewable Energy Lab, planned lab sites, and funding hubs that can support talent innovation.
- Community-Based Networks: Associations for diverse populations and local scholarship foundations can help access underrepresented populations.

Goal Development

Renewables and clean energy industry representatives identified two priorities:

- 1) Defined career pathways focused on skill-based training and transferable skills
- 2) Established and reliable talent pipelines supported by retention and work-based learning programs.

The draft solutions below will further guide discussion, informing the region's 2- and 5-year goals that will be included in the resulting workforce plan.

- Clarify & Promote Transferable Skills: The industry needs standardized skill-based career pathways. Both new and well-established candidates should understand how their skills can transfer to the renewables and clean energy industry. This effort could attract talent that may not otherwise be engaged.
- Early Exposure with Wraparound Supports: Early exposure to careers through high school pre-apprenticeships and outreach is a top priority. Wraparound supports and services should be offered to reinforce a resilient system that meets both employer and worker needs. These supports would also support the development of a more diverse talent pool. For example, supports similar to a 529 savings account for college education could be used for trade programs to increase youth access.
- Regional Coordination: Industry and public partners would benefit from more effective spaces to connect, share resources, and align on workforce strategies. This would include increased coordination and awareness about existing sector partnerships and workforce programs. Ideally, accessible and regular convening opportunities can become trusted hubs for innovation.
- Small Business Incubators: Small business support can help companies grow, expand hiring capacity and support retention by creating more room for upward mobility. Industry partners can collaborate on best and promising practices while developing sustainable talent pipeline solutions.

Next Steps

The next phase of this work will focus on developing the Tactical Regional Workforce Plans, which will further outline the industry-led goals and tactics identified at the summits. The Program Facilitator will rely on Regional Action Teams to ensure these plans are developed with ongoing regional input. The resulting workforce plans will be published in the 2025 Colorado Talent Pipeline Report.

Regional Action Teams will be led by Local Workforce Board members since the Workforce Plans will be incorporated into local WIOA plans. Regional Action Teams will be responsible for Workforce Plan execution, reporting on progress, and identifying opportunities for continuous improvement and plan revision. The Colorado Workforce Development Council (CWDC) will oversee implementation across the seven regions and will be responsible for monitoring, evaluation and technical assistance through 2030.

Appendices

Appendix A: Advanced Manufacturing - Key Findings on Priority Occupations

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
Production Operators	 Tenured workforce with lack of internal mobility Candidates are not aware of role Lack of diversity in candidates and workers Manual shift work; hard on the body High turnover Cost of living 	 Safety concerns Decreased or halted production Decreased quality of work Companies may leave the area or move production overseas High automation or similar costs to replace workers 	 Upskill current workers with automation Develop internal and external pathway programs Coordinate cohort training programs across manufacturers Increase in-person job shadowing Coordinate with K-12 partners 	 Internships and apprenticeships Work-based learning programs Sector partnerships Manufacturing Day participation Parent buy-in
Maintenance Technician/ Mechanic	 Aging workforce in a highly physical role Candidates lack breadth of experience and knowledge Lack of flexible training program options for upskilling current workers 	 Staff burnout Safety concerns Decreased or halted production High cost to company if machine is inoperable 	 Collaborative partnerships for ongoing training Increased communication and awareness around the role and pathway Upskilling from related roles Re-title/ rebrand role 	 Public workforce system Careerwise Opportunity Now Work-based learning funding

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
	 Integrating new technology and processes 		Find role ambassadors	
Machinist	 Aging workforce Inflexible work hours Lack of information and role awareness amongst candidates Poor perception of the work amongst candidates Restrictions with students under 18 Not a primary industry in Colorado Cost of living 	 Staff burnout Safety concerns Decreased quality of work High cost to company if machine is inoperable Decreased or halted production Lack of company growth Companies may leave Colorado 	 Develop internal upskilling programs Create entry-level and upskilling boot camps Increase veteran engagement Coordinate with K-12 partners, including PTAs, and community colleges to increase role awareness Develop family education programs 	 Engaged employers State Agency of Apprenticeship Careerwise CoorsTek CCFC, Legacy, Epic, Warren Tech St. Vrain Advanced Manufacturing Academy Community colleges Social media
Quality Inspector	 Lack of information and role awareness amongst candidates Candidates lack breadth of experience and knowledge Cost of training Employer competition - hired talent may be recruited by other employers 	 Safety concerns Decreased quality of work Loss of life Lack of company growth 	 Engaging candidates in other quality-focused careers Clarify pathway opportunities Coordinate with K-12 and post-secondary partners 	 Rocky Mountain Tooling & Machining Association (RMTMA) Workforce centers State Agency of Apprenticeship CTE programs Internship programs Warren Tech Trade associations

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
	Cost of living			

Appendix B: Aerospace & Defense - Key Findings on Priority Occupations

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
Positions Requiring Security Clearance	 General lack of awareness amongst candidates Candidates navigating and understanding the clearance process Clearances are a federal process outside of internal controls Cost of waiting SCIF requirements 	 Loss of economic opportunities to the individual, company, and state National security concerns if work cannot be completed in States Changes in processes or requirements Companies may leave Colorado 	 Leverage Colorado's robust military community with individuals familiar with clearance processes Explore a clearance-ready curriculum Establish a pre-screening process Explore cost/job sharing process models Develop a career progression map Establish an apprenticeship for adults transitioning from previous careers Begin the clearance process during training 	 CDLE model class on the security clearance process General, willing partners #1 in per capita aerospace employment Local government and the private sector willing to invest in the SCIF space Multiple military installations
Systems and Electrical Engineering	Candidates may not be aware the aerospace industry needs this discipline	Decreased competitionLegacy system conversion	 Improve career knowledge and perception amongst potential talent 	 CTE and concurrent enrollment pathways Internships Apprenticeships

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
	 Candidates may not be aware of longer-term career path Competition with computer science focuses Inadequate marketing to students and candidates Non-US applicants who cannot obtain certain security clearances 	Small businesses unable to survive	 Increase high school exposure, e.g., story telling Improve partnerships and marketing with post-secondary institutions Explore industry-sponsored senior projects Engage displaced federal workers who may already have security clearances and technical skills 	 Collaborative industry organizations Infrastructure partnerships between employers and educators
Cybersecurity	 Niche industry needs Candidates struggle to understand and see a lucrative career pathway Employer competition hired talent may be recruited by other employers 	 Consistently changing risk landscape Inability to retain talent and maintain operations 	 Increase and enhance apprenticeship and micro-apprenticeship Develop municipal Managed Security Service Provider (MSSPs) to give candidates experience through public/private collaboration 	 Four-year post-secondary degree is typically not required for entry Apprenticeships Bootcamps Pathways with stackable credentials

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
Machinist	 Retiring talent Changing workforce demographics Candidates struggle to understand and see a lucrative career pathway Potential visa attainment issues Cost of living 	 Potential disruption of knowledge continuity Lost contracts Lost federal funding for programs/projects Slowed innovation Eroded US defense capabilities 	 Improve space career perception amongst potential talent and families Re-energize national pride around space exploration Conduct community outreach; share success stories Leverage interest in the Golden Dome Explore K-12 pre-apprenticeships 	 Four-year post-secondary degree is typically not required for entry Advanced Manufacturing Technician Apprenticeship Program (AMTAP) and Sunnyvale Apprenticeship Program (SAP) Community partners Education partners Workforce centers

Appendix C: Renewables & Clean Energy - Key Findings on Priority Occupations

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
Skilled Trades	 Engaging interested and qualified candidates Some skilled trades do not have a standard pathway Navigating justice-involved candidates Workforce gaps in rural areas Lack of wraparound services and social safety nets for candidates and workers, e.g., childcare, transportation needs Cost of living 	 Decreased quality of work Rising energy costs Grid failure No clean energy Irreparable environmental concerns Failure to keep up with innovative and supportive policy Increased competition with other states 	 Engage K-12 partners to increase earlier exposure to trades Promote the school curriculum with more construction math and applied building sciences Leverage the Seal of Climate Literacy in high school Explore continued career and professional development models Ability to enter an emerging industry such as heat pumps 	 Industry support High school and CTE programs, e.g., HBI's PACT Pre-apprenticeship and apprenticeship programs Project SCALE The growing sentiment that college isn't for everyone Earn while you learn models, with no educational debt Job security Lifelong sustainable wage
Technician/ Entry Level Roles	 Generational resistance Lack of or limited clear career pathways Lower social stigma Safety concerns 	 Staff burnout Failure to meet production needs Slower innovation Increased costs 	 Involve mentors/ current workforce Increase candidate exposure and awareness, e.g., glamorize the career Increase public/ private partnerships 	 Current, experienced workforce Registered apprenticeship programs OJT models Workforce centers Nonprofits

Occupation	Challenges	Risks	Solutions or Opportunities	Assets
	 Fear of job automation Lower pay scale and high cost of living 		 Explore more short-term certifications Promote low barriers to entry 	
Engineering	 Some roles can be highly specialized Security clearance process, if applicable Employer competition - hired talent may be recruited by other employers 	 Lack of company growth Lost federal funding Companies not entering or leaving Colorado Decrease in or lack of innovation 	 Enhance K-12 partnerships Explore cost-sharing models with partners Promote and develop apprenticeships Leverage the National Renewable Energy Lab and 16 planned lab sites 	 Denver Scholarship Foundation National associations for diverse groups OEDIT EDA Tech Hub NSF Engine Industry partners P-TECH

The group determined that "Clean Energy and Renewables" is quite broad. Three priority occupations were chosen, capturing those that participants felt were applicable across the entire industry.