2023 COLORADO
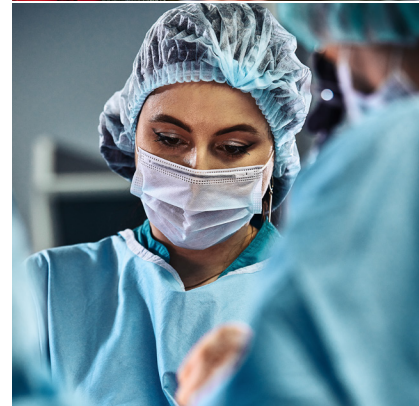
TALENT PIPELINE REPORT

Colorado Workforce Development Council

talentFOUND

The Colorado Talent Pipeline Report is developed by the Colorado Workforce Development Council in partnership with the Colorado Departments of Higher Education, Labor and Employment, Education, Human Services, Local Affairs, and the Colorado Office of Economic Development and International Trade.

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TABLE OF CONTENTS

BACKGROUND

What is this report and why has it been written?

The Colorado Talent Pipeline Report has been published annually since 2014 by state agency partners as required by 24-46.3-103 C.R.S. as amended by SB14-205. It provides key insights on the demand for and supply of talent in Colorado. It also identifies key strategies to balance the supply and demand equation as examined through a data lens. This information is used to inform potential legislation, develop and implement programs, and align partners around the current talent landscape. The report has sections on Colorado's current economic landscape, talent demand and supply, workforce development strategies, and potential policy interventions. There are also appendices containing additional details on topics discussed within the report.

When?

The report is published annually in December. Starting in 2024, quarterly updates will be published to complement the main report.

How?

There are many ways to dig into the report. The Table of Contents can help you find an area you are most interested in. Visit ColoradoTalentDashboard.com to dig into the data in a more dynamic format. You may request a presentation for your organization on the Colorado Workforce Development Council website.

Who might be interested in this information?

This report is submitted to the Colorado General Assembly. Given the contents, it is often also of interest to partners of the talent development network who serve job seekers, workers, learners, and employers. It can inform programs being implemented by workforce development, economic development, education and training, and community-based services organizations – as well as businesses themselves.

What's coming up next in the March update?

The 2024 quarter-1 report will showcase postsecondary outcomes in the labor market as well as workforce trends, opportunities associated with K-12 students, the Big Blur, and quality jobs and credentials, among other highlights and emerging trends.

A note on language and data.

We try to be intentional about inclusive language in our communications, and we recognize language is constantly evolving and there is always more to learn. We aim to be specific and use the preferred language of the individual or group being referenced. Inclusive and preferred language can be more challenging to use in projects heavily based on data as not all data are reported with inclusive language. We will continue to work on improving.

In this report, data are sometimes broken out by gender, sex, race and ethnicity, or other factors. Due to constraints of data sources, we do not have information on genders outside of men and women. We acknowledge that there are individuals who identify outside the gender binary who are not being represented with these current categories. In addition, when discussing race and ethnicity, Black and/or African American, Hispanic and/or Latinx, Asian American, Pacific Islander, and Native American are used throughout the report. We recognize that there are individuals whose identities may not align with these. Given the constraints of data sources, the constant evolution of language, and the differences in identification within groups, we have opted to go with these broader classifications for the sake of clarity and uniformity with current practices. And, as we learn more, our language will continue to evolve.

COLORADO'S ECONOMY AND THE EVOLVING NATURE OF THE WORKFORCE

Where are we now?

Colorado's economy continued to outpace national averages this year, ranking third in the nation overall during 2023 according to this year's U.S. News and World Report. Colorado added 42,700 additional jobs to the state between August 2022 and August 2023.[1] Nearly 64% of this job growth happened in rural areas of the state – creating new economic opportunities for the rural workforce in 2023.[2]

Colorado's robust recovery from the COVID-19 pandemic included returning to pre-pandemic unemployment rate levels at 2.8% in January 2023. In August 2023, the state was proud that with more Coloradans actively working or looking to join the labor market, the state returned to its pre-pandemic employment-to-population ratio of 66.6% in August 2023. The employment-to-population ratio reflects how many Coloradans aged 16+ are employed.

> Colorado's labor force participation rate (LFPR) remained unchanged at 68.7% for the fourth month in a row in July, ranking 5th highest nationally.

Average hourly earnings saw roughly a 5% annual growth, from $34.60 to $35.91, outpacing the national average by $2.17 per hour in July, but slowing down from the nearly 8% boost workers saw in 2022 in response to surging inflation levels.[3]

The statewide unemployment rate increased slightly in August, reaching above 3% for the first time in 16 months at 3.1%. It still sits below the U.S. total rate, however, which rose from 3.5% to 3.8% over the same period.[4] Colorado's unemployment rate has ranged between 2.6% and 3.1% since April 2022.[5]

At the same time, the demand for talent in the job market remains at historically high levels for both Colorado and the U.S., and many employers are still struggling to find the skilled workforce they need to manage thriving businesses.[6] **At the state level, estimates suggest that labor shortages combined with skill mismatches are costing the state an additional $46 billion in GDP (e.g., output) per year.**[7] Robust vocational training, educational initiatives, and recruitment strategies to bring untapped talent from traditionally marginalized groups into the workforce will continue to be crucial moving into 2024.

Recognizing the need for affordable childcare, Governor Polis' administration took concrete steps to save people money on childcare, including signing the bipartisan HB22-1006 Child Care Property Tax Exemption which expanded the existing property tax exemption for nonprofit child care centers, allowing these exemptions to include properties that are leased by a child care center and directing federal funding to increase availability.[8] In 2023, the gap between childcare spots available compared to the spots needed has decreased by about 21% to 75,000. The state is exploring different avenues to address this barrier.

The rapid pace of change in many U.S. occupations – driven in large part by advancing technologies – has made it difficult for workers to keep their skills relevant to the marketplace. Similarly, while there are enough people in Colorado available to fill hard-to-fill positions or high-need positions, many lack the skills and competencies these positions require to succeed.

However, Colorado continues outpacing national levels in terms of job openings. Job openings are based on the Bureau of Labor Statistics (BLS) definition and include all positions that are open on the last business day of the reference month. Between September 2022 to September 2023, nationally, there were on average 1.7 available jobs for every unemployed person. In Colorado, that number was 2.5 jobs for every unemployed person, reflecting statewide worker shortages.[9] [10] This deficit has intensified since last year when the 2022 Talent Pipeline Report cited two job openings for every available worker in the state.

A recent national job report finds that the demand for skilled labor will not decrease anytime soon. While 60% of small businesses reported they were hiring (or trying to hire) during the first quarter of 2023,

47% of small business employers surveyed have jobs openings they currently cannot fill;

90% of small business employers surveyed stated they could not find the skills they need across job seekers; and

88% of small business employers surveyed have job openings that are seeking skilled workers.[11]

According to Investopedia, **skilled labor** is a segment of the workforce that has specialized know-how, training, and experience to carry out more complex physical or mental tasks than routine job functions. Skilled labor is generally characterized by higher or specialized education, as well as expertise attained through training and experience, and likewise generally corresponds with higher wages. This can be contrasted with low-wage labor, which typically refers to those working in occupations in food service, housekeeping, entry-level health care positions (e.g., nursing assistants and direct care workers), and entry-level retail positions, such as cashiers.

Small businesses are businesses with 50 employees or less and these businesses constitute **99.5% of all businesses in Colorado's economy. Small businesses employed 1.2 million people in the state during 2022.**[12] With nearly 90% of these types of employers seeking skilled labor, strategies that support their hiring needs and create opportunities for upskilling, such as work-based learning and on-the-job training, continue to be critical to the success of Coloradans.

Growth in job openings and low unemployment rates significantly tighten labor markets. In states like Colorado, which have had slightly more job openings than available skilled talent, these impacts intensify.

Compounding the tight labor market, demographic forecasts indicate that we can expect slower growth across the state's population. This is particularly true for younger age groups within the state. During the upcoming decade, U.S. and Colorado high school populations are expected to plateau and then decline due to falling birth rates.[13] This trend will have major repercussions on the labor market and those repercussions are amplified by the state's aging population. While the state's entire population is projected to grow by 10% by 2030, the 65+ population is projected to increase three times faster (about 31%) during that same timeframe.[14]

Colorado has the **fourth fastest growing 65+ age group in the U.S.** The growth in retirees will impact every age bracket in the labor force, causing robust demand for replacement workers and increased need for caregiving occupations such as direct care workers.[15] However, we will need to continue to engage older Coloradans in the workforce. Workers 55 and older are increasingly staying in the national and state workforce, in part due to demographic shifts, inflation, and a more vulnerable stock market, which can prevent retirement. There has also been increased U.S. demand for workers 55 and older.[16]

Employers can engage this age group to better their businesses, as individuals 65 and older had the highest labor force participation rate increases in the U.S between 2010 and 2020 at 58% increase, followed by those within the 55 to 64 age group at 17.2% increase.[17] Effective leaders can utilize late-career workers for roles they previously may not have considered and offer "post-leadership" roles that leverage deep expertise and provide opportunities to mentor earlier career workers in a more flexible work environment. Many national companies are actively recruiting older workers, finding age to be an asset that contributes to dedicated work.[18]

According to new estimates, there will be 150 million more potential workers over the age of 55 by 2031 and demand for valuable credential attainment and skills training/retraining will not slow down anytime soon.[19] Those who plan to work for the next 50 years should be prepared for a lifetime of learning as employers' needs shift overtime and employees participate in the labor market for longer.[20] Employers that can successfully upskill an aging workforce for a modern workplace and plan for age-related attrition will be better positioned for demographic changes. In this way, they will act as co-producers of talent rather than as consumers of talent.

To attract and retain talent in the future, engaging and supporting the following populations will be vital in ensuring our state and its residents continue to thrive. These groups can provide companies with a competitive advantage and do not represent a homogeneous group.[21]

They include:

» Those from traditionally marginalized populations.

‣ Individuals who are Black and/or African American, Hispanic and/or Latinx, Asian American, Pacific Islander, and Native American, women, individuals who identify as LGBTQIA+, individuals who are justice-involved or previously incarcerated, persons identifying as having a disability, residents of rural areas, and veterans;

» Caregivers for adults and children;

» Relocating partners and spouses;

» Persons with mental health or developmental/neurodiversity challenges;

» Those without traditional qualifications who may need training or retraining;

» Coloradans who need or choose to remain in the labor market past traditional retirement ages;

» Coloradans between the ages of 16-19; and

» Immigrants and refugees that want and/or need to join the state's talent pool.

A tight labor market can increase opportunities for advancement for traditionally marginalized populations.

Over the past three years, spiking labor demand and persistent labor shortages have led many employers to consider nontraditional candidates with potential. These employers have been willing to provide nontraditional candidates with training if they fell short with respect to relevant experience.[22] Creative solutions to a tight labor market have been a leading example for employers and job seekers alike in regards to the importance of agility and lifelong learning.

Quality Jobs and Quality Credentials Drive Future Workforce Projections

As we move into 2024, employers will likely need to continue to enhance job quality through skill advancement and training opportunities, flexibility, and emphasis on their company's social impact and/or mission. Earn-and-learn models are a good way employers can achieve a quality boost in operations while bolstering the talent of their staff.[23] These models provide clear pathways for employees to compete in the labor market and allow for lifelong, career-connected learning.

Job quality efforts led by employers, such as supporting their employees with opportunities for career advancement, paying livable wages, and providing robust benefits, will help ensure a business's long-term success and a sustainable economic future for Colorado. For more information on quality jobs and their economic impacts, please visit the 2022 Talent Pipeline Report.

Ongoing labor shortages also increase the demand for automation and new technologies, further changing the job market. This comes at a critical time when **an additional 12 million occupational transitions are estimated to be needed by 2030, reinforcing the need for individuals to reskill, upskill, or utilize transitional skills.**[24] [25]

Labor market trends since the onset of the COVID-19 pandemic have provided evidence that today's workers are willing to learn new skills and pivot in their careers. As more good-paying, high-demand jobs enter the market, these labor market trends make us confident that workers will seize opportunities to advance themselves and qualify for new roles. We can also assume that workers will continue to call for better pay and better conditions when looking for a job moving forward.

Digital Equity

Digital literacy and access to the internet are considered "super social determinants of health."
Both are foundational for other major socio-economic factors associated with wellbeing and health
(e.g., economic sustainability, health care systems, community and social context, food, education,
neighborhood and physical environment). Outcomes related to an individual's level of digital access
show rippling effects on their ability to buy a home, get a good job, and further their education – not to
mention their ability to secure basic life needs, such as telehealth support, food, and social services.
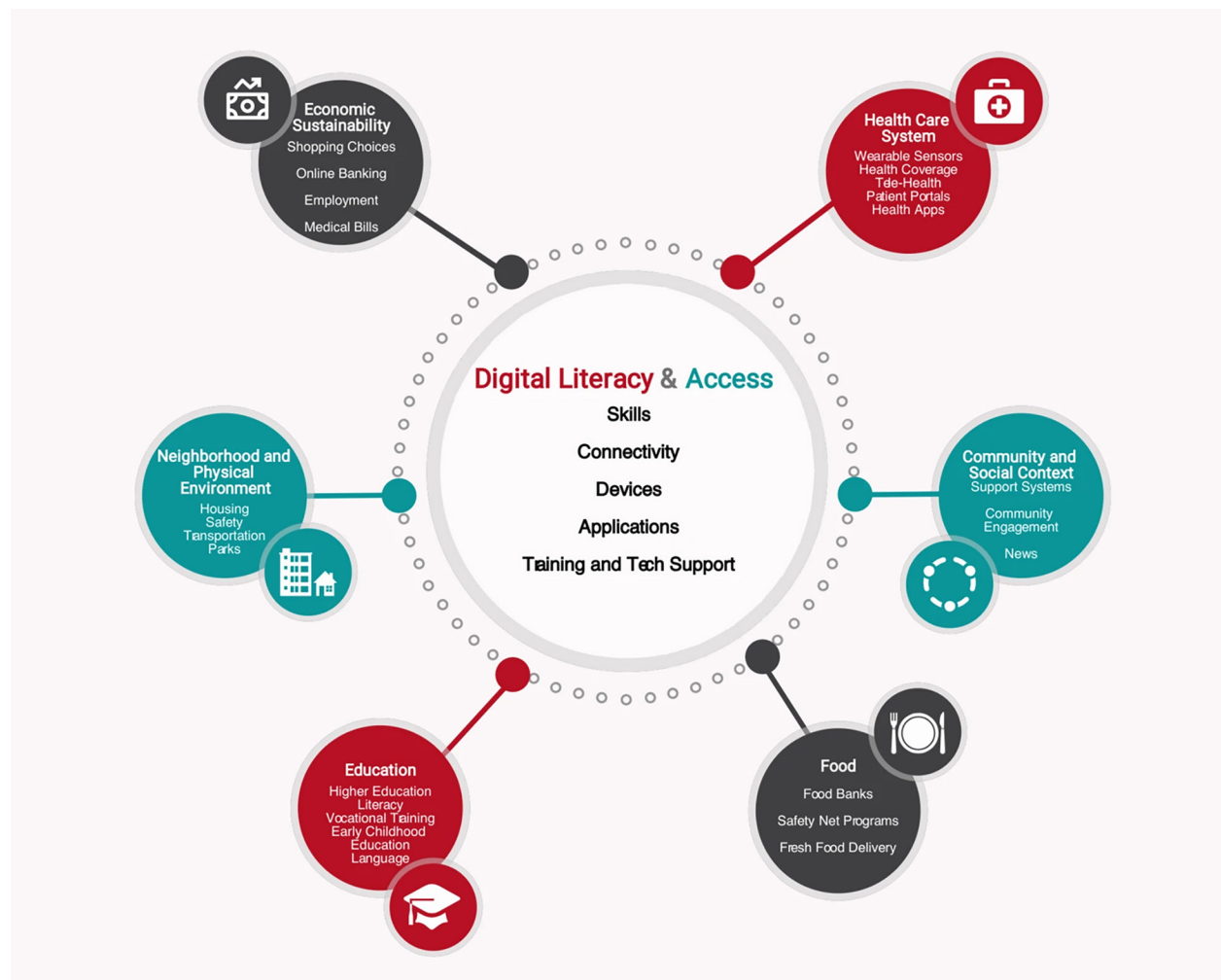
Digital literacies and social determinants of health. (Source: npj Digital Medicine)

According to the Colorado Broadband Office, **Digital Equity** is a state in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy.

The three key components of digital equity include:

Access to affordable, high-speed internet

Access to affordable, web-enabled technology

Access to relevant and high quality, effective training and support for digital skill development and use

The digital divide is inversely correlated with digital equity, meaning reducing the digital divide signals an increase in digital equity.

In 2023, approximately **18 million U.S. households do not have broadband of any kind.**[26] **As of July 2023, an estimated 190,000 Coloradan households have little to no access.**[27] Closing this gap will require more effort than just ensuring broadband availability to all households, regardless of urban or rural geographies.

Efforts towards closing the digital divide include:

PROVIDING AFFORDABLE BROADBAND

More than 21% of low-income households in 2022 had no broadband access due to financial constraints.[28] The American Community Survey (ACS) defines low income households as those making $20,000 or less. This is below Colorado's poverty rate for a household of three by more than $4,000 per year.

» According to BroadbandNow only 3% of Coloradans have access to a standalone internet plan under $60 per month.

EXPANDING THE LEVEL OF DEVICE ACCESS STATEWIDE

Owning a working computer and possessing the skills to use it are basic needs in today's society.

» According to Digitunity, **7.15% of households in Colorado have no computer, and only 73.45% of households have more than one device.**

» A Pew Research Center survey shows that Americans with lower incomes have lower levels of technology adoption.

INCREASING DIGITAL LITERACY EDUCATION

The ability to use information and communication technologies to find, evaluate, create,
and communicate information is an important competency that requires both cognitive and technical skills.[29]

» **Technology skills are reported to be the third most important growing core skill in the next five years.**[30]

» According to the National Skills Coalition, 18% of the national workforce have very limited skills associated with digital literacy. Workers with limited skills can complete only very simple digital tasks with a generic interface and just a few simple steps. For example, these workers might struggle to sort emails that respond to an event invitation into different folders.

Remote Workforce Trends – Here to Stay?

Experts project that there will be 36.2 million U.S. workers who are fully remote by 2025.[31] According to research by McKinsey International in 2023, the highest percentage of remote workers are between 24 and 35, with 35% working full time remotely and 25% participating in a hybrid model.[32]

While the percentage of full-time remote work has observed slight decline since 2021 in both Colorado and the U.S, it is safe to assume remote/hybrid work will continue to be an aspect of workplaces where it is feasible. 2022 census figures show that 24% of workers in the Denver metro area continued working from home last year, relative to 28% in 2021.[33]

Prior to the pandemic, only 9% of workers in the Denver area worked remotely. As of last year, **Boulder, Colorado, saw 32% of workers working remotely, which is the highest percentage of remote workers of any metro area in the U.S.**[34] [35] Denver was also listed as one of the metro areas with the greatest share of remote workers at 23.7% in 2022, ranking 9th in the U.S. overall.[36]

Those with higher levels of education are more likely to work remotely.[37] Boulder and Denver both have highly educated populations and are likely locations for ongoing remote and hybrid workforce participation.

Colorado ranked 14th in the U.S. during 2023 for the percent of individuals 25 and older with a high school diploma or higher.[38] According to the Lumina Foundation, 60.5% of

Colorado's population has received some sort of postsecondary credential, increasing by roughly 15 percentage points since 2008 and ranking 4th in the nation in 2023 for overall educational attainment, as reported by U.S. News.[39] [40] Given the correlation between education level and remote work, occupations that offer remote and hybrid options in Colorado are likely to remain in demand at least in the near future.

Table 1: **U.S. Cities with Largest Share of Remote Workers in 2022**
Source: U.S. Census Bureau, 2023.
Note: This share of the population represents individuals 16 and older.
Supplemental data for Table 1: U.S. Cities with Largest Share of Remote Workers in 2022.

Metro Area	Share of Remote Workers
Boulder, CO	32.0%
Austin, TX	28.0%
San Francisco, CA	27.0%
Raleigh, NC	26.1%
Seattle, WA	25.4%
Washington, DC	25.4%
San Jose, CA	24.4%
Bend, OR	24.2%
Denver, CO	23.7%
Portland, OR	23.2%
Ann Arbor, MI	22.6%
Charlotte, NC	22.3%
Phoenix, AZ	21.7%

At a national level, only 15% of workers worked from home in 2022, but numbers are higher on both the east and west coasts and in other larger metropolitan areas.[41] However, the share of individuals working remotely declined by a little less than three percentage points between 2021 and 2022 in the U.S., showing very little demand to change conditions that the pandemic accelerated.[42]

Implications of Artificial Intelligence on the Future of Jobs and Workforce Development

According to a [July 2023 report by the McKinsey Global Institute](#), an **estimated 30% of time spent by U.S. workers in 2023 could be automated by AI technology by 2030.**[43] Economists also predict automation will likely benefit professionals associated with higher-wage jobs linked to STEM, health care, transportation and warehousing, business, and law.[44] While technological advances tend to prompt disruption when first adopted into the market, historical trends suggest they drive economic and employment growth in the long-run.

Outcomes remain uncertain about the impact of AI on job losses in the future. Based on observations over the last few years, some economists anticipate reduction in jobs will largely be lower-wage occupations that can be replaced by AI technology.[45] Individuals in those jobs will need to continue to upskill, reskill, or next-skill in order to move into higher-wage jobs, remain competitive in the market, and advance in their careers.

Spurred by the pandemic and tight labor market conditions, many workers have already begun moving into new roles, accelerating occupational shifts in the economy. Labor force participation rates associated with low- and middle-wage occupations have declined relative to pre-pandemic levels (regardless of the demand for these positions).[46] Simultaneously, [the share of high-wage occupations (that pay more than $57,000 annually) has increased](#), adding about 3.5 million jobs in the U.S.[47]

Between 2019 and 2022, the U.S. saw more than 8.9 million occupational shifts, with over four million linked to exits from food service, customer service, and office support and production careers.[48] These sectors are typically linked to lower-earning occupations. It is important to mention that these estimates reflect national trends and are not specific to Colorado's economy, which has experienced an upward shift in leisure and hospitality jobs over the last 12 months.

Workers in lower-wage jobs are up to 14 times more likely to need to change occupations than those in highest-wage positions, and most will need additional skills to do so successfully.[49] In addition, **women are 1.5 times more likely to need to move into new occupations than men.**[50]
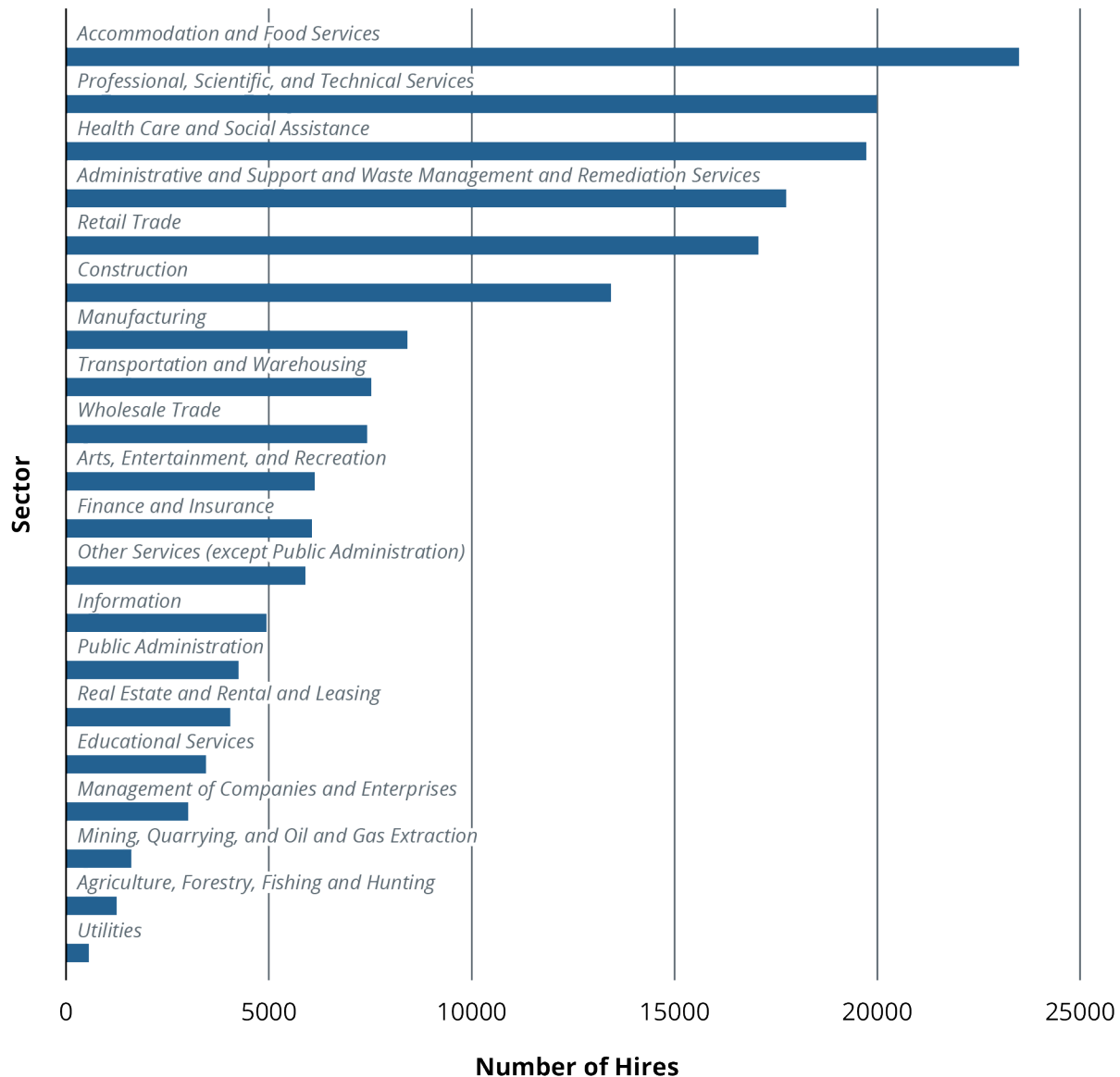
DEMAND

According to a recent economic indicator report from CU Boulder's Leeds School of Business, Colorado's job recovery continues to remain above average in 2023, though growth has cooled significantly. As of early May, Colorado's job growth rate rests at 1.5% and lags behind the national pace at 2.5%.[51] The state's job growth rate has increased by 0.4% since May when job growth sat at 1.1% while the U.S. decreased by 0.2%.

Growth in hiring across sectors is shown in Figure 1. Accommodation and Food Services; Professional, Scientific, and Technical Services; and Health Care and Social Assistance are associated with the highest number of hires in the state during 2023.

Figure 1: **Number of Hires by Sector in Colorado: 2023, Q2**
Source: U.S. Census Bureau, Center for Economic Studies, LEHD
Table alternative for Figure 1: Number of Hires by Sector in Colorado: 2023, Q2.

While growth has relatively slowed in recent months – largely due to the labor shortage rather than the effects of an economic turndown[52] – data indicate more individuals are returning to Colorado's labor market, with 31,400 Coloradans reentering the workforce between Aug. 2022 and July 2023 compared to 21,600 job leavers during the same period.[53]

Outcomes reported across all demographics display that the number of people rejoining the job market exceeds the number of people leaving in 2023. Further, the increase in new participants in the workforce suggests potential growth in Colorado's labor market.

Nationwide, millions of workers left the labor market in 2020 and have not returned for nearly three years since the virus surfaced. This left many economists uncertain about where the future of work was headed. Data show **large portions of Coloradans reentering the state's workforce in 2023**, suggesting that the statewide labor shortages may be partially addressed by more individuals returning to the job market.

Colorado's Top Jobs

Since 2014, this report has defined and identified Top Jobs in Colorado based on annual data. This list helps inform job seekers, guide employers to create quality work environments, and inform program creators. These are occupations that are in high-demand, have strong expectations for growth over the next 10 years, and are capable of providing a livable wage based on regional assessments. Criteria measurements differ slightly from year-to-year based on economic conditions specific to Colorado. In 2023, Colorado Top Jobs are occupations that are able to meet or surpass the following:

» Projected high net annual openings (>40)

» Above average growth rate over 10 years (>13%)

» A livable wage (as defined by the MIT living wage calculator)

In 2023, the average growth rate across all occupations was estimated at 12.61%. It was then rounded up to 13% to observe jobs associated with above average growth. This amount has decreased by 2% relative to the 2022 report.

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Colorado has very diverse regions, and the cost of living can also vary greatly by county. Regional information on living wages can be seen using the MIT living wage calculator, and lists of Top Jobs based on regional data can be seen in Appendix A.

Tier 1 jobs are benchmarked by an income that can support a family of three with two adults—one working—and one child. MIT defines this annually at a statewide average of $77,480.

Tier 2 jobs are benchmarked by an income that can support a family of one adult. MIT defines this annually at a statewide average of $39,977.60.

Again, the idea of a living wage will fluctuate from county to county, accounting for varying differences in regional expenses such as groceries, child care, and housing.

In 2023, the Tier 1 Top Jobs list increased by five occupations and the Tier 2 Top Jobs list increased by 25 occupations compared to 2022 (Figure 2). Some jobs that dropped off the list in 2022 have rejoined, signaling that employers have responded to higher costs of living by boosting wages. This year there are 75 Tier 1 Top Jobs and 133 Tier 2 Top Jobs that met all three criteria.

Figure 2: **Changes in Amount of Qualifying Top Jobs in Colorado 2021-2023**
Source: Office of Labor Market Information, CDLE, 2023.
Notes: This graph examines Top Job quantities after 2020. This report assumes 2020 is an outlier year due to the initial COVID-19 outbreak's rippling impacts on the labor market. However, estimates and analyses do acknowledge the negative effects due to viral-related outcomes that have made lasting impacts in following years.
Table alternative for Figure 2: Changes in the Number of Jobs that Qualify as a Top Job in Colorado 2021-2023.
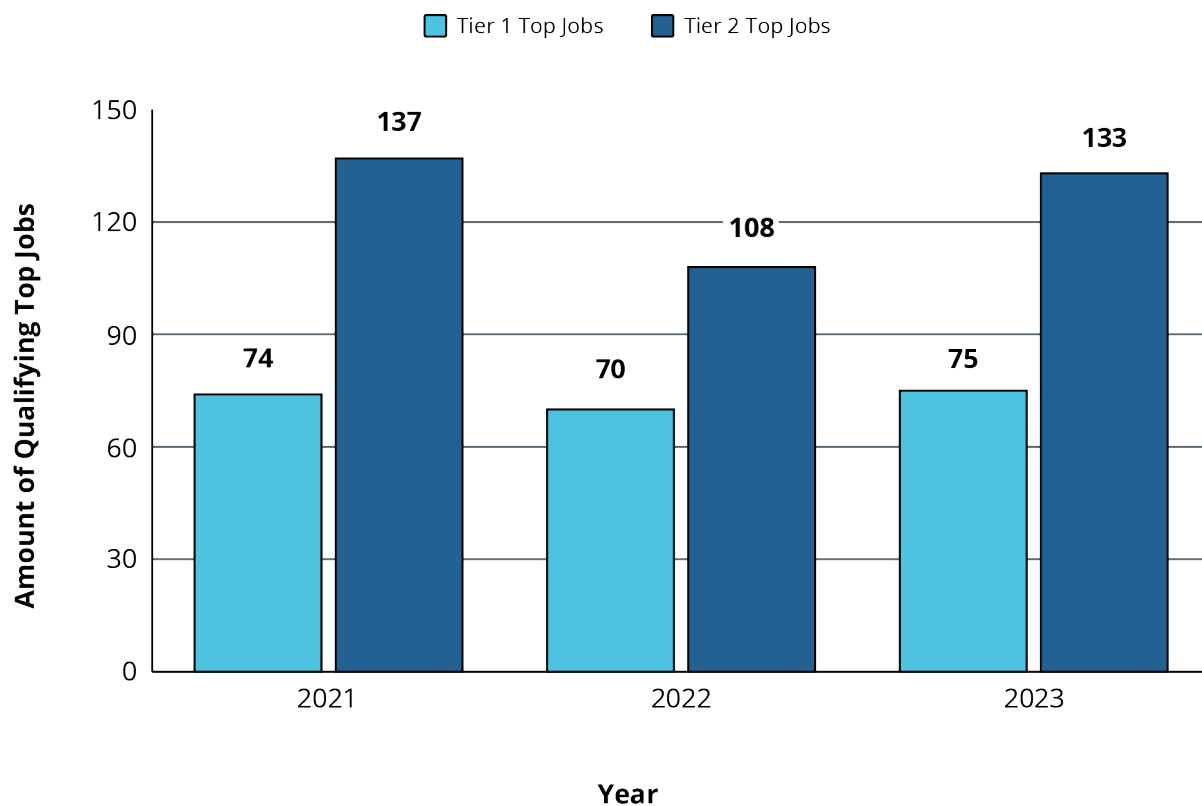
The 10 industries associated with the highest concentration of Top Jobs in 2023 are reported in Table 2 below. Column 1 shows the major industry group, and the table is sorted from the highest to lowest number of different occupations across Tier 1 and Tier 2 categories. Column 2 shows the number of occupation titles associated with Tier 1 and Tier 2 Top Jobs that fall into the associated industry category. Columns 3 and 4 report subsets of Tier 1 and Tier 2 Top Jobs that are linked to the major industry groups in column 1.

The industry category of Education, Training, and Library Occupations had the highest number of different occupations across Tier 1 and Tier 2 Top Jobs with 31 occupation titles. This is followed by Healthcare Practitioners and Technical Occupations with 24 occupation titles, and Life, Physical, and Social Science Occupations with 23 occupation titles.

Table 2: **Colorado's 2023 Top Jobs and their Industries**
Source: Bureau of Labor Statistics; Office of Labor Market Information, CDLE, 2023.
Supplemental data for Table 2: Colorado's 2023 Top Jobs and their Industries.

Major Industry Category	Number of Occupation Titles in Tier 1 and Tier 2	Tier 1 Jobs	Tier 2 Jobs
Education, Training, and Library Occupations	31	Engineering or Political Science or Nursing or Criminal Justice and Law Enforcement Teachers, Postsecondary Teachers	Business or Computer Science or Mathematical Science or Biological Science or Atmospheric, Earth, Marine, and Space Sciences or Chemistry or Psychology Health Specialties or Education or Art, Drama, and Music or Communications or English or History or Foreign Language or Philosophy Postsecondary Teachers, K-12 Teachers, Librarians, Curators, Preschool Teachers
Healthcare Practitioners and Technical Occupations	24	Chiropractors, Pharmacists, Physician Assistants, Occupational or Physical Therapists, Speech-Language Pathologists, Veterinarians, Registered Nurses, Nurse Anesthetists, Nurse Practitioners, Cardiovascular Technicians/ Technologists, Diagnostic Medical Sonographers, Magnetic Resonance Imaging	Pharmacy or Psychiatric or Clinical Lab Technicians, Paramedics, Surgical Technologists, Medical Records Specialists, Athletic Trainers, Dietitians and Nutritionists, Respiratory Therapists, Health Information Technologists and Medical Registrars

Major Industry Category	Number of Occupation Titles in Tier 1 and Tier 2	Tier 1 Jobs	Tier 2 Jobs
Life, Physical, and Social Science Occupations	23	Hydrologists, Geoscientists, Psychologists, Urban and Regional Planners, Physicists, Urban and Regional Planners, Biochemists, Medical Scientists, Environmental Scientists, Food Scientists and Technologists, Atmospheric and Space Scientists, Geological Technicians, Occupational Health and Safety Specialists	Soil and Plant Scientists, Zoologists, Biologists, Epidemiologists, Chemical/ Biological/Environmental/ Forensic Science Technicians
Architecture and Engineering Occupations	17	Architects, Aerospace or Chemical or Civil or Computer Hardware or Electrical or Environmental or Industrial or Petroleum or Materials or Electronics or Mechanical Engineers	Cartographers and Photogrammetrists, Surveyors, Civil or Environmental Engineering Technicians, Mapping Technicians
Computer and Mathematical Occupations	15	Computer Systems or Network Analysts, Information Security Analysts, Software Developers, Database Architects, Web or Digital Developers, Data Scientists, Software Quality Assurance Analysts and Testers, Actuaries, Operations Research Analysts	Computer Network Support Specialists, Computer User Support Specialists

Major Industry Category	Number of Occupation Titles in Tier 1 and Tier 2	Tier 1 Jobs	Tier 2 Jobs
Installation, Maintenance, and Repair Occupations	14	No Tier 1 Top Jobs associated with this industry in 2023.	Radio, Cellular, and Tower Equipment Installers and Repairers, Aircraft Mechanic Workers, Computer, Automated Teller, and Office Machine Repairers, Telecommunications Installers/Repairers, Industrial Machinery Workers, Machinery Service Technicians, Audiovisual Equipment Installers and Repairers, Security and Fire Alarm Systems Installers, Farm Equipment Mechanics and Service Technicians, Recreational Vehicle Service Technicians, Mechanical Door Repairs, Heating, Air Conditioning, and Refrigeration Mechanics and Installers, Maintenance Workers, Machinery, Medical Equipment Repairers
Business and Financial Operations Occupations	13	Logisticians, Accountants and Auditors, Financial and Investment Analysts, Financial Advisors, Financial Examiners, Project Management Specialists	HR or Marketing or Training and Development Specialists, Credit Counselors, Tax Preparers, Event Planners
Construction and Extraction Occupations	13	Rotary Drill Operators, Oil and Gas	Floor Layers, Tile and Stone Setters, Installers, Electricians, Glaziers, Structural Iron and Steel Workers, Highway Maintenance Workers, Derrick Operators, Oil and Gas, Service Unit Operators, Oil and Gas, Septic Tank Servicers and Sewer Pipe Cleaners, Solar Photovoltaic Installers, Drywall and Ceiling Tile Installers, Roustabouts, Oil and Gas

Major Industry Category	Number of Occupation Titles in Tier 1 and Tier 2	Tier 1 Jobs	Tier 2 Jobs
Community and Social Services Occupations	11	No Tier 1 Top Jobs associated with this industry in 2023.	Marriage and Family or Rehabilitation or Substance Abuse, Behavioral Disorder, and Mental Health, Counselors, Therapists, Child, Family, and School or Healthcare or Mental Health and Substance Abuse Social Workers/Assistants, Community Health Workers, Clergy, Educational, Guidance, and Career Counselors and Advisors, Probation Officers and Correctional Treatment Specialists, Social and Human Services Assistants
Transportation and Material Moving Occupations	10	Airline Pilots, Copilots, and Flight Engineers, Commercial Pilots	Aircraft Cargo Handling Supervisors, Flight Attendants, Truck or Bus Drivers, Aircraft Service Attendants, Refuse and Recyclable Material Collectors, Industrial Truck and Tractor Operators, Refuse and Recyclable Material Collectors

Job training opportunities have continued to expand this year across the state, with many employers providing diverse opportunities for staff advancement that improve the quality of Colorado's workforce overall. **More than 42% of Tier 2 Top Job openings and 24% of Tier 1 Top Job openings require some type of training to prepare individuals for a good-paying, high-demand occupation.** Many employer initiatives to upskill their workforce are linked to apprenticeships and/or internship opportunities and these strategies span every sector in the economy.

No single career pathway mirrors another. Many Top Jobs in Colorado can be accessed through diverse training and education opportunities that don't require someone to give up their income to pursue a degree. Considering the rapid pace of change in our economy since the pandemic, learning and gaining professional experiences are lifelong practices that lead to further attainment.

See a full list of Colorado's Top Jobs and their associated attainment and wages in Appendix A.

Attainment Value in the Workforce

In 2023, 94.7% of Tier 1 Top Jobs and 64.7% of Tier 2 Top Jobs required some type of postsecondary education past a high school diploma or equivalent to be relevant for a particular role. Relative to 2022 levels, postsecondary completion requirements linked to Tier 1 Top Jobs increased by 3.3% while decreasing for Tier 2 Top Jobs (Figure 3). These results are likely due to more employers:

#1   Seeking non-degree/non-postsecondary training attainment to fulfill high-need Tier 2 Top Jobs in the state; or

#2   Putting a higher value on postsecondary completion requirements for entry into Tier 1 Top Jobs.

Figure 3: **Postsecondary Attainment Requirements for Entry into Top Jobs in Colorado, 2023**
Source: Office of Labor Market Information, CDLE, 2023.
Notes: 2023 levels are displayed by the blue bars. The green indicator lines show 2022 percentages to indicate changes from the previous year.
Table alternative for Figure 3: Postsecondary Attainment Requirements for Entry into Top Jobs in Colorado, 2023.
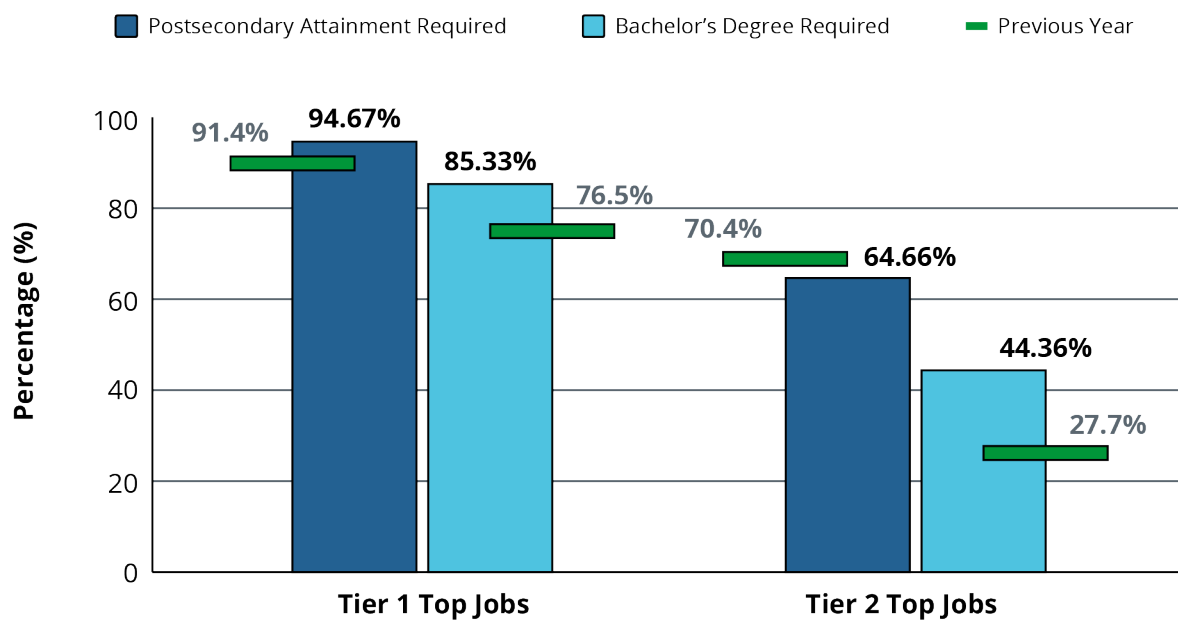
Eighty-five percent of Tier 1 Top Jobs and 44.4% of Tier 2 Top Jobs require a bachelor's degree for eligibility. These reflect an 8.8% and 16.7% increase from last year's report findings, respectively, continuing the upward trend in demand for degrees. While Colorado employers are feeling the strains of labor shortages, they are simultaneously increasing their reliance on a bachelor's degree to fill high quality jobs.
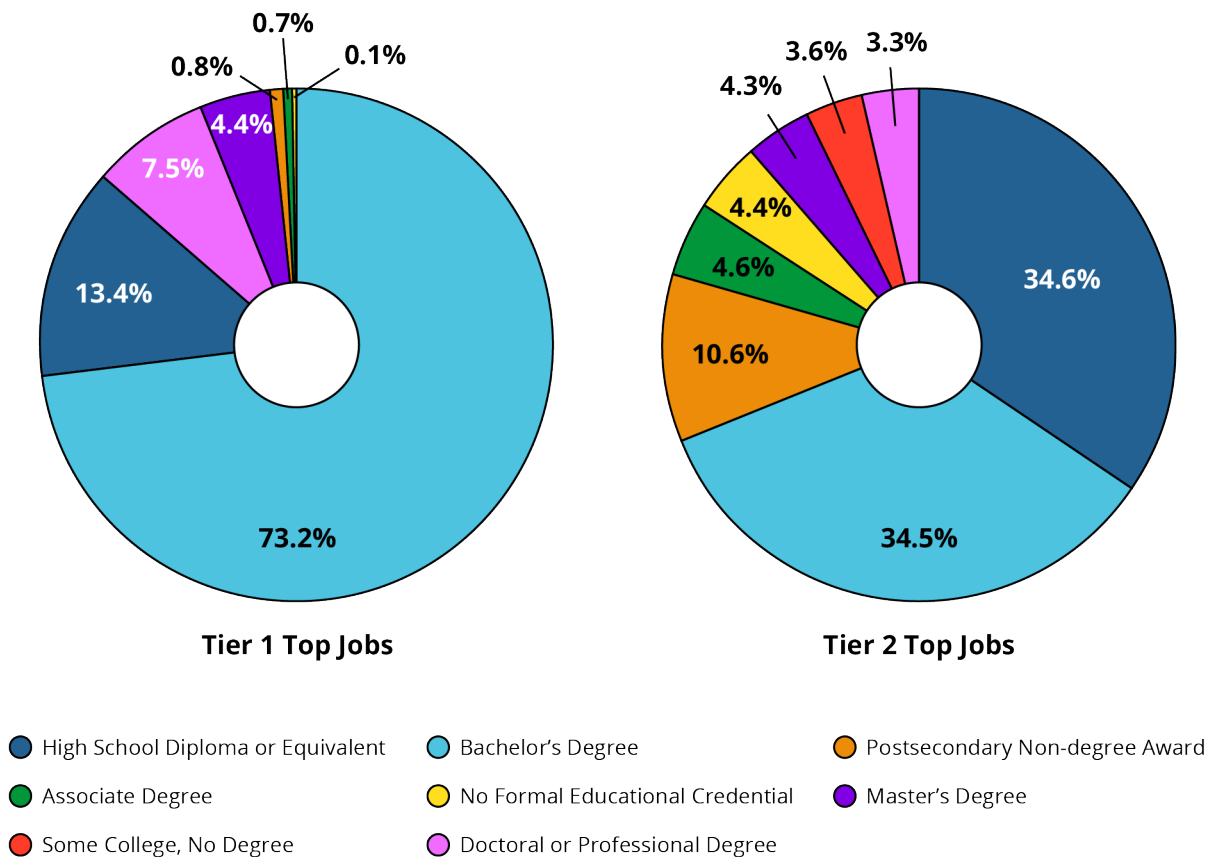
Figure 4 reports Top Job openings during 2023 and their associated typical attainment requirements (if any) for eligibility. Compared to Tier 1 Top Jobs, occupations categorized into Tier 2 have fewer attainment requirements due to the lower wage threshold that qualifies a job as Tier 2. More occupations fall into this observation group each year.

The number of Tier 2 Top Jobs that do not require some type of postsecondary attainment grew by 5.74% relative to last year. This demonstrates increasing opportunities for those with a high school diploma or equivalent to secure a good paying, high-demand job through a more diversified pathway.

Figure 4: Top Job Openings by Typical Attainment Level in 2023
Source: Office of Labor Market Information, CDLE, 2023.
Table alternative for Figure 4: Top Job Openings by Typical Attainment Level in 2023.

Tier 1 Top Jobs

Tier 2 Top Jobs

- High School Diploma or Equivalent
- Bachelor's Degree
- Postsecondary Non-degree Award
- Associate Degree
- No Formal Educational Credential
- Master's Degree
- Some College, No Degree
- Doctoral or Professional Degree

Top Job Opportunities for Work-based Learners

While many Top Jobs still require a degree, employers are considering other qualifications. This year, roughly 35% of Tier 2 Top Jobs require only a high school diploma or equivalent and 4.4% have no formal education credential required, showing a **shift in demand for training requirements over degrees in some jobs**. The lower the educational attainment required to secure good paying, in-demand jobs, the more likely it is that an employer will require job seekers to acquire some type of job training to succeed in a role.

To meet workforce demand and address our workforce shortage, Colorado has continued to expand education and training opportunities, bolstering the number of Coloradans with postsecondary skills and credentials. **In 2023, there were an estimated 2,857 Tier 2 Top Job openings attainable through apprenticeships in the state.**

About 11% of Tier 2 Top Jobs required some type of credential past a high school diploma but not an associate or bachelor's degree. Typically referred to as postsecondary non-degree credentials, these are jobs that require

an industry-recognized credential but no degree. This type of attainment provides a more flexible framework that avoids the financial opportunity costs learners sometimes face by leaving the labor market to attain further education. This year there were 7,403 Tier 2 Top Job openings and 375 Tier 1 Top Job openings associated with this credential category.

Postsecondary advancement is broader than a bachelor's degree. Our understanding of postsecondary advancement is expanding to include shorter-term credentials and other training.

The population of learners in the U.S. also continues to expand, encompassing a broader group of the population beyond the stereotypical young college students. **Currently in the U.S., more than 70% of postsecondary students in 2023 are considered "non-traditional,"** meaning they are not single, non-working individuals between the ages of 18 - 22 without children.[54]

Including all jobs in Colorado, approximately 33% of jobs require some credential past high school in 2023. Roughly 65% of jobs in Colorado require some type of training, including apprenticeships and internships.

A **non-degree credential** is a postsecondary certificate, apprenticeship certificate, professional license, or industry certification.

Sector Trends and Employer Demand

Table 3 shows Colorado's industry sectors ranked by current employment levels. Based on employment growth projections, the industries we expect to have the highest need over the next five years include: Health Care and Social Assistance (+35,378 new jobs), Accommodation and Food Services (+30,598 new jobs), and Professional, Scientific, and Technical Services (+26,645 new jobs).

Table 3: **In-demand Industries in Colorado**
Source: Colorado Department of Higher Education (CDHE) Return on Investment Report, 2023; Integrated Postsecondary Data System (IPEDS); CDHE; Office of Labor Market Information, CDLE, 2023.
Supplemental data for Table 3: In-demand Industries in Colorado.

Industry	Current Employment	Current Average Annual Wage	5-year Forecast Employment Growth	5-year Forecast Annual % Growth
Health Care and Social Assistance	377,324	$65,721	35,378	1.9%
Professional, Scientific, and Technical Services	312,348	$117,534	26,645	1.7%
Retail Trade	286,433	$42,395	6,925	0.5%
Accomodation and Food Services	286,282	$31,620	30,598	2.1%
Educational Services	232,216	$70,730	13,598	1.2%
Construction	224,094	$70,730	12,244	1.1%
Administrative and Support Waste Management and Remediation Services	174,893	$58,047	10,152	1.2%
Manufacturing	159,654	$82,840	5,743	0.7%

Industry	Current Employment	Current Average Annual Wage	5-year Forecast Employment Growth	5-year Forecast Annual % Growth
Public Administration	151,958	$77,401	4,048	0.5%
Other Services (except Public Administration)	134,790	$43,945	10,639	1.6%
Transportation and Warehousing	124,419	$66,613	9,818	1.6%
Finance and Insurance	120,819	$122,819	7,325	1.2%
Wholesale Trade	116,997	$107,008	6,427	1.1%
Information	84,047	$130,152	6,648	1.6%
Arts, Entertainment, and Recreation	73,967	$43,661	6,890	1.9%
Retail Estate and Rental Leasing	69,204	$784,454	2,729	0.8%
Management of Companies and Enterprises	45,455	$164,336	2,602	1.1%
Agriculture, Forestry, Fishing, and Hunting	36,673	$45,333	1,114	0.6%
Mining, Quarrying, and Oil and Gas Extraction	20,935	$162,631	2,118	2.0%
Utilities	14,910	$109,136	246	0.3%
Unclassified	1,292	$82,546	111	1.7%
Total - All Industries	**3,048,711**	**$72,865**	**203,260**	**1.3%**

The [Colorado Department of Higher Education's (CDHE) 2023 Return on Investment (ROI) Report](#) reported job creation is expected to increase across all industry sectors in Colorado by an additional **203,260 new jobs over the next five years**.[55] This provides opportunities for learners to transfer their skills or reskill/upskill/next-skill to move to a new industry sector with higher paying wages and better quality factors.

Many core skills are relatively uniform across sectors.

According to [Indeed's Career Guide](#), core skills are a set of capabilities that employers consider essential for candidates to fulfill various work tasks and perform well in different work environments. In 2023, the demand for core skills associated with cognitive ability is growing the quickest, reflecting the increasing value of complex problem-solving in the workplace.[56] Core skills that are in demand across the fastest-growing occupations are listed below. These are ranked by demand according to U.S. employers surveyed for the [World Economic Forum Future of Jobs 2023 report](#). Next to each core skill is the percentage of national organizations who consider the skill increasingly important over the next five years.

These core skills are:

01.	Creative Thinking (73.2%)		06.	Systems Thinking (59.9%)
02.	Analytical Thinking (71.6%)		07.	AI and Big Data (59.5%)
03.	Technological Literacy (67.7%)		08.	Motivation and Self Awareness (58.9%)
04.	Curiosity and Lifelong Learning (66.8%)		09.	Talent Management (56.4%)
05.	Resiliency, Flexibility, and Agility (65.8%)		10.	Service Oriented (54.8%)

In 2023, employers estimate that 44% of workers' skills will be disrupted in the next five years.[57] As technological literacy is the third-fastest growing core skill, proficiencies associated with [AI and machine learning](#) and [augmented reality, virtual reality, and mixed reality](#) are examples of new specialized skills that are expected to surge upwards in employer demand during this period.

One emerging U.S. trend linked to technological literacy intersects with demographic trends which project Hispanic and/or Latinx Coloradans will have the highest rate of growth in the state. According to a [September 2023 article from the Brookings Institution](#), this population is outpacing newskill advancement in the financial technology realm relative to other population groups. According to the Brookings Institution, financial technology (aka "fintech") defines new products and services that promise to revolutionize banking, investments, and more. This skill is powered by AI, big data, and block chain technology. [The surge in employment of Hispanic and/or Latinx individuals working in fintech has prompted arguments that this sector is bolstering inclusion](#) and lowering barriers for wealth-building in an industry that has traditionally excluded individuals of color.[58]

To learn more about the core skills that are in demand by employers in the state, please refer to the ["Shifts in Industries and In-demand Skills"](#) section of this report.

Economic Development in Rural Colorado

64% of Colorado job gains are observed in rural areas.

During the last year, Colorado's nonfarm payroll jobs have been growing, increasing by more than 42,700 new positions. The largest gain in jobs (approximately 27,200 or 63.7%) are observed in non-metropolitan statistical areas (e.g., not Denver, Colorado Springs, Fort Collins, Boulder, Greeley, Grand Junction, or Pueblo). These findings suggest economic development is accelerating in more rural areas of the state. Figure 5 illustrates this trend, reporting job growth differences by area from August 2022 through August 2023.

Figure 5: Job Growth in Colorado by Area: August 2022 - August 2023
Source: Colorado Department of Labor and Employment; Bureau of Labor Statistics.
Notes: MSA = Metropolitan Statistical Area; Non-Metro Colorado = residual of state that is not an MSA (47 counties). Data seasonally adjusted, August 2022 to August 2023.
Table alternative for Figure 5: Job Growth in Colorado by Area: August 2022 - August 2023.

Number of Jobs
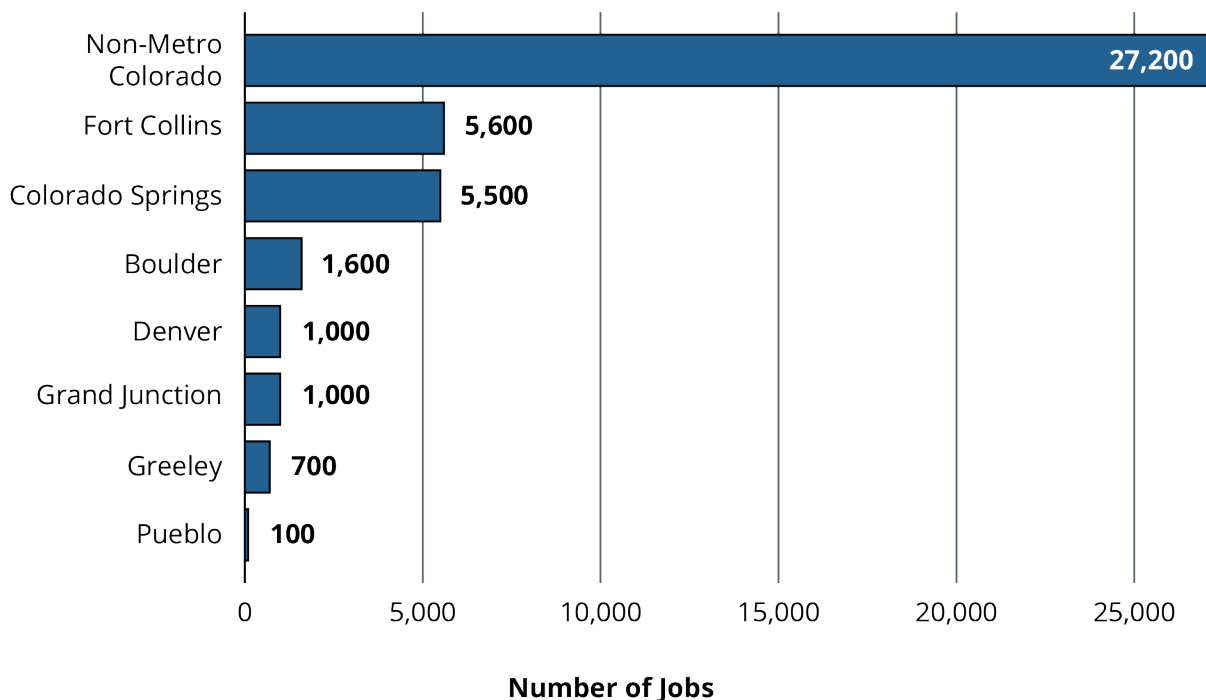
Rural areas have had significant growth in population level since the pandemic. Between 2020 and 2022, eight of the 10 fastest-growing counties in Colorado by percentage were rural, led by San Juan and Custer, which both grew by 13%.[59] Figure 6 displays the change across Colorado's population by county during this period.

Figure 6: **Change in Colorado Population by County, 2020 - 2022**
Source: U.S. Census. Map: Kavya Behera/Axios
Table alternative for Figure 6: Change in Colorado Population by County, 2020 - 2022.
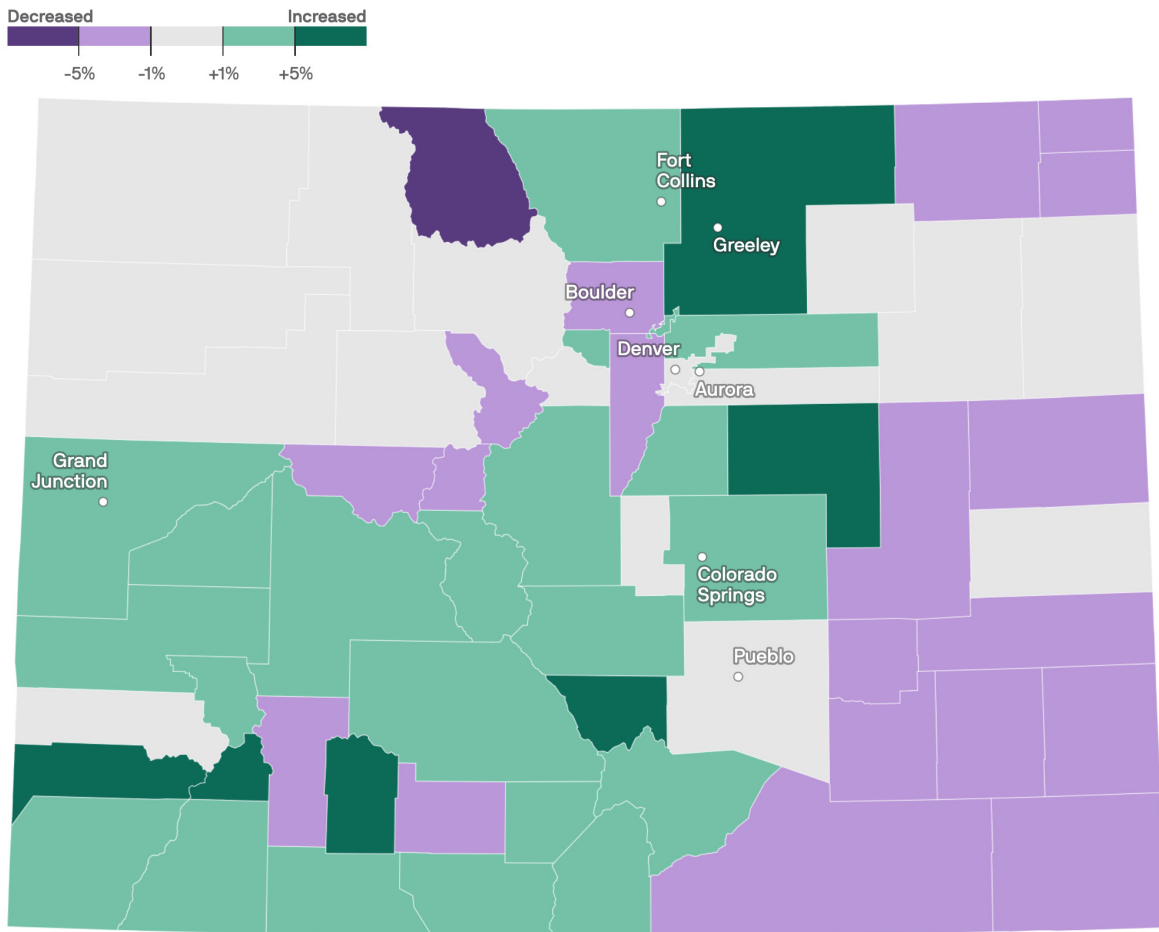
Colorado expects nearly $19 million in federal funding through the Inflation Reduction Act specifically to aid Colorado's farmers, ranchers, clean energy workers, and small businesses in rural communities (additional funds anticipated for other industries). We can expect rural job growth and population increases to only continue from these federal investments.
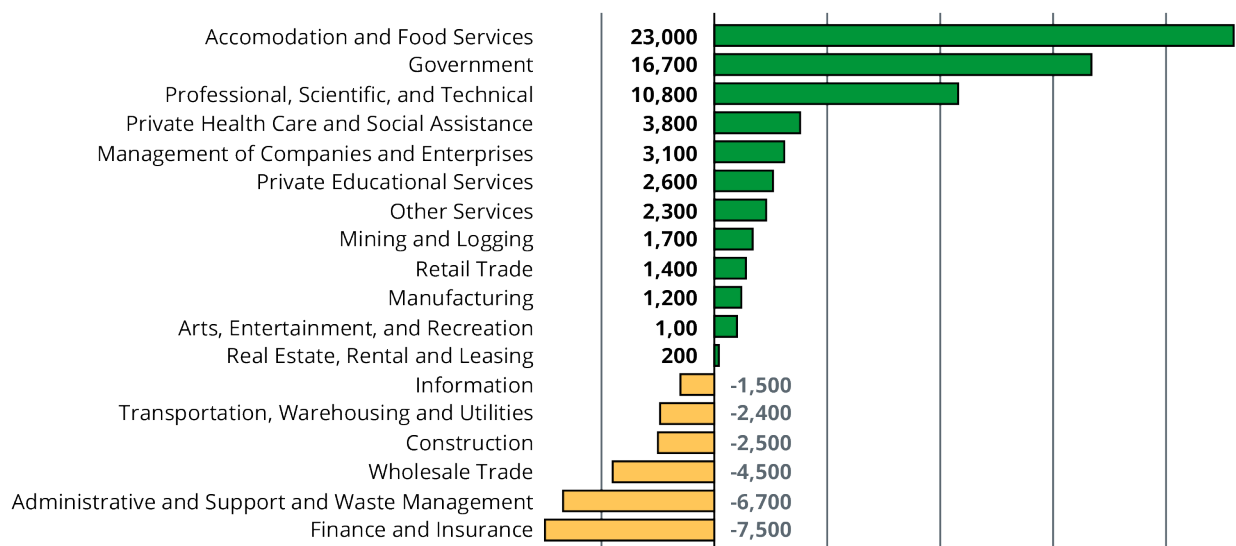
Shifts in Industries and In-demand Skills

The largest year-over-year growth rates by industry sectors came from accommodation and food services; health care; government; and professional, scientific, and technical sector jobs.[60] **Accommodation and Food Services saw Colorado's biggest job gains for the past year, adding 23,000 jobs as of September 2023.**[61] The COVID-19 pandemic greatly reduced employment in the leisure and hospitality industry at the state level and nationally. Wage growth associated with this sector has now surpassed overall wage growth across sectors.[62]

The bulk of losses over the past 12 months were recorded in financial activities; administration; trade, transportation, utilities; and construction (Figure 7).[63] While Finance and Insurance is the third highest paid industry in Colorado, high interest rates tend to have a more immediate impact on this sector. Finance and Insurance shed more jobs than any other sector in Colorado as of September, losing 7,500 jobs during the year.[64] Like financial activities, construction is also an interest-rate-sensitive industry, which likely explains the weaker than expected growth.[65]

Figure 7: **Change in Job Growth by Industry Sector, August 2022 - August 2023**
Source: Office of Labor Market Information, CDLE, 2023.
Table alternative for Figure 7: Change in Job Growth by Industry Sector, August 2022 - August 2023.

Industry Sector	Change
Accomodation and Food Services	23,000
Government	16,700
Professional, Scientific, and Technical	10,800
Private Health Care and Social Assistance	3,800
Management of Companies and Enterprises	3,100
Private Educational Services	2,600
Other Services	2,300
Mining and Logging	1,700
Retail Trade	1,400
Manufacturing	1,200
Arts, Entertainment, and Recreation	1,00
Real Estate, Rental and Leasing	200
Information	-1,500
Transportation, Warehousing and Utilities	-2,400
Construction	-2,500
Wholesale Trade	-4,500
Administrative and Support and Waste Management	-6,700
Finance and Insurance	-7,500

Total Nonfarm: +42,700

The information in Table 4 below is based on online job postings that were active in Colorado over 12 months between September 2022 and September 2023. Registered Nurses continue to hold the top position for most active job postings for the second year in a row. Customer Service Representatives and Heavy and Tractor Trailer Truck Drivers dropped off the list this year and were replaced by Maintenance and Repair Workers, General; and Medical and Health Service Managers. The increase in active job postings for Maintenance and Repair Workers, General is likely linked to the growing number of jobs in energy and transportation. Repair and maintenance represented the largest proportion of motor vehicle jobs in the state during 2022, employing 20,954 individuals.[66]

Heavy and Tractor Trailer Truck Drivers, a vital job that also does not require a postsecondary degree, dropped off this list after being at or near the top for multiple years. 1,538 active postings in Colorado were associated with this role between September 2022 and September 2023.[67] This occupation – alongside Construction and Transportation, Warehousing and Utilities – will likely see a spike in growth during upcoming years due to labor demand created by the statewide housing shortage and the Infrastructure Investment & Jobs Act (IIJA).

Table 4: **Highest Job Openings by Occupation in Colorado: Sept. 2022 - Sept. 2023**
Source: JobsEQ Econometric Modeling, 2023
Supplemental data for Table 4: Highest Job Openings by Occupation in Colorado: Sept. 2022 - Sept. 2023.

Occupation	Active Job Ads
Registered Nurses	36,063
First-Line Supervisors of Retail Sales Workers	23,252
Retail Salespersons	22,269
Stockers and Order Fillers	19,720
Computer and Information Systems Managers	16,914
Software Developers	15,129
Maintenance and Repair Workers, General	12,893
Medical and Health Services Managers	12,471
First-Line Supervisors of Food Preparation and Serving Workers	12,251
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	12,175

Table 5 reports the leading core skills sought by Colorado employers between September 2022 and September 2023. Based on active job numbers, **core skills will continue to be more valuable to employers in 2023 relative to technical skills** (which were largely associated with IT this year). This trend aligns with national trends discussed in the "Sector Trends and Employer Demand" section above. These are skills that relate to critical thinking and allow for success linked to reading comprehension, communication, problem solving, teamwork, etc.

Table 5: **Leading In-demand Skills by Employers – Technical Skills vs. Core Skills: Sept. 2022 - Sept. 2023**

Source: JobsEQ Econometric Modeling, 2023
Notes: To review the list of in-demand skills in full, please see Appendix B. It is worth mentioning that the technical skills associated with the ability to lift heavy weights are likely reflecting in-demand jobs such as warehouse/packaging handlers and direct care workers.
Supplemental data for Table 5: Leading In-demand Skills by Employers – Technical Skills vs. Core Skills: Sept. 2022 - Sept. 2023.

Technical Skill Title	Active Job Ads	Core Skill Title	Active Job Ads
Microsoft Excel	74,609	Communication (verbal and written)	390,582
Microsoft Office	72,089	Cooperative/Team Player	244,394
Ability to Lift 51-100 lbs.	39,884	Customer Service	167,134
Ability to Lift 41-50 lbs.	39,724	Organization	111,939
Microsoft Outlook	31,771	Self-Motivated/Ability to Work Independently/Self Leadership	100,960
Microsoft Word	29,870	Adaptability/Flexibility/Tolerance of Change and Uncertainty	99,706
Microsoft PowerPoint	27,557	Problem Solving	99,287
Agile	22,577	Detail Oriented/Meticulous	95,391
Python	22,254	Interpersonal Relationships/Maintain Relationships	87,243
Sales	21,413	Supervision/Management	86,507
Ability to Lift 21-30 lbs.	20,411	Ability to Work in a Fast Paced Environment	85,780
Spanish	19,920	Prioritize	54,483

In Table 6, active job ads and resume analytics are common economic proxies to determine gaps in workforce supply and demand. Job postings associated with certification requirements between September 2022 and September 2023 in Colorado are reported in column 2 of Table 6. Column 3 displays the number of job seekers in the state who have this credential on their resume (via online postings during the same period). The skill gap between these two metrics is shown in column 4. If there are more employers attempting to find talent with a particular certification than there are job seekers with that certification, a deficit occurs. Conversely, if there are more job seekers with a certificate than there are active job ads that request it, a surplus occurs.

Percentages linked to a deficit or surplus are listed in column 5 of Table 6 and were calculated based on the intensity of the talent gaps in relation to the number of active job ads affiliated with a particular certification. The need for training in column 6 is determined by the percentage of the deficit or surplus of in demand skills: high training needs are identified as having a 21% deficit or higher and low training needs are listed as any certificate associated with a surplus.

Table 6: **Colorado's In-demand Certificates: Sept. 2022 - Sept. 2023**
Source: JobsEQ Econometric Modeling, 2023
Notes: General driver's licenses were omitted from this list for analytical purposes, as they do not match CDHE's definition of a certificate credential. To review the entire certificate list in full, please see Appendix B.
Supplemental data for Table 6: Colorado's In-demand Certificates: Sept. 2022 - Sept. 2023.

Certificate Title	Active Job Ads	Job Seeker Postings with Certificate	Talent Gap	Deficit or Surplus Percentage	Need for Training
Basic Life Support (BLS)	26,313	9,748	16,565 Deficit	-63.0%	**High**
Certification in Cardiopulmonary Resuscitation (CPR)	21,229	21,517	288 Surplus	1.4%	**Low**
Registered Nurse (RN)	19,660	5,485	14,175 Deficit	-72.1%	**High**
Secret Clearance	11,383	3,384	7,999 Deficit	-70.3%	**High**
Advanced Cardiac Life Support Certification (ACLS)	7,631	4,184	3,447 Deficit	-45.2%	**High**
First Aid Certification	6,731	17,700	10,969 Surplus	163.0%	**Low**
Commercial Driver's License (CDL)	5,033	1,253	3,780 Deficit	-75.1%	**High**
Certified Nursing Assistant (CNA)	4,428	3,376	1,052 Deficit	-76.2%	**High**
Licensed Practical Nurse (LPN)	4,281	478	3,803 Deficit	-88.8%	**High**
Pediatric Advanced Life Support (PALS)	3,108	1,898	1,210 Deficit	-38.9%	**High**

Based on talent supply and employer demand for high-need skills associated with certificate completions, all of Colorado's most in-demand certificate credentials are associated with skill gaps in the state between September 2022 and September 2023 other than First Aid Certifications and Certifications in Cardiopulmonary Resuscitation (CPR).

Relative to the total number of job postings, Licensed Practical Nurse (LPN) certifications have the highest need, with an 89% gap of skilled workers for this role. In terms of scarcity, the Certified Nursing Assistants (CNA) certification and Commercial Driver's License (CDL) come in second and third, respectively.

Table 6 indicates imbalances between the demand for credentials and the supply of Coloradans with those credentials. It should be noted that data sources do not perfectly capture the total population with credentials. It is likely that these numbers underreport the total number of individuals with these credentials given that not all job seekers and workers post their resume/credential attainment online.

Certificates should compensate certificate holders for their completion by providing a return on investment. Many certifications listed in Table 6 are associated with entry-level positions that are not included in Tier 1 or Tier 2 Top Jobs in 2023, such as those linked to health care, direct care, and transportation positions.

Employers can consider **lowering hiring prerequisites and supporting employees in gaining a certificate while employed, and/ or supporting skills-based hiring practices to attract, retain, upskill, and next-skill Colorado's talent pool.** This would enhance quality jobs in the state and bring a competitive edge to Colorado businesses. This aligns with one of the [Colorado Job Quality Framework](#)'s key pillars to establish transparent growth opportunities to advance along a career pathway and increase pay.

Occupations within high-demand industries but with lower earning potential are reported in Table 7 below. These high-need jobs are difficult for employers to fill due to lower average hourly earnings. These career paths can be made more attractive by showing clear pathways for advancement and structuring workforce benefits to fit quality and DEI standards.

Table 7: **Lowest Average Earning, High-demand Industries in Colorado, 2023**
Source: Occupational Employment and Wage Statistics (OEWS)
[Supplemental data for Table 7: Lowest Average Earning, High-demand Industries in Colorado, 2023.](#)

Industry	Statewide Employment	Average Hourly Earnings
Food preparation and serving related	254,820	$17.92
Building and grounds cleaning and maintenance	81,420	$19.12
Healthcare support	93,430	$19.29
Farming, fishing, and forestry	5,240	$19.64
Personal care and service	59,390	$20.20

SPOTLIGHT:

Clean Energy Jobs

Jobs in clean energy are among the fastest growing in Colorado and throughout the United States.[68] Professions in the energy sector require a range of skills and expertise. There are opportunities to work on energy production, storage, and transmission; energy efficient building construction and renovation; the development and installation of solar, wind, and other forms of renewable energy; manufacturing and maintenance of zero-emission vehicles; and the development of alternative clean fuels.

Colorado has received national recognition for recent efforts to advance an inclusive workforce to meet the state's renewable energy goal of 100% renewable energy for the electric grid by 2040. Based on the U.S. DOE Employment Report for 2023, between 2021 and 2022, energy jobs in the state increased by 4.8% (or nearly 7,000 jobs), representing 5.4% to total state employment.[69] Out of the 153,223 estimated workers in this sector statewide during 2022, approximately 23.4% were associated with energy efficiency.[70] The remaining energy jobs were in electric power generation (23,403 jobs); fuels (32,998 jobs); transmission, distribution, and storage (29,007 jobs); and motor vehicles (31,968 jobs).

Figure 8: **Colorado's Employment by Major Energy Technology: 2020-2022**
Source: U.S. Department of Energy. USEER, 2023.
*Table alternative for Figure 8: Colorado's Employment by Major Energy Technology: 2020-2022.*
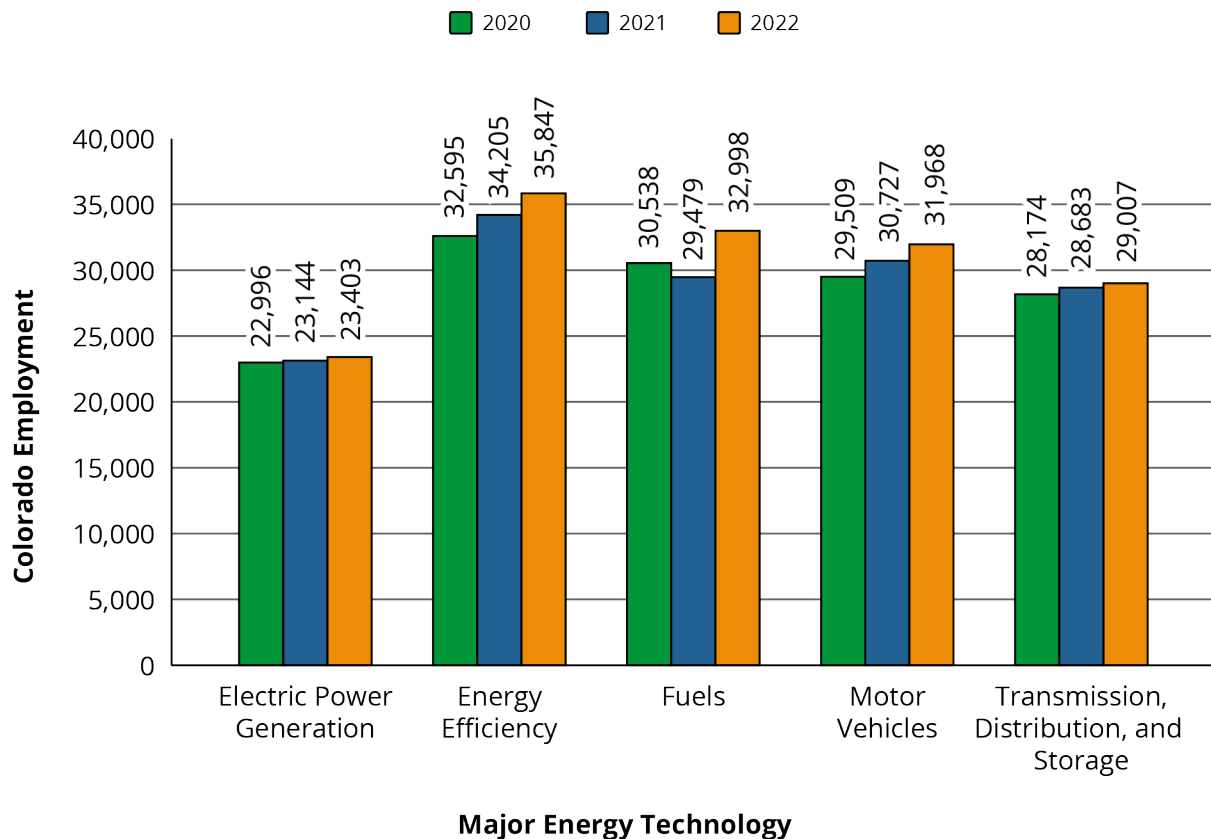
Occupations associated with clean energy and energy efficient jobs in Colorado have increased to an estimated 35,847 jobs in 2022, with roughly 78% of those jobs linked to transmission and distribution. The professional and business services industry employed 17,624 energy efficiency workers in the state, which represents the largest share of energy efficiency employment (Figure 9).

Figure 9: **Colorado's Energy Efficiency Employment by Sector**
Source: U.S. Department of Energy. USEER, 2023.
Table alternative for Figure 9: Colorado's Energy Efficiency Employment by Sector.
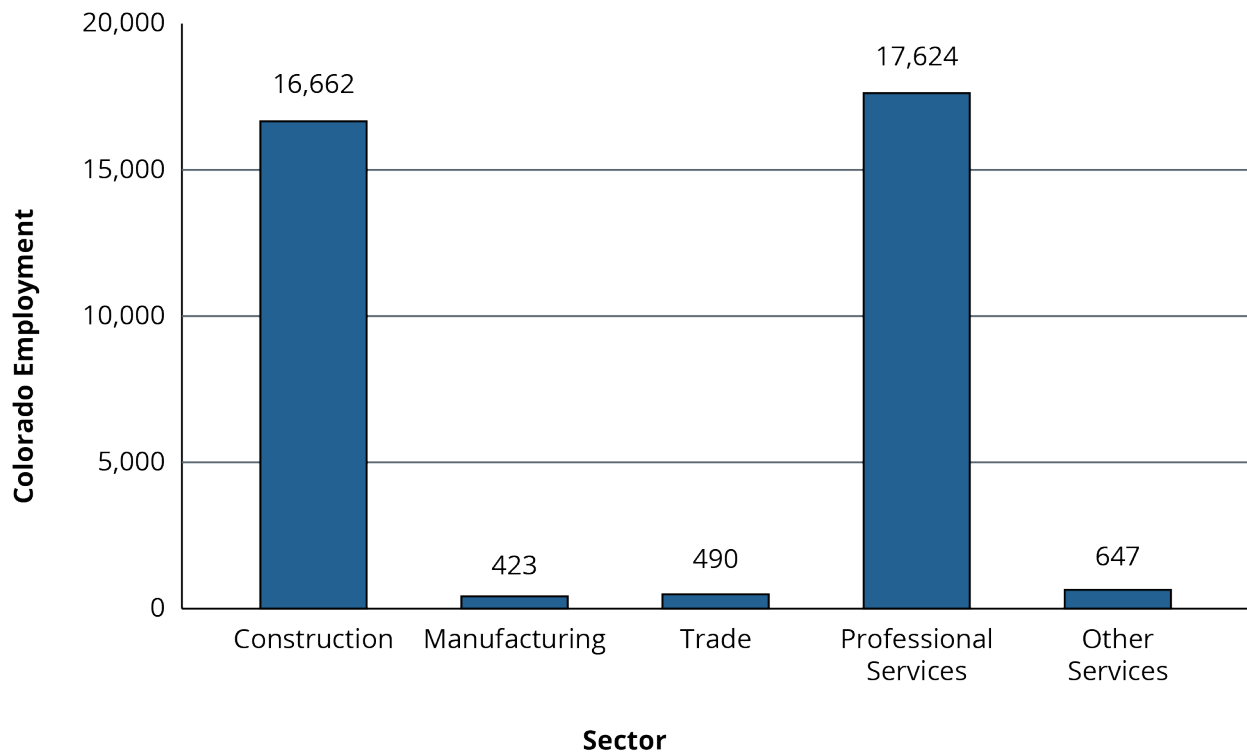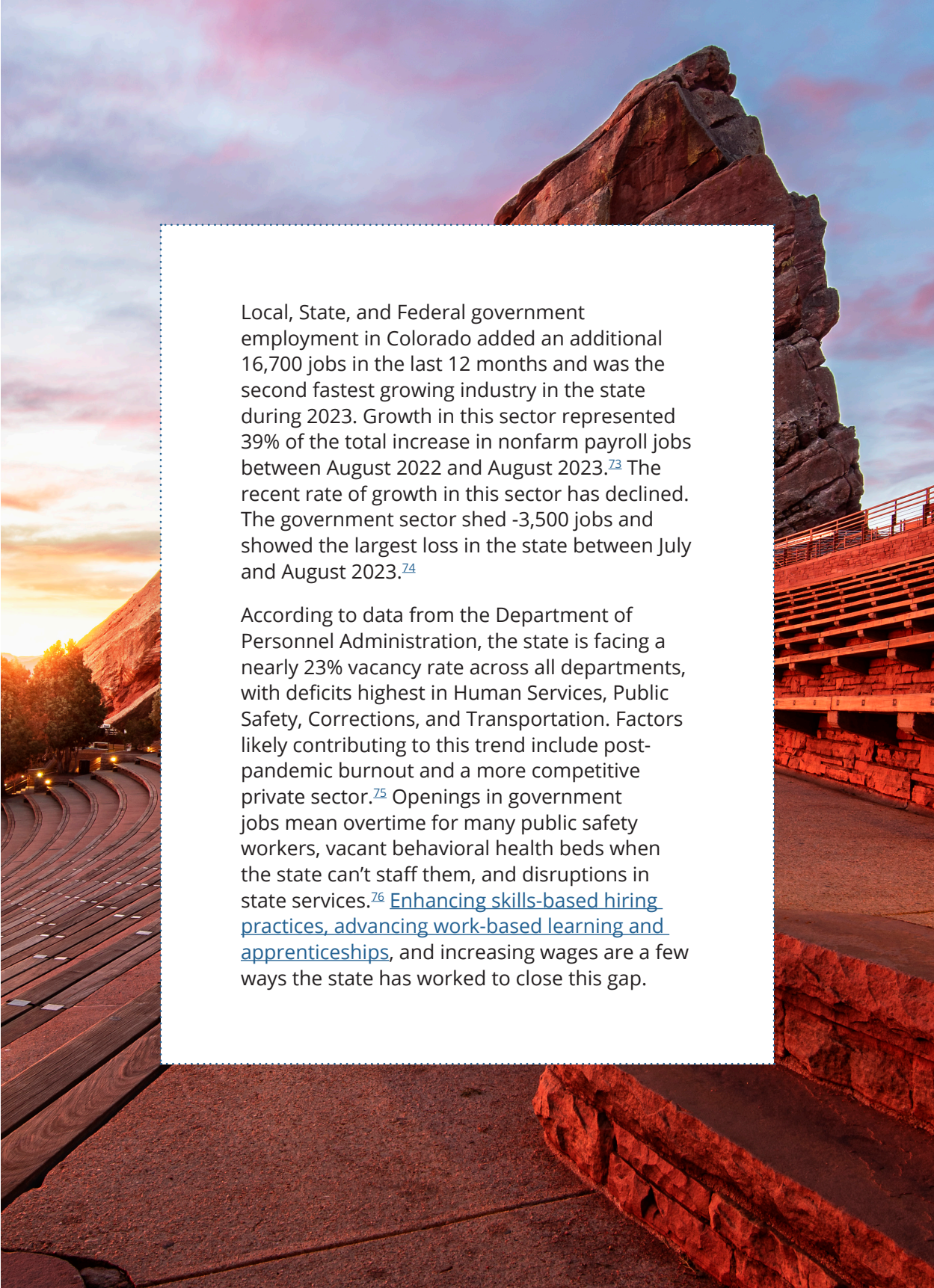
In 2022 there were 85,222 jobs in clean energy in Colorado if traditional transmission and distribution is included, and 66,388 jobs if it is not.[71] Employers in Colorado expect jobs related to energy efficiency to grow by an additional 6.2% over the next 12 months.[72] This is the highest projected growth across all major technology applications in the state.

SPOTLIGHT:

Jobs in Government

Local, State, and Federal government employment in Colorado added an additional 16,700 jobs in the last 12 months and was the second fastest growing industry in the state during 2023. Growth in this sector represented 39% of the total increase in nonfarm payroll jobs between August 2022 and August 2023.[73] The recent rate of growth in this sector has declined. The government sector shed -3,500 jobs and showed the largest loss in the state between July and August 2023.[74]

According to data from the Department of Personnel Administration, the state is facing a nearly 23% vacancy rate across all departments, with deficits highest in Human Services, Public Safety, Corrections, and Transportation. Factors likely contributing to this trend include post-pandemic burnout and a more competitive private sector.[75] Openings in government jobs mean overtime for many public safety workers, vacant behavioral health beds when the state can't staff them, and disruptions in state services.[76] Enhancing skills-based hiring practices, advancing work-based learning and apprenticeships, and increasing wages are a few ways the state has worked to close this gap.

SUPPLY

Colorado added an average of 5,900 jobs per month in 2022, and 3,300 during the first six months of 2023.[77] [78] While the state continues to see job growth, the declining rate of growth is significant, averaging to 2,600 fewer jobs per month. According to the Bureau of Labor Statistics, Colorado was one of six states that experienced a slump in hiring rates during July (dipping downwards by -0.8 of a point).[79]

However, state economists point out this is likely a signal of a labor supply constraint and not an indication of decreased labor demand.[80] [81] This employment slowdown emerges at the same time that **the state records the 14th-fastest job openings rate, the 5th-highest labor force participation rate (LFPR) in the U.S., and the highest number of people participating in the labor force in Colorado's history.**[82] [83]

> The **labor force participation rate** is defined as the percent of the civilian noninstitutional population over the age of 16 that is either employed or seeking work.

Resume forensics that show attainment data of core skills compared to hard skills across Colorado job seekers as of March 2023 can be accessed via Appendix C.

Population Change: Slowing Growth, Aging, and Diversifying

According to the State Demographer's Office, Colorado's population continues to grow, though less rapidly than recent years, and they predict the state's population will continue to grow to almost 7.5 million in 2050.[84] To plan for the future, understanding the main drivers of population change and how to manage those changes in the labor market are important. The State Demographer's Office also reports that Colorado experienced a net change of -1.32% in birth rates between 2020 and 2021.[85] During this same period, the death rate increased by 10.33% and net migration saw a decline of -47.26% year-over-year.[86] Slow population growth often puts upward pressure on housing markets at state and national levels. Younger generations are expected to plateau and then decline due to falling birthrates, changing the composition of households and the market for housing.

Between now and 2025, an estimated 82% of the increased demand for housing in the state will be from households without children.[87] During the same period, Colorado is projected to require roughly 608,000 additional housing units. The 65+ age group is projected to make up 52.5% (or 319,400) of that housing demand.[88] The state estimates that Colorado falls short of keeping up with population growth, creating a gap of roughly 25,000 homes each year.[89]

Affordability challenges make housing challenges more severe. According to the U.S. News and World Reports' top-ranked state of 2023, Colorado was the 43rd most affordable state for housing. Without available/affordable housing options, it is difficult to recruit new residents and bolster the state's workforce. It is similarly challenging to sway younger generations to remain in the state and in its workforce as adults.

Governor Polis has worked in partnership with the legislature to utilize underused state land for much-needed housing projects eliminate growth caps, which significantly reduce the ability of cities to increase supply to meet the demand for housing in Colorado, and utilize funding from ARPA funds, state funds, and new Proposition 123 funds to ensure there is more housing being built.

We recognize that Colorado must address housing supply challenges to attract qualified workers, retain existing workers, decrease cost of living pressures that hurt job quality, and respectively increase the number of quality jobs. We look forward to meeting the moment so people can afford to live where they want to live, and that more Coloradans can live nearer to where they work.

Another factor to consider is Colorado's changing population. State demographic projections estimate that Colorado will continue to become more racially and ethnically diverse, with the rate of diversification accelerating significantly between now and 2030.[90]

The Colorado State Demographer's Office projects trends to shift in upcoming years. Between now and 2030, the rate of growth of individuals that identify as Black and/or African American, Hispanic and/or Latinx, Asian American, Pacific Islander, Native American, or more than one race or ethnicity will outpace all other demographic groups. The demographic changes will be led by the younger working-age population.[91]

The following population pools are estimated to have the largest population growth and likely biggest impact on Colorado's changing economy and evolving workforce:

» Two or more races, not Hispanic and/or Latinx: Share of estimated growth is 112%

» Asian American or Pacific Islander: Share of estimated growth is 112%

» Hispanic and/or Latinx: Share of estimated growth is 65%[92]

These estimates demonstrate the necessity of diversity, equity, and inclusion (DEI) practices for education and training providers and employers. In order to attract and retain Colorado's earners and learners, equity practices must be incorporated into standard employment practices and training programs statewide. Strengthening DEI practices should be a top priority to maximize all the available talent in the state.

Colorado's Employment by Attainment Level

As highlighted in the CDHE 2023 Return on Investment Report and in alignment with national trends about employment and education, statewide data continue to illustrate a correlation between employment and education levels for Coloradans in the workforce this year.

Figure 10 shows Colorado's employment rate by education level. We see a clear relationship between education and unemployment in the state during 2022 and 2023. As education attainment increases, so too does the rate of employment.

Figure 10 also reports the unemployment rate for each education level included in the Current Population Survey (CPS). The third column shows Coloradans who have attained some college or associate degree. Next to the third column are data that show as Coloradans receive more education, employment rates increase and unemployment decreases. The data collection groups "some college or an associate degree" as one sample group. This may artificially raise the unemployment rate of Coloradans with an associate degree as it includes individuals who drop out of college.

Overall, the data suggest that higher educational attainment positively impacts increased workforce participation and lower unemployment rates.

Figure 10: Colorado's Employment Status by Education in 2023
Source: Current Population Survey, Bureau of Labor Statistics & Office of Labor Market Information, CDLE, 2023.
Note: Unemployment rate reflects the civilian non-institutional populations within Colorado.
Table alternative for Figure 10: Colorado's Employment Status by Education in 2023.
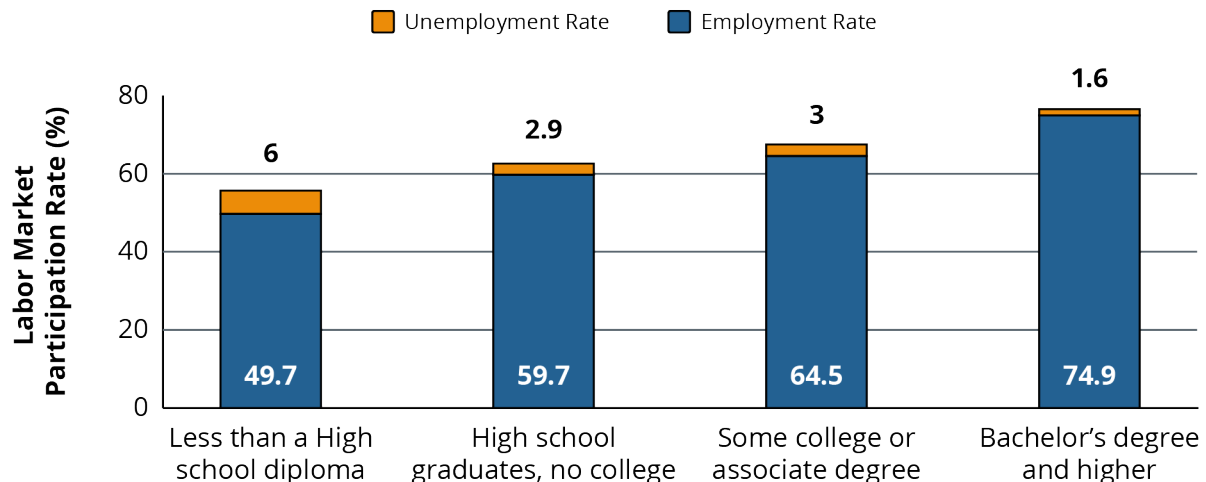
With 76% of all Top Jobs requiring at least a postsecondary degree or credential past a high school diploma or equivalent, Colorado will need to increase the number of individuals who successfully complete training and educational credentials. Colorado students who complete credentials in the following industries are likely to have the highest returns in upcoming years, given average earning levels in 2023 according to the Quarterly Census of Employment and Wages (QCEW):

MINING/ENERGY:

$4,275

average weekly wage

INFORMATION:

$2,988

average weekly wage

MANAGEMENT OF COMPANIES AND ENTERPRISES:

$3,945

average weekly wage

PROFESSIONAL AND TECHNICAL SERVICES:

$2,496

average weekly wage

FINANCE AND INSURANCE:

$3,056

average weekly wage

SPOTLIGHT:

The Refugee Population in Colorado

One established pathway to broaden the statewide talent pool is through Colorado's refugee population. Social and economic impacts tend to go hand in hand. In a talent-scarce economy, inclusive policies help fill vacancies, adapt to a workforce's changing needs, and provide income and stability to traditionally marginalized groups such as refugees. According to the Colorado Refugee Services Program (CRSP), most of the economic activity created by refugees is from the wages they earn. **In Colorado, most refugees join the workforce less than three months after they arrive.**[93] Recent studies indicate refugees tend to work in high-growth, high-demand industries.[94]

This means that **refugees are not only working, but they are also filling critical gaps that enable local industries to thrive in our economy**. Employing refugees can have the twofold benefit of generating tax revenue and economic activity while also allowing refugees to gain financial stability. Local and state governments generate $1.23 in tax revenue for every $1 the state spends.[95]

For more information, please visit the Office of New American's website. The Office of New Americans partners with the Colorado Refugee Services Program and helps state agencies, private sector organizations, and the public to integrate and include immigrants and refugees in Colorado communities. The Office is currently developing a statewide strategy to promote successful economic, social, linguistic, and cultural integration of New Americans by investing in the success of these populations in Colorado.

Unemployment

Colorado's seasonally adjusted unemployment rate increased two-tenths of a percentage point in August to 3.1% compared to the July rate of 2.9%.[96] The number of unemployed individuals grew by 4,700 over the same time period to 99,800. The national unemployment rate increased three-tenths of a percentage point to 3.8% from July to August. As mentioned earlier in this report, Colorado's unemployment rate had been below 3.0% for 15 consecutive months prior to August, and still remains at pre-pandemic levels. The national unemployment

rate increased three-tenths of a percentage point to 3.8% from July to August.[97]

Unemployment by county in Colorado is represented in the graphic shown in Figure 11. As indicated by the map, counties that are on opposite sides of the Front Range area have higher unemployment rates. The largest cluster of counties with low unemployment are located along the eastern portion of the state, along with some outliers spotted throughout. These counties are largely concentrated in rural areas of the state.

Figure 11: **Colorado's Unemployment Rate by County: August 2023**
Source: Office of Labor Market Information, CDLE, 2023.
*Table alternative for Figure 11: Colorado's Unemployment Rate by County: August 2023.*
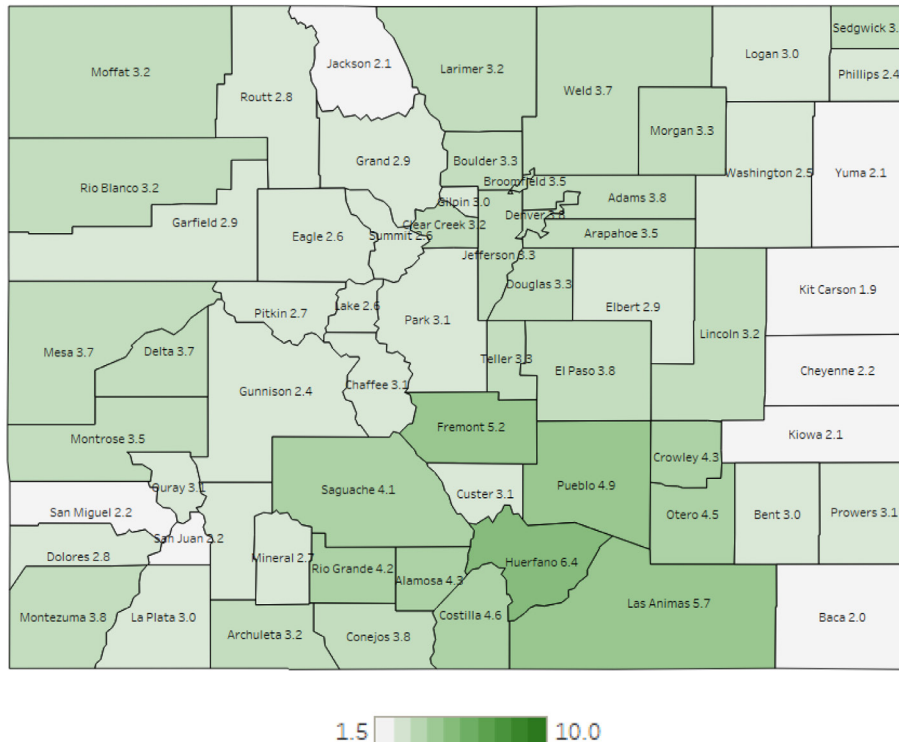
SUPPLY

Over the last 12 months, **job growth from outside metropolitan statistical areas was responsible for nearly 64% of the job growth gain in Colorado**.[98] We can expect this to improve rural economic conditions over time and reduce the level of unemployment in these economies.

Men between the ages of 25 and 54 continue to have the highest labor force participation rate in the state (Figure 12). Men and women who are 65+ or are in the 16-19 age bracket have the lowest participation rates relative to other groups.[99] Men and women follow similar trajectories across all age groups, however men consistently tend to have higher workforce participation in every age group outside of the 20 to 24 bracket (where women outpace men by approximately 1%). This general trend could be attributed to a number of factors, including wage inequities and lingering child care constraints.

Figure 12: **Colorado's Labor Force Participation Rate by Sex and Age: August 2022 - July 2023**
Source: Current Population Survey, Bureau of Labor Statistics & Office of Labor Market Information, CDLE, 2023.
Table alternative for Figure 12: Colorado's Labor Force Participation Rate by Sex and Age: August 2022 - July 2023.
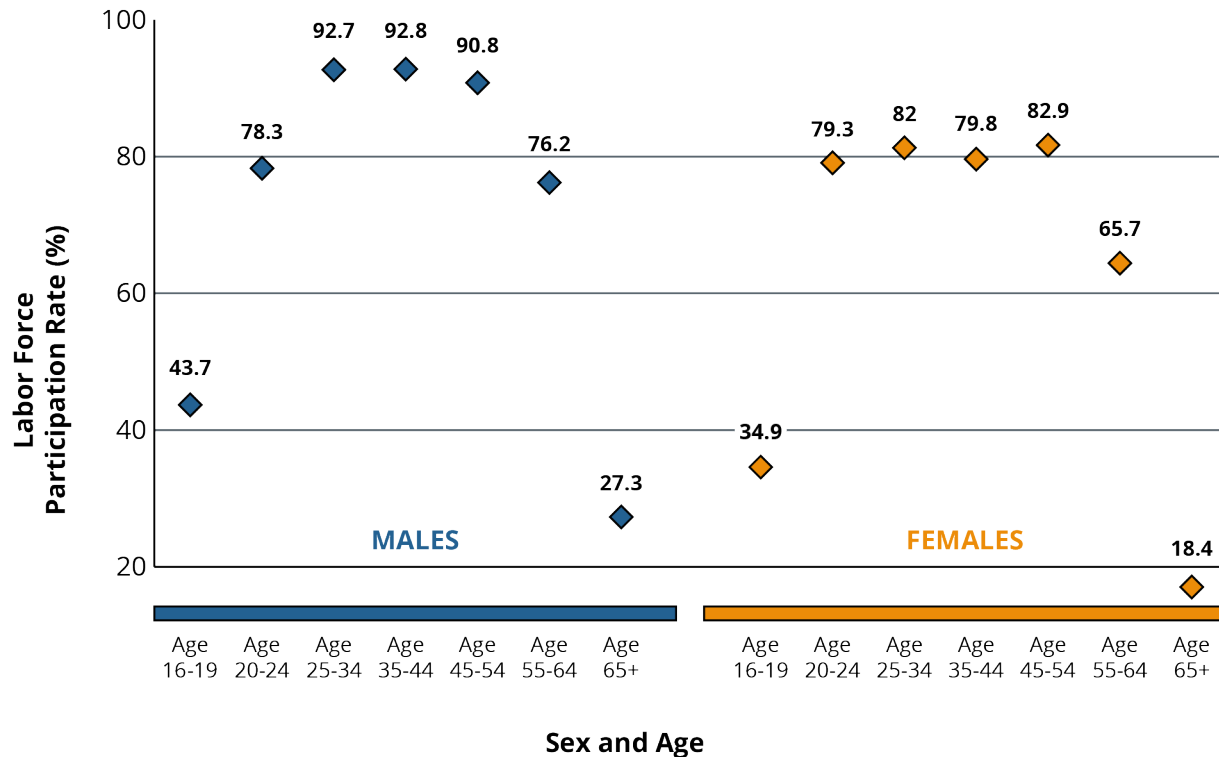
While women tend to have lower labor force participation rates, recent state trends show a strong recovery for women in Colorado.[100] As COVID-19 swept across the globe, women were more adversely impacted in the workforce compared to men initially. Roughly 10% of mothers nationwide left their jobs in 2020 to care for their children.[101] However, shifts in economic indicators are telling a new story. The unemployment rate for women in Colorado between September 2022 and August 2023 was 2.6%, relative to the 3.7% rate for men during the same period, and is 0.3% lower than pre-pandemic levels.[102] [103] There are many factors contributing to this recovery, including remote work options that help families balance child care needs.

Figure 13 below reports unemployment by race and ethnicity and age group in Colorado. Similar to the data shown in the figure above, all demographic groups show the 16-19 age category being associated with the highest unemployment rate. This signals a need to expand opportunities for K-12 students and better inform them about skill advancement and credential opportunities before they graduate high school.

The unemployment level of Coloradans who identify as Black and/or African Americans in the 16-19 age range, however, is higher than individuals of other races in the same age bracket. These findings are similar to previous years, and indicate that there remains large equity gaps in the state's workforce. **Young Black and/or African American job seekers disproportionately have the hardest time securing a job in the Colorado market.**

Figure 13: **Colorado's Unemployment Rate by Race and Ethnicity and Age in 2023**
Source: Current Population Survey, Bureau of Labor Statistics & Office of Labor Market Information, CDLE, 2023.
Note: Unemployment rate reflects the civilian non-institutional populations within Colorado.
Table alternative for Figure 13: Colorado's Unemployment Rate by Race and Ethnicity and Age in 2023.
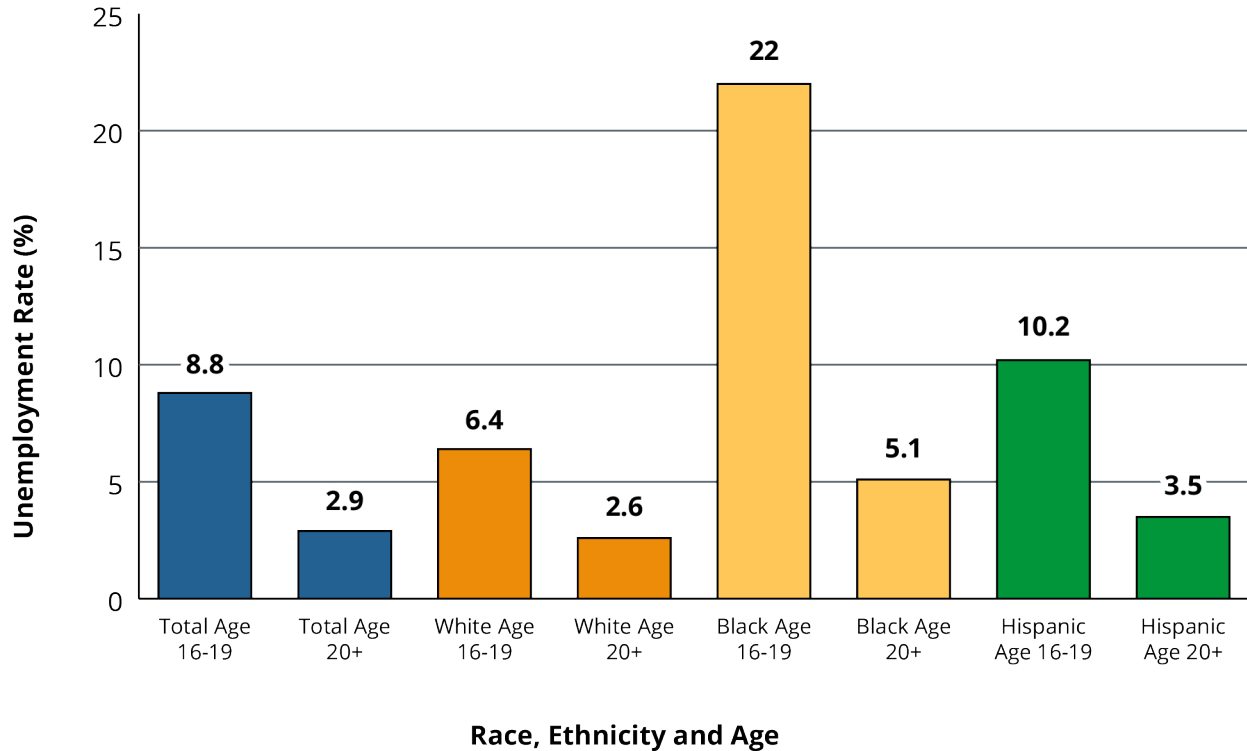
According to a Gartner study, 70% of Latinx, Black, BIPOC and Asian candidates in the U.S. reported discontinuing a job application due to preference mismatch in the role, compared to 60% of white Americans.[104] Individuals who were not white reported that two major drivers of this outcome were linked to the level of diversity in the workplace and the leadership style of the potential manager.[105] Based on these responses, employers seeking to find talent can increase their applicant pool by improving DEI efforts.

STRATEGIES

In order to address the tight labor market and meet the demands for skilled workers, Colorado's talent development network is focused on enhancing quality, equity, access, and affordability of all programs that connect Coloradans to in-demand careers. The strategies that are highlighted in this section work toward a future where every learner can attain the skills needed to find a job that supports themselves and their family.

As federal and state investments in talent development are being directed to meet our state's unique workforce needs, those funds must include the flexibility for local communities to enhance wrap-around services to address challenges including transportation and child care. Investments must also focus on meeting regional needs and expanding business-led strategies for enhancing our state's talent pipeline. With investment and focus, we can create a workforce development ecosystem that is dynamic and accessible – allowing Coloradans to learn and earn throughout the course of their lives.

Models that emphasize skills-based hiring, work-based learning, on-the-job training, upskilling, career exposure, economic mobility, and return on investment are keen areas of interest for the state. Further, Colorado hopes to be a national example for how to bridge gaps across the workforce development ecosystem by aligning state and federal investments to build quality opportunities that are demand-driven.

Leveraging Data to Guide Investments

Colorado has begun to reimagine how data is used to understand program outcomes, anticipate employer demand, project short- and long-term workforce needs, and assess the value of existing efforts for learners and employers. Based on HB22-1349, the Colorado Commission on Higher Education (CCHE) and CDHE are working on a variety of tasks related to better use of data to support student postsecondary and workforce success. CCHE has convened a Technical Working Group comprised of local stakeholders and national experts to work over the course of 2023 to determine and define:

#1: Colorado-specific measures of postsecondary value, including a "minimum economic viability threshold." This threshold is meant to ensure that Colorado learners, at a minimum, can count on their investment in postsecondary education to increase in their lifetime earnings compared to what they would have made had they not pursued postsecondary education. The return on investment should also exceed their cost of attendance (inclusive of the opportunity cost of foregone wages).

#2: Student success measures that consider the skill or knowledge progression of students through postsecondary education and their ability to translate those skills into a career upon degree completion. The student success measures must include postsecondary success measures and workforce success measures.

View a summary of various ROI approaches with applicability to Colorado's goals. Recommendations from the Technical Working Group will inform future approaches to calculating and messaging the value of postsecondary education.

To achieve these goals, data on postsecondary programs and workforce outcomes will be critical. The well-governed, responsible sharing of data between state agencies will enable Colorado to tell a more holistic story of student experiences in higher education and the returns gained to the individual, communities, and the state. CDHE completed a report on the current longitudinal data landscape in Colorado (specifically the K-12, postsecondary education, and workforce continuum). The report includes recommendations on ways to deliver a statewide longitudinal data system that connects K-12, postsecondary education, and workforce information.

While such a system will better showcase what is working in Colorado, data expertise is also a critical part of projecting demand and effective workforce planning. The federal government has deployed significant funding opportunities through the Infrastructure Investment & Jobs Act (IIJA), Inflation Reduction Act (IRA), and the Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act. Each of these has the potential to fuel a large amount of work in Colorado that will require a ready and trained workforce.

In order to inform decision makers and predict workforce needs in Colorado available under the (IIJA), the CWDC funded the creation of the Colorado IIJA Workforce Dashboard. This interactive tool is intended to guide workforce development efforts related to the Infrastructure Investment & Jobs Act (IIJA). The platform indicates which funds have been awarded and what projects it will support. It also reports in-demand jobs linked to infrastructure and where these occupations are needed across the state. For each high-need job, it provides the associated skills required, the level of difficulty to fill a particular role, training gaps, and the estimated demand.

As of October 2023, funding from the IIJA will create an estimated 42,770 additional jobs in Colorado, boosting the workforce by 28%. Average earnings per job are equal to $97,721. Occupations related to IIJA projects, such as trades and highway infrastructure, are typically high-paying.

High-need, high-demand sectors reported in the dashboard include: (1) Construction; (2) Broadband Telecommunications; (3) Clean Energy and Technology; and (4) Conservation (Forestry and Logging). Jobs associated with the highest demand as related to IIJA are shown in Table 8 below. Demand for workers is highest in construction.

In Table 8, row 1 (Construction and Extraction) includes occupations such as: Construction Laborers; First-Line Supervisors of Construction; Operating Engineers and Other Construction Equipment Operators; and Painters, Construction and Maintenance. Total growth projections between now and 2032 are listed in the fourth column and the projected job creation from the IIJA alone is reported in the fifth column.

Table 8: High-need, High-demand Jobs Propelled by IIJA
Source: Colorado IIJA Workforce Dashboard, 2023.
Notes: The need for training value is calculated by the number of completions relative to the number of yearly openings for that job title. Estimated employment, projected employment, and growth rates are sourced from the Office of Labor Market Information, October 2023. The estimate for IIJA job demand assumes a $7 billion budget projection. Two key inputs in determining projected demand spurred by the Act helped to generate this figure. These include the Association of General Contractors' (AGC) construction budget formula and number of jobs already existing in Colorado within the pertinent IIJA industries. Worker ratios are assumed to remain consistent for IIJA projects, which is typically the case for comparable projects in these industries.
Supplemental data for Table 8: High-need, High-demand Jobs Propelled by IIJA.

Job Title	Estimated Current Employment	Projected Employment in 2032	Total % Change: 2022-2032	Projected IIJA Job Demand	Need for Training
Construction and Extraction	169,591	190,462	12.31%	>14,000	**High**
Carpenters	20,904	23,460	12.23%	4,310	**High**
Electricians	19,577	22,865	16.80%	3,498	**High**
Operating Engineers	12,105	13,460	11.20%	1,898	**High**
Plumbers, Pipefitters, and Steamfitters	9,990	11,042	10.50%	2,156	**High**

As of the fourth quarter in 2023, Colorado has received approximately $5.65 billion from IIJA, which will create jobs in four sectors of the state's economy. Work is underway to produce similar estimates related to the Inflation Reduction Act (IRA). Data are also being deployed to compete for additional funding under the CHIPS and Science Act of 2022. The act authorizes historic investments in curiosity-driven, exploratory research and use-inspired, translational research. These investments will grow innovation across all areas of science and engineering at speed and scale.

Industry-led Solutions

Sector Partnerships

The sector partnership model is Colorado's primary vehicle to engage with business and industry in talent development. A portion of stimulus funds from HB21-1264 were invested in staffing for regional sector partnerships to help strengthen them after the impacts of the pandemic. Selected grantees excel at advancing and supporting sector partnerships. Grantees bring together business leaders from the same industry in a region with education, workforce development, economic development, and community organizations to address the needs of their industry. HB21-1264 funding is being used to increase the capacity of regional sector partnerships by convening industry-led efforts across multiple sectors including behavioral health; early childhood education; IT/technology; media and journalism; construction; advanced manufacturing; health care; food, beverage, and hospitality; and agriculture. Read more about the impacts of sector partnerships in Appendix D.

Skills-based Hiring and Work-based Learning

Legislation such as HB22-1215 and executive action such as Executive Order 2022-15 and Executive Order 2023-18 advance skills-based hiring and work-based learning initiatives throughout the state. Skills-based hiring and work-based learning help prepare Coloradans for the jobs Colorado employers are hiring for. The latter Executive Order, signed by Governor Polis in early September 2023, expands the scope of the Governor's 2022 Executive Order to include and promote other work-based learning programs in state government, including internships, pre-apprenticeships, and fellowships, that support learning through and at work. In addition to creating more jobs and opportunities for all Coloradans, this is expected to fill state vacancies and expand the workforce throughout the public service sector.[106]

The Directives of the new Governor's Executive Order include:

Increasing the number of Registered Apprenticeship Programs (RAPS) within State Departments by 50% by June 30, 2024.

Increasing the number of Registered Apprenticeships in the private sector by an additional 100 programs by June 30, 2024, through the technical assistance and support offered by the Department of Labor and Employment's Office of the Future of Work.

Creating 10 additional work-based learning programs for classifications with high vacancy rates or multi-department positions by June 30, 2025.

Directing each Department to implement at least two new work-based learning programs by Dec. 30, 2025.

Expand pre-apprenticeship opportunities throughout the state.

» These are programs designed to prepare individuals to enter and succeed in Registered Apprenticeship Programs (RAPs).

Boost internships that expose an individual to the requirements of a particular occupation or industry, the work environment, and the behavioral expectations for success on the job.

Increase postsecondary programming that creates pathways from high school into the public sector or other postsecondary opportunities.

By continuing to increase collaboration between business, education, the state, and workforce development, Colorado can support pathways to in-demand careers. Skills-based hiring, on-the-job training, work-based learning, and apprenticeship will create access into lifelong careers.

As a result of the efforts of the Polis-Primavera Administration, the General Assembly, labor organizations, the public workforce system, and the private employers who are innovating their hiring and training practices, **Colorado has more than 300 registered apprenticeship sponsors, including State programs, that support more than 6,000 registered apprentices**.

Education and Training Innovations

Short-term Credential Pipelines

Today job seekers are taking advantage of the expanding non-degree/short-term credentials offered at higher education institutions across the state. At the same time, employers are responding to this trend by recognizing their workforce values flexibility for earn-and-learn opportunities and fast tracks for advancement.

A key barrier to bachelor's degree attainment or higher is likely the opportunity cost of foregone wages. Even for learners who receive state and federal financial assistance, the full cost of attendance for a degree program can be a challenge, and the time they spend in the classroom is time they otherwise could be spending in the workforce earning wages to provide for themselves and their families.

In response to this trend, Colorado has been building stackable credential pipelines at the state, system, and institutional levels. While this upskills the state labor pool and leads to higher wage work, it also improves equity and affordability. In a 2023 ROI RAND Corporation study, key findings show how Colorado's state-specific stackable credential pipeline has reduced systemic barriers to credential equity by:

Streamlining and scaling information systems/resources while boosting outreach efforts for a wide variety of pathways;

Expanding opportunities to stack credentials in the workforce (largely driven by strengthening coordination across industries and campuses); and

Removing challenges for Colorado learners to move from noncredit to credit programs by coordinating between noncredit and credit departments and institutions and investing in outreach to improve awareness.

Colorado's actions to develop stackable credentials across fields and institutions has further narrowed the gap between low-income students and middle- and high-income certificate earners. Research shows that Colorado low-income certificate-earners are more likely to earn multiple credentials and go on to earn longer-term credentials (credentials capable of being stacked vertically) at higher rates than middle- and high-income certificate-earners. This suggests that stackable credential pathways help to advance equity across the state.

In addition, an increasing number of high school students have access to postsecondary credentials through programs such as the Career Development Incentive Program (CDIP). This program provides financial incentives for schools that encourage high school students to complete qualified industry credential programs and has awarded more than $22 million since its 2016-17 inception. See the complete CDIP list of approved programs in Appendix E. Additional information is available in Appendix F.

A **stackable credential pathway** is a sequence of credentials or courses earned through various means, including through assessment of prior learning, that may be accumulated over time and move an individual along a career or educational pathway. Pathways are designed to lead to a degree, but also incorporate entry and exit points along the way, enabling students to earn-and-learn. For example, a student might complete a short-term certificate in cyber security one term and later return to apply some of those credits to earn an associate degree in information systems technology. This process allows completors to gain immediate work experience in the field and helps them advance along that career pathway.

A **postsecondary certificate** is a credential awarded by an Institution of Higher Education (IHE) at the undergraduate level that does not include degrees or post baccalaureate awards.

Colorado's Postsecondary Pathways Within Reach for All

Over the last two years, Colorado has dedicated record levels of funding to workforce development initiatives across the state and expanded access to short-term credentials in high-need areas.

Colorado's community and technical colleges are offering free training for students pursuing in-demand jobs thanks to an investment of over $65 million.

Launched in August 2022, the Care Forward Colorado program covers all tuition, fees, and course materials for short-term health care programs. More than 5,000 Coloradans have already completed programs in nurse assisting, phlebotomy, emergency medical services, and other desperately needed professions in the health care sector. This aid comes at a critical time for the health care sector. Employers are still struggling to find individuals with health care skills. Eight of the top 10 in-demand certificates between September 2022 and September 2023 are tied to health care occupations (Table 6).

Building on this model, Governor Polis signed HB23-1246, which expands zero-cost training for in-demand fields including construction/infrastructure, education, early childhood education, firefighting, forestry, law enforcement, and nursing. The new program, called Career Advance Colorado, launched in July 2023. Together, these initiatives aim to train more than 20,000 Coloradans for high-skill careers while responding to the state's most critical workforce shortages.

Career Pathways

In 2022 and 2023, a coalition of state agencies worked with industry leaders and academic partners to develop career pathways for agriculture and natural resources and construction and infrastructure. These pathways were published in July 2023 on My Colorado Journey, the state's free education and career planning platform. The pathways aim to address the increased demand for these workers, continue career development in the sector, and increase public awareness and interest in the industries post-pandemic. The addition of these pathways bring the total number of industries with published career pathways in My Colorado Journey to 13.

Data from this year's Talent Pipeline Report will guide the selection of future industries to focus on for career pathways development. Further details on career pathways development are available in Appendix G. For more information on My Colorado Journey and its metrics, see Appendix H.

STRATEGIES

Colorado's Public Workforce System

Colorado's public workforce system continues to be a powerful driver of economic progress by helping connect job seekers and employers to each other and resources. As illustrated in Figure 14, the most recent data show that statewide, Colorado's public workforce system had an annual economic impact of more than half a billion dollars. This impact is achieved through the services of Colorado's network of locally run workforce centers and workforce development professionals across the state.

Workforce centers provide no-cost services and resources to give employers and job seekers a competitive edge to recruit the best talent and pursue meaningful careers. By visiting a workforce center online or in person, employers can access support recruiting and training workers, hosting job fairs, screening and assessing job candidates, obtaining labor market information, and more. Job seekers can receive career coaching, assistance improving resumes and interviewing skills, training opportunities, job connections, and grants. A complete overview of Colorado's efforts under the Workforce Innovation and Opportunity Act is found in the annual report shared as Appendix I.

Figure 14: **Economic Impact of Colorado's Workforce Areas**
Source: Colorado's Workforce Intelligence Data Expert group; graphic courtesy of Pikes Peak Workforce Center.
Table alternative for Figure 14: Economic Impact of Colorado's Workforce Areas.
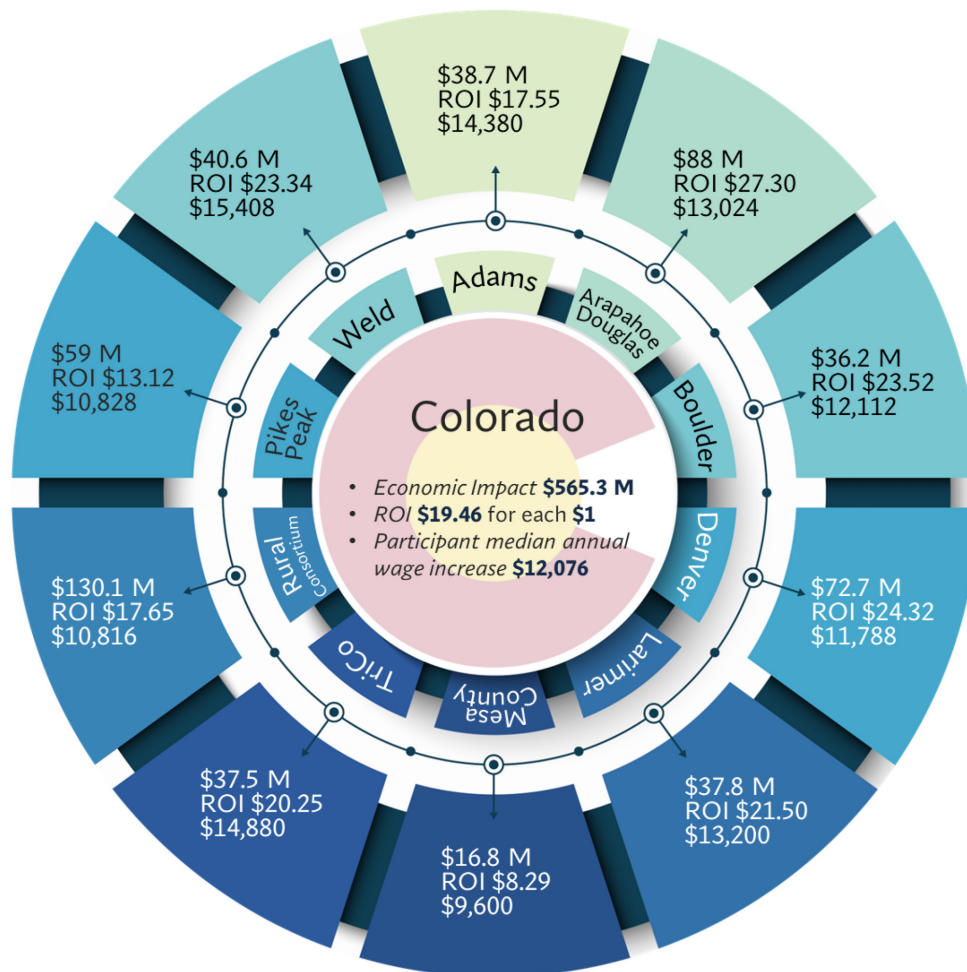
Supporting All Coloradans

Digital Equity for All

In 2022 the Colorado Department of Labor and Employment's (CDLE) Office of the Future of Work (OFW), in collaboration with the Office of eHealth Innovation (OeHI), was awarded funding from the National Telecommunications and Information Administration (NTIA) to create Colorado's Digital Access Plan. The OFW also applied in collaboration with OeHI and the Office of Information Technology for grant funding through the federal Digital Equity Act, a component of the federal Infrastructure Investment & Jobs Act.

As of fall 2023, OFW and OeHI are in the process of creating Colorado's Digital Equity Plan that aims to remove barriers to digital access for covered populations by reviewing existing data, identifying gaps, and identifying strategies to provide resources and support. Covered populations include: individuals who are English language learners, members of a traditionally marginalized racial or ethnic group, older Coloradans, justice-involved, identify as having a disability, are a veteran, or live in rural Colorado. Through SB22-140, the OFW and Serve Colorado partnered to launch a Digital Navigator AmeriCorps program that began recruiting members in September 2023.

Progress made to Colorado's State Digital Access Plan include:

» The State of Colorado expects to receive about $20M in capacity funds in the first quarter of 2024 to implement the objectives established in the State Digital Access Plan.

» In mid-2023, 21 community-based organizations were awarded funding to support their customers and clients in participating in a statewide digital equity survey. Results from the survey will be used to establish baselines for measurable objectives that will be included in the plan.

» The team collected critical data for this plan through the Statewide Digital Equity Survey and the Digital Equity Ecosystem Mapping survey reaching thousands of Coloradans and hundreds of organizations across the state.

In July 2023, Colorado was approved to receive $827 million in federal funding to accelerate broadband access efforts across the state through the NTIA's Broadband Equity, Access, and Deployment program. This allocation is meant to accomplish the goal set out by Governor Polis, along with the Colorado Broadband Office, and other leading legislators to **connect 99% of Coloradans with adequate internet access by 2027**. "Adequate access" is defined by the state as having at least 100 megabits per second download and 20 mbps upload speeds.

Currently in Colorado, roughly 90.2% of households within the state are considered to have adequate access to broadband but approximately 190,000 households have little or no high speed access. Broadband access work will prioritize underserved communities in the state that do not have access in their place of residence. Two essential strategies to improve access include improved affordability for household services and infrastructure solutions in rural areas.

Office of Just Transition

The Colorado Office of Just Transition (OJT) assists communities and workers transitioning away from the mining and burning of coal as an energy source. Created by the Legislature in 2019 (C.R.S. 8-83-501 through 506), OJT was the first state office of its kind and is guided by the Colorado Just Transition Action Plan. This plan was based on recommendations from OJT's advisory committee and was updated in 2023. View the Colorado Just Transition Action Plan.

In 2023, six coal-fired power plants and six coal mines remained in operation in Colorado. By the end of this decade, all the power plants are scheduled to close. This means that most of the mines are likely to close as well. OJT estimates that nearly 3,000 miners, power plant workers, and supply chain workers will lose their jobs when this happens, and that communities like Craig, Hayden, and Brush will lose a significant amount of their property tax bases.

To meet this challenge, OJT has two overarching goals:

» To help communities transition with more family-sustaining jobs, broader property tax bases, and greater economic diversity: and

» To help workers who are laid off from the coal industry or related supply-chain businesses secure good new jobs with family-sustaining incomes without sacrificing their families' economic security – including secure retirements for older workers who may not wish to remain in the workforce.

In this work, OJT takes its lead from the communities and workers themselves.

Based on legislation to date, OJT expects to receive approximately $45 million over the next decade to assist communities and workers. Strategies for communities include direct grants as well as economic development planning and technical assistance, among others. Assistance for workers includes a comprehensive and flexible program of strategies, ranging from career and financial planning, tuition assistance, small business start-up, retirement planning, and other support for workers and their families.

Creating New Partnerships

Opportunity Now

Led by Colorado's Office of Economic Development and International Trade (OEDIT), Opportunity Now Colorado was born out of the 1330 task force and codified by Colorado's General Assembly in HB22-1350 to focus on how we modernize education to be more responsive to business needs and support business to co-create talent to fill Colorado's in-demand jobs.

In its first phase of funding, 426 applications were received from more than 1,000 industry and education partners. Ultimately, $27 million was distributed to 46 grantees in all OEDIT regions.

The goals of the $85M program are to:

» Help meet statewide or regional workforce development needs in order to recover from the negative economic impacts of the COVID-19 pandemic.

» Create intentional pathways between education and employment that allow students and workers to transition more easily in and out of these systems, ensuring a higher skilled and educated workforce.

» Provide more opportunities for economic mobility to regional students and workers in in-demand, high-skill, high-wage occupations.

Figure 15: **Opportunity Now Applicant Overview**
Source: Office of Economic Development and International Trade (OEDIT), 2023.
Table alternative for Figure 15: Opportunity Now Applicant Overview.
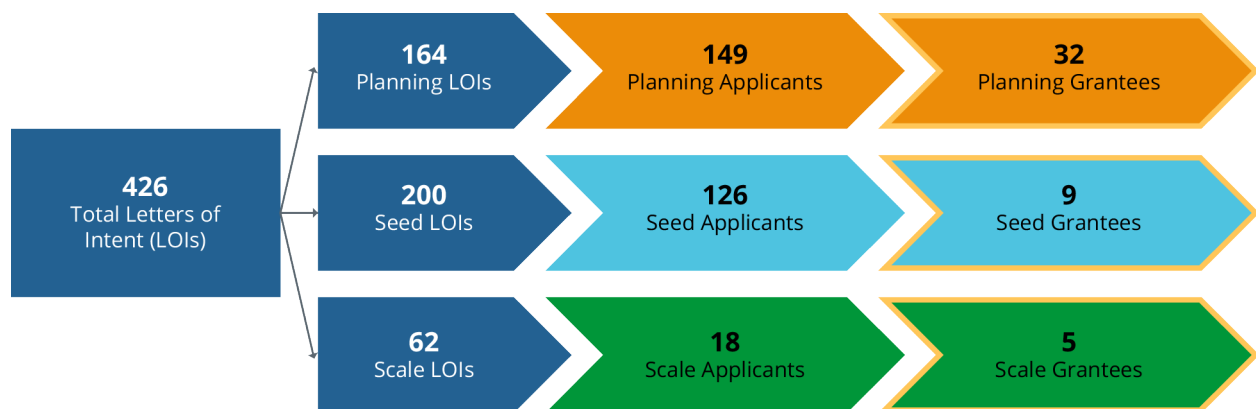
The Opportunity Now Applications by Industry and Region table outlines the percentage of applications received in each industry area and the percentage of those applications by OEDIT region. It is important to note the diversity of industries represented in the application pool. Per statute, industry priority areas include education, early childhood, health care, and infrastructure/construction.

POLICY RECOMMENDATIONS

Colorado's economy is stronger than the national economy in 2023 with a lower unemployment rate and a higher labor force participation rate, compared to national averages. Since 2016, Colorado has remained in the top 10 for the quality of our workforce. But Colorado is not resting on its laurels. Last year, Colorado dedicated $38 million to support zero cost training for early childhood and K-12 educators, fire and forestry professionals, construction workers, law enforcement officers, and nurses through the Career Advance program. We also invested $25 million in scholarships to pursue postsecondary education and training opportunities; and $5 million to support work-based learning in high school.

The demand for skilled workers continues, with 2.5 jobs available for every unemployed person in Colorado. We have identified four areas for continued focus and policy development.

Recommendation One:

Strengthen Support for Employers' Talent Development

Our workforce development practices are only as strong as the jobs they connect Coloradans to. We recommend incentivizing talent development strategies that are evidence-based and led by employers. Strategies like on-the-job training, micro-credentialing, apprenticeship, and sector-wide collaboration help Coloradans develop the skills they need for quality careers.

» **Sector partnerships:** Regional, employer-led strategies are critical to identifying and meeting the workforce needs of communities throughout our state. While there are 25 sector partnerships around the state using the model promoted by the Colorado Workforce Development Council, not every region has a local business community currently engaged in this work. COVID-19 further disrupted this practice, making it more difficult to convene existing partnerships and launch new ones. Additional incentives to engage business in these partnerships will strengthen regional economic development.

» **Apprenticeship:** Earn and learn models create viable pathways into good paying jobs for many Coloradans. Apprenticeship is a solution to the skills gap in many industries because employers build the skills they are looking for by investing in the development of their employees. On-the-job training and related academic instruction also ensure that our workforce has the technical understanding to apply their skills throughout their careers.

» **Opportunity Now:** The Opportunity Now program dedicated $85 million of stimulus funds to effective talent development partnerships. To date, the program has seeded 46 talent partnerships to help local employers meet their workforce needs. An additional investment in Opportunity Now would further advance progress.

Recommendation Two:

Increase the Availability of Career-connected Learning Opportunities

Colorado students need to be prepared to meet the challenges of the future economy, and those future skills need to be developed today. Early career exposure and strengthening the connections between K-12, higher education, and the workforce help students develop life long skills. Colorado can invest in the front-end in our talent pipeline by making career-connected learning more widely available. The Big Blur Task Force, established by HB22-1215, developed recommendations to increase career-connected learning in their report released Dec. 1. The Talent Pipeline Report recommendations dovetail with that work.

» **Postsecondary and Workforce Readiness Programs:** Funding Postsecondary and Workforce Readiness programs is a persistent challenge in Colorado schools. Providers and school districts deliver Postsecondary and Workforce Readiness programs, however the rate of reimbursement for delivering these programs is unpredictable. Preparing our students for what comes after K-12 is an essential function of our education system. Postsecondary and Workforce Readiness programs must have sustainable funding to support that mandate. These programs could be supported with a new categorical funding stream, modeled after the Career and Technical Act, formerly the Colorado Vocational Act of 1970, CRS 23-8-101 (Colorado CTE Categorical) or another new funding stream.

» **Career Development Incentive Program:** The Career Development Incentive Program, or Career Development Success Program, provides financial incentives for school districts and charter schools that encourage high school students, grades 9-12, to complete qualified industry credential programs, pre-apprenticeships and apprenticeships, and internships. An increasing number of students are taking advantage of this program, reducing the total reimbursement rate per pupil. Increasing funding for this program and creating a more reliable amount per outcome will allow more students to graduate from high school with an industry-recognized credential.

» **Concurrent Enrollment:** Research funded by the U.S. Department of Education's Institute of Education Sciences and the Colorado Evaluation and Action Lab show that 82% of Colorado Concurrent Enrollment students continued in their postsecondary education compared to 77% of non Concurrent Enrollment students. Concurrent enrollment also provides students with the opportunity to earn college credit at no tuition cost to them or their families. Expanding access to concurrent enrollment opportunities helps students learn higher-level skills and credits toward a credential.

Recommendation Three:

Establish a Statewide Longitudinal Data System

Colorado has committed to improving our state data systems. The Colorado Department of Labor and Employment received a $3 million grant from the U.S. Department of Labor to improve workforce data quality, the Colorado Department of Higher Education received $3 million from HB22-1349 to better analyze the value of higher education programs as they relate to outcomes, and a study mandated by HB21-1111 directed the state to identify where personally identifiable information is stored by state agencies throughout Colorado. These early improvements in our state's data infrastructure have helped responsibly modernize our technology. However, we don't have a complete view of how investments in workforce programs provide value to learners, employers, and the state's economy.

A longitudinal data system is capable of following learners and earners over the course of their education and training, providing valuable insight about what practices work. Colorado has many statewide data systems and data collaboratives. However, we do not have a system that can pull workforce outcome data from multiple sources to measure the impact and value of education and training over time. Better cross agency analytics lead to more evidence-based decision making.

Recommendation Four:

Invest in High-impact Opportunities

The below recommendations reflect areas where collaborative leadership in workforce development will make a critical contribution to Colorado's future.

» **Infrastructure Workforce:** Data show Colorado currently needs 33,500 infrastructure and construction workers, with an additional 50,000 by the end of the decade. Colorado has had labor shortages in building in construction trades for decades. These labor shortages are exacerbated by an aging workforce and increased demand to deliver on federal investments and support Colorado's housing needs. Colorado is projected to need 6,098 construction laborers alone to respond to IIJA project needs, and according to E2's 2023 Report on Clean Jobs Colorado, 20,000 clean energy jobs are also in construction. However, according to the U.S. Bureau of Labor Statistics, the construction industry has shrunk 2.3% in Colorado this year.

The capacity of our infrastructure workforce will directly impact our ability to:

‣ Deliver IIJA and IRA projects on time and on budget;

‣ Meet our ambitious climate goals; and

‣ Build more housing for Coloradans.

» **Advanced Manufacturing Workforce:** Advanced manufacturing in Colorado generated $29.5 billion in economic impact. Careers in the industry span production, engineering, quality assurance, maintenance, and supply chain/logistics. There are several quality jobs within the industry that Coloradans can access without a college degree and the average annual wage for manufacturers in Colorado is 43% higher than the average annual wage for all industries. Skills in this industry support climate technology, medical devices, aerospace, broadband, and more.

Colorado has a few opportunities that will increase the need for a high-skilled advanced manufacturing workforce:

‣ Colorado was designated an official tech hub for the quantum industry. With that designation, we earned the opportunity to compete for millions of dollars in federal funding to grow the quantum industry in Colorado.

‣ Colorado will remain the home of Space Command, solidifying our place as a national leader in aerospace. This announcement will draw more investment into Colorado's aerospace industry, and we need to develop talent to meet the forthcoming demand.

» **Rural Workforce:** Several recent state and federal investments focus on strengthening rural economies and the rural workforce. These investments have supported projects like the Colorado Rural Resiliency and Recovery Roadmap program and have advanced the state's broadband goals. While these investments are bringing growth opportunities to Colorado's rural communities, regional shortages in agricultural workers and veterinary services persist. Bringing the next generation of workers into the agricultural industry is important to the sustainability of rural economies and Colorado's agricultural sector. Expanding the scope of practice for veterinary care could improve access to critical services in areas with a limited labor supply.

REFERENCES

1. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

2. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

3. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

4. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

5. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

6. Bureau of Labor Statistics Job Openings and Labor Turnover Survey (JOTS), 2023.

7. Denver Post, "Colorado hiring holding a recession at bay, for now." Aldo Svaldi. July 2023.

8. HB22-1006 Child Care Center Property Tax Exemption

9. Gedney, Ryan. 2023 Colorado Unemployment Insurance Trust Fund Status Report, pg. 10-11.

10. According to the Office of LMI's 2023 UI Trust Fund Update Report at CDLE, the current job openings per unemployed person ratio for the U.S. and Colorado are slightly higher than their levels in 2019, which peaked at 1.3 and 2.0, respectively. At present, there are approximately 20 states with a job openings per unemployed person ratio at 2.5 or higher.

11. NFIB Small Business Jobs Report, March 2023.

12. Lincoln Business Guides, Colorado Small Business Statistics (2022).

13. Colorado State Demographer's Office, DOLA, 2023.

14. Colorado State Demographer's Office, DOLA, 2023.

15. Colorado State Demographer's Office, DOLA, 2023.

16. Wall Street Journal-NORC survey, April 2023.

17. Forbes, "Why Talent Shortages Persist: Moving Beyond the Great Resignation and Quiet Quitting," John M. Bremen, January 2023.

18. The Workforce of Tomorrow Advisory Board, "Age is an asset: Why companies are interested in older workers," April 2023.

19. Fortune, "The trade-off for a longer life is a longer career," Chloe Berger, July 2023.

20. Institute for the Future (IFTF), 2021.

21. Harvard Business School, "Hidden Workers, Untapped Talent," 2021.

22. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

23. In June 2023, the Office of Future Work (OFW) at CDLE was awarded $700,000 to expand apprenticeships statewide. This is anticipated to bring 275 new jobs to the state by 2025.

24. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

25. All occupational and public postsecondary programs within the state during 2023 can be reviewed by visiting the Selecting an Institution site provided by the Colorado Department of Higher Education.

26. National Digital Inclusion Alliance, 2023.

27. Office of Governor Polis, July 2023.

28. American Community Survey, 1-Year Estimates, 2023.

29. Colorado Broadband Office, Governor's Office of Information Technology (OIT), 2023.

30. World Economic Forum, Future of Jobs Report, 2023.

31. Zippa Recruiter, "25 Trending Remote Work Statistics in 2023," June 2023.

32. Forbes Advisor, "Remote Work Statistics and Trends in 2023," June 2023.

33. U.S. Census Bureau, 2023.

34. Axios Denver, "How many people are working remotely in Denver and Boulder." September 2023.

35. U.S. Census Bureau, 2023.

36. Axios Denver, "How many people are working remotely in Denver and Boulder." September 2023.

37. Forbes Advisor, "Remote Work Statistics and Trends in 2023," June 2023.

38. Lumina Foundation, 2023.

39. Lumina Foundation, 2023.

40. U.S. News & World Report, "Best State Rankings," 2023.

41. Axios Denver, "How many people are working remotely in Denver and Boulder." September 2023.

42. Axios Denver, "How many people are working remotely in Denver and Boulder." September 2023.

43. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

REFERENCES

44. O*NET; US Bureau of Labor Statistics; Current Population Survey, US Census Bureau; McKinsey Global Institute.

45. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

46. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

47. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

48. O*NET; US Bureau of Labor Statistics; Current Population Survey, US Census Bureau; McKinsey Global Institute.

49. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

50. McKinsey Global Institute, "Generative AI and the future of work in America." 2023.

51. Office of Labor Market Information, CDLE, 2023.

52. CU Leeds School of Business Quarterly Economic Report, 2023.

53. Colorado LMI Gateway, Colorado Current Population Survey Demographic Data July 2023

54. Kai Drekmeier, "What 'Non-traditional Learners Teach All of US." Horizons Jobs for the Future, 2023.

55. Office of Labor Market Information, CDLE, 2023.

56. World Economic Forum, Future of Jobs Report, 2023.

57. World Economic Forum, Future of Jobs Report, 2023.

58. Brookings Institution, "Latinos and the future of finance: Why we need to examine the motivations and effects of Latinos' fintech adoption." Tonantizin Caroma and Luis Godinez-Puig. September 2023.

59. Axios, "New Census figures show where Colorado grew amid the pandemic." April 2023.

60. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

61. Office of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

62. Bureau of Labor Statistics, FRED Economic Data, September 2023.

63. Office Of Labor Market Information, CDLE; Bureau of Labor Statistics, 2023.

64. Office of Labor Market Information, CDLE, 2023.

65. Gedney, Ryan, Office of Labor Market Information, Principal Economist CDLE, 2023.

66. DOE U.S. Energy and Employment Report, 2023.

67. JobsEQ, 2023

REFERENCES

68. Colorado Department of Labor and Employment, 2023.

69. DOE U.S. Energy and Employment Report, 2023.

70. DOE U.S. Energy and Employment Report, 2023.

71. DOE U.S. Energy and Employment Report, 2023.

72. DOE U.S. Energy and Employment Report, 2023.

73. Office of Labor Market Information, CDLE, Bureau of Labor Statistics, 2023.

74. Office of Labor Market Information, CDLE, Bureau of Labor Statistics, 2023.

75. Denver Post, "One in five Colorado state jobs is vacant. Will houses, better pay entice workers?" August, 2023.

76. Denver Post, "One in five Colorado state jobs is vacant. Will houses, better pay entice workers?" August 2023. Retrieved at: www.denverpost.com/2023/08/17/colorado-state-job-vacancy-hiring-openings.

77. Leeds School of Business, University of Colorado Boulder. August 2023. Retrieved at: www.colorado.edu/business/news/2023/08/10/colorado-secretary-state-q2-2023-indicators-report.

78. Office of Labor Market Information, CDLE, Bureau of Labor Statistics, 2023.

79. Bureau of Labor Statistics State Jobs Openings and Labor Turnover, July 2023. Retrieved at: www.bls.gov/news.release/pdf/jltst.pdf.

80. Griswold, Jena. "Colorado Secretary of State Quarterly Business & Economic Indicators Report. August 2023. Retrieved at: www.sos.state.co.us/pubs/business/quarterlyReports/2023/Q22023-SOSIndicatorsReport.pdf.

81. It should also be noted that due to data limitations, Colorado's jobs are likely biased downwards, underestimating total quantities from the most recent data collections.

82. Griswold, Jena. "Colorado Secretary of State Quarterly Business & Economic Indicators Report. August 2023. Retrieved at: www.sos.state.co.us/pubs/business/quarterlyReports/2023/Q22023-SOSIndicatorsReport.pdf.

83. Office of Labor Market Information, CDLE 2023.

84. Colorado State Demographer's Office, DOLA, 2023.

85. Colorado State Demographer's Office, DOLA, 2023.

86. Colorado State Demographer's Office, DOLA, 2023.

87. Denver Business Journal, "Change in the neighborhood," September, 2023.

88. Denver Business Journal, "Change in the neighborhood," September, 2023.

89. The Office of Governor Polis, 2023.

90. Colorado State Demographer's Office, DOLA, 2023.

91. Colorado State Demographer's Office, DOLA, 2023.

92. Colorado State Demographer's Office, DOLA, 2023.

93. Colorado Office of Economic Security, CDHS, 2023.

94. Colorado Office of Economic Security, CDHS, 2023.

95. Colorado Office of Economic Security, CDHS, 2023.

96. Office of Labor Market Information, CDLE, 2023.

97. Office of Labor Market Information, CDLE, 2023.

98. Office of Labor Market Information, CDLE, 2023.

99. Office of Labor Market Information, CDLE, 2023.

100. Gedney, Ryan, as quoted in *The Denver Post*, "Colorado's child care gaps laid bare by pandemic with never-ending wait lists, exorbitant costs." April 2023.

101. Brookings Institution, The Hamilton Project, "Ten Economic Facts on How Mothers Spend Their Time," 2021.

102. Gedney, Ryan, as quoted in *The Denver Post*, "Colorado's child care gaps laid bare by pandemic with never-ending wait lists, exorbitant costs." April 2023.

103. At a national glance, today, there are approximately 7.2 million men who have essentially dropped out of the workforce since 1960 between the ages of 25 and 54. According to a USA Today article, in January 2023, the share of U.S. men 25 to 54 working or looking for work sat at 88.5%. This is below the pre-pandemic mark of 89.2%. Comparatively, the labor force participation rate for women within the same age bracket climbed to 76.9% during the same period, nearly reaching its pre-pandemic level of 77%.

104. Gartner, "Candidate Experience is a Key Piece of DEI Strategy," 2021.

105. Starred, "The Ultimate Guide to Candidate Experience," Chapter 7, 2022.

106. Denver Post, "Gov. Jared Polis turns to apprenticeship programs to help boost lagged state employ ranks," September, 2023.

APPENDICES

APPENDIX A:

2023 Colorado Top Jobs

APPENDIX B:

In-demand Skills and Certificates in 2023

APPENDIX C:

Skills by Resume Forensics in 2023

APPENDIX D:

2023 Sector Strategies Update

APPENDIX E:

Career Development Incentive Program (CDIP) List of Approved Programs – HB16-1289

APPENDIX F:

2023 Postsecondary and Workforce Readiness (PWR) Coordinator Update – HB15-1170

APPENDIX G:

2022-2023 Career Pathways Annual Report – HB15-1274

APPENDIX H:

2023 My Colorado Journey Progress Report

APPENDIX I:

PY22 Workforce Innovation and Opportunity Act (WIOA) Annual Report

APPENDIX J:

2023 Update on Reskilling, Upskilling, and Next-skilling (RUN) – HB21-1264

APPENDIX K:

Jobs that Dropped off the 2022 Top Jobs List

Please visit cwdc.colorado.gov/talent-pipeline-report to access this year's appendices.

2023 Colorado Talent Pipeline Report
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