

2022

# COLORADO TALENT PIPELINE REPORT

The Talent Pipeline Report explores issues related to the demand for and supply of talent in Colorado and strategies for strengthening our talent pipeline.



Colorado Workforce  
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In accordance with C.R.S, 24-46.3-103, this Colorado Talent Pipeline Report was prepared by the Colorado Workforce Development Council (CWDC) in partnership with Colorado’s Department of Higher Education (CDHE), Department of Education (CDE), Department of Labor and Employment (CDLE), including the CDLE’s Labor Standards and Statistics division, Department of Human Services (CDHS), the Office of Economic Development and International Trade (OEDIT), and the Department of Local Affairs (DOLA) State Demography Office. Support was provided by the Governor’s Office, the Colorado Community College System (CCCS), and other partners.

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The demand for talent is being faced across the country, however in Colorado we don't just see this as a challenge; it's an opportunity to be seized. My business background informs my leadership today and it has shown me that building a business isn't just about the idea or the product, it's about the people around you and the team you work with. We must value the education, skills, experience, and commitment that a team brings to any role.

The global pandemic created a disruption that allowed innovative practices and modernizations that would have normally taken a decade to take hold overnight. As we move forward, business, industry, government and education can be thoughtful and strategic about which of those adaptations we keep and use to succeed in this new and changing landscape.

This workforce transformation is happening and "The Future of Work is NOW." Here in Colorado we pride ourselves on being on the forefront of innovation and always taking new approaches to addressing the challenges we face. This has been especially true when it comes to our workforce. We have one of the most talented workforces in the country, but at the same time, relying on the traditional methods of education and training alone will not get us where we need to go.

**Colorado has led the way through government transformation, becoming the first state to adopt both skills-based hiring and apprenticeship strategies for our state workforce.**

This breaks down barriers to entry for talented Coloradans, evaluates candidates on their demonstrated skills, and in-return expands the pool of qualified applicants who can apply for positions with the state. It also opens the door for more "learn while you earn" opportunities, so that people who work for the state can continue growing in their field and their profession, helping our state provide better services while making us an employer of choice. Simply put, we want to hire the best and we are no longer defining that by education status, it's going to be defined by what you can do.

To keep up with the demands of our economy we have to create more opportunities for workers to continue learning and evolving over the course of their careers. So many private sector employers have already adopted these practices, and we're embodying this philosophy in state government so that we can be an encouraging example to all those who haven't.

Right now, Colorado is experiencing one of the strongest economic recoveries in the country. Our unemployment rate has dropped to 3.6 percent - below the national average. We've recovered more than all of the jobs lost during the pandemic. And our labor participation rate remains strong.

But even with this strong rebound, Coloradans and businesses continue struggling with the rising cost of everything while also navigating the changing nature of work. It's about the talent needed to power those businesses.

It's about helping connect people with resources and skills that will help them build careers they love. Careers that will support their families and contribute to their communities.

And it's about fulfilling our vision of a Colorado for All by truly creating opportunities to help every person to thrive and drive our economy forward.

A handwritten signature in blue ink that reads "Jared Polis". The signature is fluid and cursive, with the first name "Jared" being larger and more prominent than the last name "Polis".

**Jared Polis**  
Governor of Colorado



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## EXECUTIVE SUMMARY

In June 2022, there were 208,000 job openings relative to 129,000 hires – a gap of nearly 38 percent. Relative to June 2020, openings have increased by 117 percent while hires have diminished by 21.7 percent – showcasing a tight labor force. In June, the number of unemployed persons in Colorado totaled 111,682, ranking Colorado the 32nd most challenging state for employers to fill open positions in the U.S.

### **In 2022, Colorado has two job openings for every available worker.**

Colorado has historically had more open jobs than available skilled talent. This challenge presents the opportunity to think differently about how education and training (the supply side of our economy) are meeting the needs of employers, business, and industry (the demand side of our economy). The traditional way of thinking about education as supply and industry as demand is outdated.

Today, individuals are stepping out of current work to retrain into high-demand, often better paying jobs. However, the retraining cycle is often too slow and skilled talent is needed more quickly than training and education programs can produce. The costs and time investment for an individual to invest in education and training are also barriers. This is leaving Colorado in a bind as our economy continues to thrive.

To sustain the talent needs of Colorado businesses, more learners must have the opportunity to earn credentials and degrees at any stage of life. The talented individuals we need to support our economy are already in their 20s, 30s, 40s, and 50s, many of whom are already in the workforce. Over the coming decade, Colorado's high school population is projected to plateau and then decline due to falling birth rates.



The time to act is now to support Colorado's current 250,000 adults without a high school diploma, 600,000 people with some college and no degree, 45,000 students who left K-12 over the past three years, and hundreds of thousands who already have a diploma, credential, or a degree but need a chance to upskill in this new labor market.

- » More than 11 percent of Tier 2 Top Jobs are linked to apprenticeships. In 2022, apprenticeships were associated with 6,907 annual openings in the state.
- » Our industry-focused interventions to generate more skilled workers are taking hold, with more associate degrees generated this year than before in STEM fields, health care, and education.
- » Colorado tends to both attract and retain a highly educated population of people relative to all other states – both of which hold important weight. With respect to Colorado specifically, we must focus on vastly changing the state's population influx to increase in-migration and accelerate retention through diverse and equitable pathways for student and career success.
- » Colorado faces expected declines in migration inflows between now and 2050, and the projected uptick in migration will be driven by retirees in coming years, bolstering the overall net migration. Both the natural increase and net migration are forecasted to slow in growth in the decades to come.
- » The average education level of Colorado-born adults is higher than that of other state-born residents. Roughly 32 percent of Colorado-born residents have a bachelor's degree or higher and 64.6 percent of this group have attained at least some college or shorter-term credential.
- » Colorado is one of 14 states to exceed its pre-recession job levels. At the same time, the state ranks 11th in the country for the number of people voluntarily quitting their jobs.
- » Rental costs in Colorado have increased about 10 percent on average over the last year.

» Lack of affordable child care has led to a drop in women's labor force participation. As of August 2022, there are 35,296 fewer women in Colorado's workforce than there were just prior to the onset of the pandemic.

- Contributing factors include: (1) operators closing due to unparalleled industry challenges; (2) high costs; and (3) the need for regulatory reform. Between April 2018 and April 2021, 913 child care programs permanently closed their doors in the state largely due to high occupancy costs, low revenue generation, and logistical challenges, creating a gap of 94,887 children. Currently, there are only 486 centers still operating in Colorado.

### Colorado is Investing in Credential Attainment and Jobs

Goal/Outcome	Funding Amount
Earning postsecondary credential in high school	\$96.2 million
Free adult upskilling and training (includes <a href="#">federal WIOA</a> investments)	\$125.6 million
Higher education scholarships (excludes financial aid)	\$97.6 million
Industry-focused training (health care)	\$77 million
Industry-focused training (mental/behavioral health)	\$72 million
Industry-focused training (education)	\$67 million
Industry-focused training (energy)	\$2 million
Apprenticeship	\$25.86 million
Economic development for workforce	\$85 million
<b>TOTAL</b>	<b>\$648.26 million</b>

*\*One-third of the funds are from federal stimulus funds*

*\*The \$85 million for economic and workforce development will be dispersed via competitive applications accepted through the Opportunity Now Initiative. Applications are due Jan. 23, 2023. [Learn more.](#)*

# INTRODUCTION



In July, [CNBC ranked Colorado](#) the number four top state in the country to do business, and number one in the nation for workforce. Further examining Colorado's talent pipeline data and honing our strategies across the talent development network will be essential for Colorado to continue as a leader in these areas.



## FOCUS ON UNTAPPED TALENT RESOURCES

Colorado has opportunities to close labor market gaps by seeking talent from resources that previously remained largely untapped. As a state, Colorado has been successful at maintaining a minimal gap in the overall labor force participation rate by sex and race/ethnicity. This year's Talent Pipeline Report puts an emphasis on:

- » Disaggregating data to the maximum;
- » Identifying unfulfilled talent resources; and
- » Highlighting how attracting workforce populations (including those historically marginalized) with quality jobs will exponentially expand Colorado's talent pool and be critical in bolstering the industries that currently remain in deficit.

A tight labor market can work as a potential boost for conquering ageism and advancing opportunities for historically marginalized populations in the workforce. Over the past two years, Colorado has invested nearly \$650 million in our state's talent development and higher education ecosystem. These investments made by the Governor and Legislature are an opportunity to transform lives and opportunities for individuals across Colorado.

**To continue strengthening Colorado's economy we must help our youth and adults gain the skills they need to build the careers of their dreams, meet the demands of our economy, and fill the available jobs being created by Colorado businesses.**



## JOB QUALITY

**Definition of a Good Job:** When the features of a job meet the needs of workers and allow the business to thrive.

Even before the pandemic, businesses were struggling to hire and retain talent. Meanwhile, workers who have a full-time job no longer are provided the economic security they once were. Too often, when jobs fail to include basic job quality features — such as good wages, safety, benefits, and opportunities for growth — it leads to a cycle of instability among workers that can result in high turnover and declining productivity and exacerbate labor shortages for businesses.

As a state Colorado has invested considerably in apprenticeships, work-based learning, and upskilling to better prepare workers to compete in the workforce. As the state works to expend billions of dollars in recovery and infrastructure investment, now is the time to examine the work itself; to mobilize employers and leverage public resources to not just create jobs, train people, or get people to work, but to invest in connecting people with good jobs so that businesses and workers win together. Job quality is a strategy that results in positive outcomes for workers, employers, and the economy as a whole.

### Colorado's Job Quality Framework



## ALL LEARNING COUNTS

Over the past 10 years, Colorado has been expanding the ways in which learners and earners can capitalize on learning that occurs outside of the classroom, and ensuring that all learning counts while on the pathway to good jobs. Through the [Credit for Prior Learning](#), students can earn credits towards a degree through Advanced Placement, International Baccalaureate, military experiences, College Level Examination Placement exams, and industry certifications.

In the Colorado Community College System, students can earn credits towards degrees for over 60 industry recognized credentials. Students can also earn transferable credit through Career and Technical Education (CTE) courses and the [Career Development Incentive Program](#) (CDIP).

Over the next two years, the Colorado Department of Higher Education will be expanding earn and learn models through the development of stackable credentials in high demand industries. The department will also expand its work-based learning for college credit portfolio as directed by [SB22-192](#), which provides \$1 million for Colorado to create a permeable talent development framework of transferable skills and competencies.

This year's launch of the State Apprenticeship Agency also highlights Colorado's commitment to apprenticeship and creating diverse pathways to earning postsecondary credentials.





# DEMAND





Colorado's economy has rebounded from the pandemic-spurred recession in 2021, outperforming the nation and majority of states in job recovery and growth. In May 2022, Colorado was one of 14 states whose economic recovery had surged above pre-recession levels.<sup>1</sup> According to the Colorado Department of Labor and Employment's [Office of Labor Market Information](#), Colorado recorded an additional 12,400 nonfarm payroll jobs during the month of August, for a total of approximately 3.3 million jobs as of August 2022.<sup>2</sup> This reflects a job recovery rate of 114.8 percent relative to the jobs lost in March and April 2020, exceeding the national rate by a notable 13.7 percent over the same period.<sup>3</sup>

**Colorado's labor force participation rate (LFPR) marginally increased in August 2022 to 69.9 percent ranking third highest nationally.**

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.

The industry sectors with the fastest payroll recovery rates in 2022 are shown in Figure 0. Relative to the [2021 Talent Pipeline Report](#), Finance and Insurance has now made the list and outpaced Transportation Warehousing and Utilities, while Construction and Information have replaced Retail Trade and Accommodation and Food Services.

Industry sectors with payroll job recovery rates that are rebounding but have not yet reached their pre-pandemic levels include Real Estate, Rental, and Leasing and Accommodation and Food Services, with gains at 80 percent and 96 percent, respectively.<sup>4</sup>

**Figure 0**  
**Colorado Industry Sectors with the Fastest Payroll Job Recovery Rates**

Industry	Change in Jobs (Feb. 2020 - April 2020)	Change in Jobs (April 2020 - Sept. 2021)	Percentage Recovered
Finance and Insurance	-300	3,200	1067%
Transportation, Warehousing, and Utilities	-2,100	15,300	729%
Professional, Scientific, and Technical	-8,400	41,000	488%
Management of Companies and Enterprises	-2,500	5,600	224%
Construction	-9,800	15,400	157%
Information	-3,400	4,500	132%
Wholesale Trade	-6,200	7,600	123%
Other Services	-23,400	27,600	118%
Manufacturing	-11,000	12,600	115%

Source: Colorado Department of Labor and Employment: Office of Labor Market Information

<sup>1</sup> University of Colorado Boulder, Business and Research Division, Colorado 2022 Midyear Economic Update. Volume 88, No. 2, 2022

<sup>2</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>3</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>4</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

Between August 2021 and August 2022, nonfarm payroll jobs have increased aggregately by 108,300, with the private sector growing by 106,900 and the government sector adding 1,400 jobs.<sup>5</sup> The largest private sector job gains were in:

- » Leisure and Hospitality (~31,500);
- » Professional and Business Services (~30,500); and
- » Trade, Transportation, and Utilities (~14,400).<sup>6</sup>

Colorado's rate of job growth over the past year is 3.9 percent, just below the U.S. rate of 4.0 percent. Over the year, the average workweek for all Colorado employees on private nonfarm payrolls decreased from 34.4 to 33.2 hours, while average hourly earnings grew from \$32.12 to \$34.17, which is \$1.81 more than the national average hourly earnings of \$32.36.<sup>7</sup>

According to the survey of households, Colorado's seasonally adjusted unemployment rate increased one-tenth of a percentage point in August to 3.4 percent, which is a year-over-year growth rate reduction of 35.8 percent relative to the same time last year. The number of unemployed individuals rose by 4,600 over the same time period to 112,000. The national unemployment rate edged upward by two-tenths of a percentage point to 3.7 percent, which translates to approximately six million unemployed.<sup>8</sup>

## COLORADO'S TOP JOBS

In the Talent Pipeline Report labor market projections are utilized to identify the Top Jobs in Colorado. These jobs meet three criteria:

- » Projected high net annual openings (>40)
- » Above average growth rate over 10 years (>15 percent)<sup>9</sup>
- » A good wage<sup>10</sup>

Statewide data is used to classify jobs into two tiers in order to demonstrate the breadth of opportunities throughout the state. The full Top Jobs list can be seen in [Appendix B](#). 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 C](#).

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 \$71,739.20.

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 \$39,852.80.

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.

From 2021 to 2022, the benchmark in both Tier 1 and 2 has increased, largely due to historically high inflation rates, indicating occupations require a higher wage than previous years to be classified as a "living wage." Specifically, the benchmark for Tier 1 jobs has increased by 10.6 percent, and Tier 2 increased by 17.2 percent. The outcome is that the basic costs were shown to be more expensive than originally projected, which means that salaries have less buying power to cover daily expenses.

<sup>5</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>6</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>7</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>8</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

<sup>9</sup> This threshold has increased by 5 percent relative to the 2021 Talent Pipeline Report given new projected growth rate averages across all occupations in Colorado in 2022.

<sup>10</sup> MIT Living Wage Calculator



This year there are 70 occupations classified as Tier 1 Top Jobs and 108 Tier 2 Top Jobs. Major occupational profiles linked to Colorado's 2022 Top Jobs include:

- » Computer and Mathematical Occupations;
- » Business and Financial Operations;
- » Construction and Extraction Operations;
- » Architecture and Engineering Occupations;
- » Farming, Fishing, and Forestry Occupations;
- » Installation, Maintenance, and Repair Occupations;
- » Life, Physical, and Social Sciences Occupations;
- » Education Occupations;
- » Legal Occupations;
- » Personal Care and Service Occupations;
- » Sales and Trade Occupations;
- » Protective Occupations;
- » Transportation and Material Moving Occupations;
- » Office Administration and Support Occupations;
- » Food Preparation and Serving Related Occupations;
- » Health Care Occupations; and
- » Community and Social Services Occupations.



The figure below reports the top three Top Jobs across Tier 1 and Tier 2 occupations linked to six major job profiles (most prevalent across Tier 1 occupations) ranked by projected annual openings across the state over the next 10 years. The magnitude of annual openings indicate opportunities on the horizon for Coloradans in high-demand roles. Simultaneously, annual openings also signal the need to ensure that adequate and diverse education and training opportunities are provided across the state to meet the level of talent demanded for these roles. **Openings associated with Registered Nurse occupations outpaced others listed, with 4,024 annual openings projected per year across 2022 through 2032.**

**Figure 1**  
**Colorado's Top Jobs by Major Occupational Profile in 2022**

Computer and Mathematical	Architecture and Engineering	Life, Physical, and Social Sciences	Education	Healthcare	Community and Social Services
<b>Software Developers and Software Quality Assurance Analysts and Testers</b> - (Tier 1) 7,808 annual openings, median wage \$53.00 per hour	<b>Civil Engineers</b> - (Tier 1) 1,243 annual openings, median wage \$45.82 per hour	<b>Biological Technicians</b> - (Tier 2) 466 annual openings, median wage \$24.20 per hour	<b>Elementary School Teachers, Except Special Education</b> - (Tier 2) 2,307 annual openings, median wage \$28.87 per hour	<b>Registered Nurses</b> - (Tier 1) 4,024 annual openings, median wage \$37.53 per hour	<b>Substance Abuse, Behavioral Disorder, and Mental Health Counselors</b> - (Tier 2) 1,431 annual openings, median wage \$23.86 per hour
<b>Computer User Support Specialists</b> - (Tier 2) 1,606 annual openings, \$29.26 median hourly earnings	<b>Architects, Except Landscape and Naval</b> - (Tier 1) 1,449 annual openings, \$37.61 median hourly earnings	<b>Environmental Scientists and Specialists, Including Health</b> - (Tier 1) 346 annual openings, \$39.18 median hourly earnings	<b>Secondary School Teachers, Except Special and Career/ Technical Education</b> - (Tier 2) 1,461 annual openings, \$29.17 median hourly earnings	<b>Massage Therapists</b> - (Tier 2) 1,452 annual openings, \$23.03 median hourly earnings	<b>Paralegals and Legal Assistants</b> - (Tier 2) 925 annual openings, \$29.02 median hourly earnings
<b>Computer Occupations, All Other</b> - (Tier 1) 1,369 annual openings, \$48.86 median hourly earnings	<b>Electronics Engineers, Except Computer</b> - (Tier 1) 605 annual openings, \$52.52 median hourly earnings	<b>Clinical, Counseling, and School Psychologists</b> - (Tier 1) 248 annual openings, \$43.50 median hourly earnings	<b>Middle School Teachers, Except Special and Career/ Technical Education</b> - (Tier 2) 1,161 annual openings, \$29.13 median hourly earnings	<b>Dental Assistants</b> - (Tier 2) 1,308 annual openings, \$22.20 median hourly earnings	<b>Child, Family, and School Social Workers</b> - (Tier 2) 909 annual openings, \$28.87 median hourly earnings

Source: Colorado Department of Labor and Employment: Office of Labor Market Information

As noted above, the living wage in 2022 has increased by 10.6 percent and 17.2 percent year-over-year for Tier 1 Top Jobs and Tier 2 Top Jobs, respectively, to keep a similar pace to inflation. Due to the uptick in the benchmarks, four occupations have dropped off the Tier 1 Top Jobs list,<sup>11</sup> and 33 have dropped off from the Tier 2 Top Jobs list. These are jobs that are in high demand with high growth rate projections over the next 10 years, but no longer meet all three criteria.

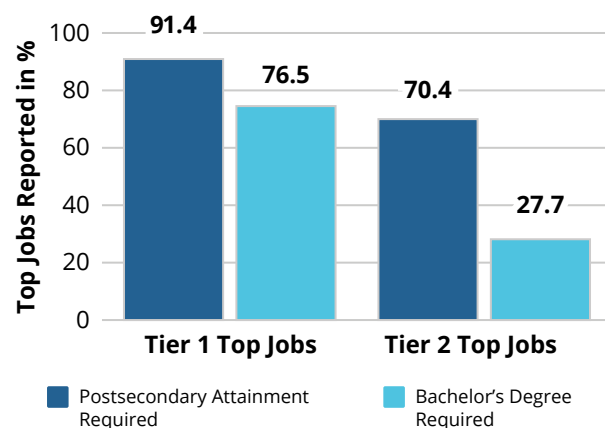
<sup>11</sup> Including Computer Network Specialists; Web Developers and Digital Interface Designers; Epidemiologists; Health Information Technologists, Medical Registrars, Surgical Assistants, and Healthcare Practitioners.

Many of these occupations that fell off the Top Jobs lists are vital building blocks for Colorado's economy. These jobs are critical and help power Colorado in fields such as direct care, health care, and education, and as such we have invested in them as a state and continue to invest in them because of the important role they play in our economy as well as in individuals' progression on career pathways. These occupations are likely to return to the Top Jobs list in future reports as wages align with inflation. Therefore, organizations and programs that utilize the Top Jobs list for decision making criteria are encouraged to include occupations from both the 2022 and [2021 Talent Pipeline Report](#).

## Attainment Levels and Top Jobs

In 2022, **91.4 percent of Tier 1 Top Jobs and 70.4 percent of Tier 2 Top Jobs require some type of postsecondary education past a high school diploma or equivalent.** These percentiles are marginally higher than prior years, likely due to the decreased number of Tier 1 and 2 Top Jobs this year caused by inflation. In addition, 76.5 percent of Tier 1 Top Jobs require at least a bachelor's degree for eligibility. This is a 3.4 percent uptick from last year's report findings.

**Figure 1.5**  
Typical Educational Requirements for Entry into Top Jobs in Colorado, 2022



Source: Colorado Department of Higher Education

While stronger attainment requirements could deter some from seeking a Top Job, more Colorado employers are diversifying the type of completion/training associated with these jobs. Shorter-term credentials are becoming more prevalent in the state (and are likely to become more popular in upcoming years across employers as the Colorado Department of Higher Education finalizes standardized statewide return on investment metrics for quality, non-degree credentials). This year, 11.5 percent of Tier 1 Top Jobs and 19.4 percent of Tier 2 Top Jobs were linked to postsecondary attainment requirements of an associate degree or less (e.g., a postsecondary non-degree award) to be eligible for a particular role.

The lower the educational attainment requirements for entry, the more likely a Top Job employer is to require some type of training to prepare job seekers for the workforce. This is especially true for Tier 2 Top Jobs in 2022, as 47.6 percent required some type of job training. Of all Tier 2 Top Jobs, 11.4 percent were linked to apprenticeships, displaying the relevance these opportunities have in landing a good job. In 2022, apprenticeships were associated with 6,907 annual openings in the state. Education attainment will be discussed further later in this report.

## INDUSTRIES AND OCCUPATIONS RACING TO THE FOREFRONT

Job posting analytics serve as an effective proxy to estimate employer demand. Figure 2 compares this year's top posted occupations from August 2021 to August 2022 relative to last year's 2021 top posted occupations (from January 2021 to October 2021).<sup>12</sup> Heavy and Tractor-Trailer Truck Drivers (ranking the most posted occupation in 2021 with 67,653 unique employer postings) have declined by 61.1 percent since August 2021, with a total of 26,388 unique postings over the following 12 months.<sup>13</sup> While the 2021 top five posted occupations move around in ranking, they remain in the top seven reported in 2022.

<sup>12</sup> Lightcast Econometric Modeling – 2022.3 Datarun

<sup>13</sup> Lightcast Econometric Modeling – 2022.3 Datarun

**Figure 2**  
**2022 vs 2021 Top Posted Occupations**

Top Posted Occupations (August 2021 - August 2022)			Top 5 Posted Occupations (January 2021 - October 2021)	
Occupation	Unique Postings	Median Posting Duration	Occupation	Unique Postings
Registered Nurses	85,531	27 days	Heavy and Tractor-Trailer Truck Drivers	67,653
Software Developers	45,572	26 days	Registered Nurses	66,918
Retail Salespersons	36,712	31 days	Software Developers and Software Quality Assurance Analysts and Testers	46,799
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	36,211	30 days	Retail Salespersons	24,992
Customer Service Representatives	29,892	27 days	Computer Occupations, All Other	23,448
Heavy and Tractor-Trailer Truck Drivers	26,388	31 days		
Computer Occupations, All Other	26,095	27 days		

**VS.**

Source: Lightcast Econometric Modeling, 2022 Q3 Datarun; EMSI - Burning Glass, 2021.4 Datarun

This year, a third column was added to the 2022 Top Posted Occupations to reflect the median span of days an occupation remained online for job seekers to view between August 2021 and August 2022. A job posting's timeline is a good reflection of how easy it is to fill certain positions in the current economy. Software Developers occupations associated with the lowest number of days at 26, making the argument that these jobs are relatively easier to hire for given 31 days.





## HEADWINDS EXIST

While Colorado and the nation's economic recovery from the 2020 recession continues with momentum, headwinds exist in the labor market, as emerging issues pose risks to the economic outlook. Among these challenges are COVID-19 variants, mounting inflationary pressure, labor and housing shortages, supply chain disruptions, and the ongoing war in Ukraine. This section discusses major obstacles employers in Colorado are currently facing.

### Labor Shortages

Job reports continue to confirm hiring challenges for business owners in 2022. According to August's [NFIB Report](#), **nearly half of employers are raising compensation to attract/retain staff and mitigate losses spurred by staffing shortages**. Overall, owners reported the following challenges:

- » Hiring or trying to hire (63 percent);
- » Few or no qualified applicants (89 percent); and
- » Openings for experienced workers vs. openings for those who need to upskill or reskill in order to excel in a role (41 percent vs. 24 percent)<sup>14</sup>

Commonalities across employers amplify the importance to provide diverse advancement opportunities to upskill and reskill that are feasible for every Coloradan.

**Upskilling** is defined as training designed to augment existing skills with new or significantly enhanced knowledge or skills to enable individuals to continue and succeed in the same profession or field of work.<sup>15</sup>

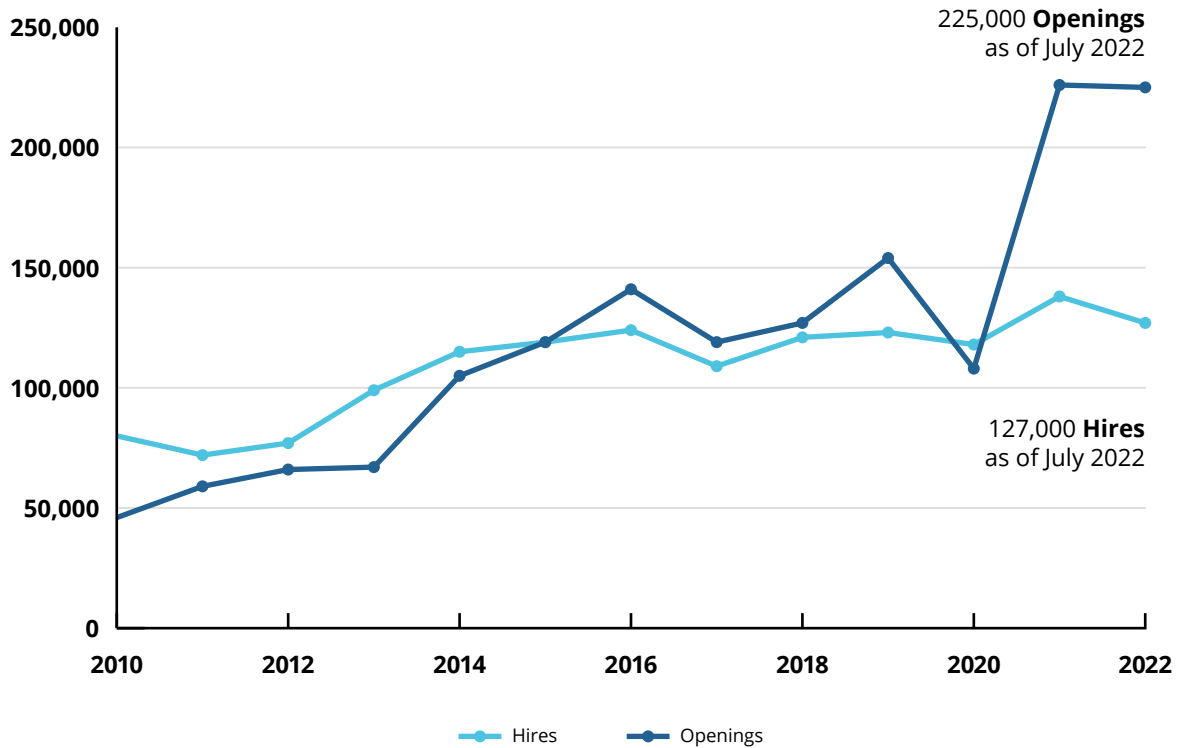
**Reskilling** is training designed to help individuals gain new knowledge or skills to enable them to perform new jobs or enter new professions.<sup>16</sup>

<sup>14</sup> NFIB Small Business Jobs Report, August 2022

<sup>15</sup> Association for Talent Development

<sup>16</sup> Association for Talent Development

**Figure 3**  
**Hires vs. Openings in Colorado**



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover Survey (JOLTS)

Data from the Bureau of Labor Statistics' (BLS) Job Openings and Turnover Survey (JOLTS) showcases the current state of the labor shortage in Colorado. Figure 3 displays the level of hires (light blue line) relative to job openings (dark blue line) in Colorado beginning annually in July 2010 through July 2022. Trend lines show similar movement patterns across hires and openings during the first several years until 2015, where Colorado's talent supply optimally met employer demand - both equating to 119,000 during the month of July.

Openings began to exceed hires in Colorado during 2016 and remained at slightly elevated levels relatively, exclusive of the plunge in July 2020 spurred by the pandemic (a decline of nearly 30 percent year-over-year). In July 2022, there were 225,000 openings across the state relative to 127,000 hires. The corresponding gap of 43.6 percent showcases the magnitude of the tight labor market.

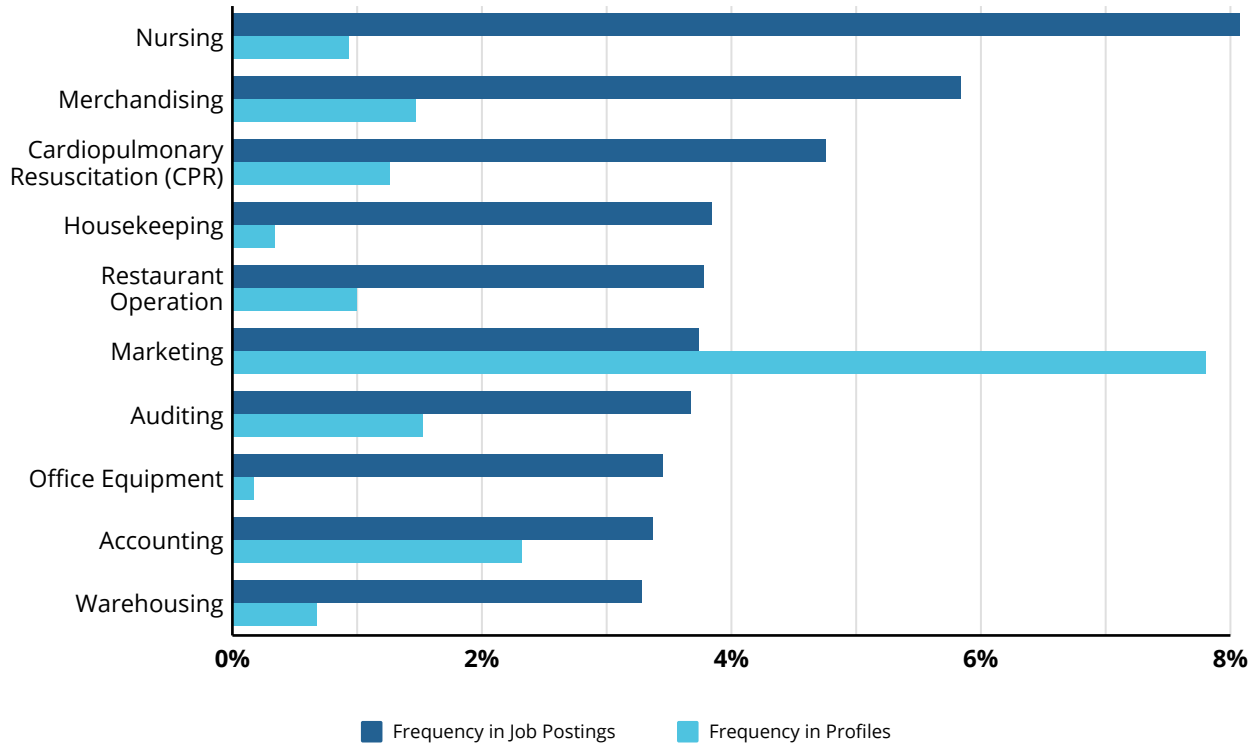
In August 2022, the number of unemployed Coloradans edged upwards by 4,600, amounting to 112,000 in total across the state.<sup>17</sup> While Colorado's labor force increased by 7,700 during the same period (representing a labor force participation rate of 69.6 percent), the number of unemployed Coloradans per job opening was at 0.5, ranking Colorado the 28th most challenging state for employers to hire in the U.S.<sup>18</sup> As a result, despite Colorado's robust job loss recovery, there has remained an ongoing labor shortage since mid-2021, a factor that has proven to be a hurdle impacting both large and small businesses.

<sup>17</sup> Office of Labor Market Statistics (LMI), CDLE

<sup>18</sup> Bureau of Labor Statistics; Local Area Unemployment Statistics (LAUS), Job Openings and Turnover Survey (JOLTS)

Figure 4 showcases the top 10 specialized skills in high demand by employers in 2022 relative to Colorado job seekers' online profiles.

**Figure 4**  
**Top Specialized Skills in Colorado**

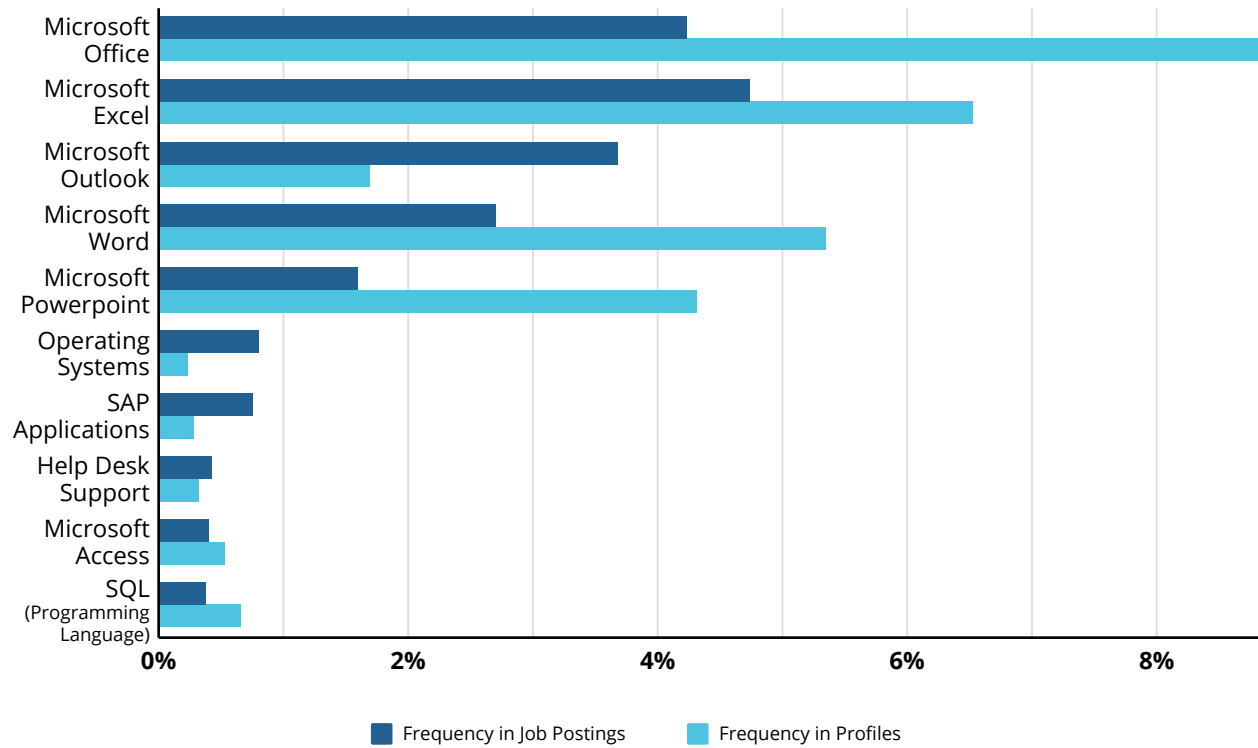


Source: Lightcast Econometric Modeling, 2022 Q3 Datarun



Similarly, Figure 5 showcases the top software skills employers are currently looking for relative to the technical skill level possessed by job seekers in Colorado.

**Figure 5**  
**Top Software Skills in Colorado**



Source: Lightcast Econometric Modeling, 2022 Q3 Datarun

Figure 6 displays occupations linked to hiring difficulty based on the amount of times on average an employer in Colorado reposts a job ad for one role.

**Figure 6**  
**Hard to Fill Jobs**

Occupation Title	Average Posting Intensity (Aug. 2021 - Aug. 2022)	Annual Median Advertised Salary
Warehouse Package Handlers	36:1	\$41,600
Package Handlers	30:1	\$41,600
Package Delivery Drivers	19:1	\$42,624
Appliance Repair Technicians	18:1	\$62,080
Package Sorters	13:1	\$35,456
Couriers	12:1	\$39,040
Store Associates	10:1	\$33,408
Research Assistant Professors	9:1	\$57,088
General Warehouse Associates	9:1	\$37,504
Travel Registered Nurses	9:1	\$116,992

Source: Lightcast Econometric Modeling, 2022 Q3 Datarun

The second column of Figure 6 reports the top 10 highest frequency ratios associated with an employer posting for one particular job. The third column displays the median annual wage linked to each role in Colorado. Warehouse Package Handlers have the highest ratio (36:1), as employers will have to repost an average of 36 times in order to fill a single position. In the last 12 months, the Transportation and Warehousing Industry seem to have had the most difficulty hiring, as six of the top 10 hardest to fill occupations are linked to highest reposts per job.

**Hard to fill jobs and the mismatch between low wages and high costs of living reflects a limiting factor in our labor market.** Through a 2022 data lens, we find the majority of wages have not caught up with inflation levels, thus creating barriers to Top Job classifications.

Occupations associated with high-need industries and above average growth rates meet only two of the three criteria to be identified as a Top Job in Colorado. Outside of Travel Registered Nurses, which have an annual advertised median salary of \$116,992, no jobs reported in Figure 6 would meet the livable wage criteria to qualify into the Tier 1 Top Job category in 2022.<sup>19</sup> Package Sorters, Couriers, Store Associates, and General Warehouse Associates have associated annual median advertised salaries that are too low to be considered Tier 1 or Tier 2 Top Jobs this year.<sup>20</sup>

**Without wages that provide workers living earnings, it remains difficult to attract and retain talent in growing industries that serve as economic engines for a thriving economy.**

<sup>19</sup> The annual wage level for a Tier 1 Top Job in 2022 is equal to \$71,739.20 and assumes a 40 hour work week and 52 weeks per year.

<sup>20</sup> The annual wage level for a Tier 2 Top Job in 2022 is equal to \$39,852.80 and assumes a 40 hour work week and 52 weeks per year.

## Competitive Housing Market and the Housing Shortage

Rental costs increased statewide about 10 percent on average this year, making housing neither affordable nor attainable for a large portion of the workforce. Rent for a one-bedroom apartment increased in 2022 by:

- » 13 percent in Colorado Springs;
- » 11 percent in Denver;
- » 122 percent in Grand Junction; and
- » 8 percent in Pueblo.<sup>21</sup>

Colorado additionally carries the 5th highest median home value and 12th highest median household income in the nation.<sup>22</sup> In 2022, activity in the construction sector has elevated home prices dramatically in the state. During the first quarter of this year, single-family home prices increased by 21.6 percent year-over-year.<sup>23</sup>

Mortgage rates reached 5.87 percent in June, the highest level since 2008. Rising labor prices and historic inflation levels continue to push the housing market into steeper ground.<sup>24</sup> All of these confounding factors contribute to a significant housing shortage in Colorado.

While confidence in the housing market remaining robust has continued to [slump amongst national buyers in recent months](#) (largely due to spiked mortgage rates), a recent [study by Fortune Magazine](#) shows that Colorado home prices remain largely unaffected in 2022 and will likely stay that way in upcoming business cycles. According to [Indigo Pathways'](#) 2021 Colorado Health Foundation Poll (composed of 43,756 respondents), **88 percent of respondents say the cost of living in the state is a serious problem and 30 percent are worried about potentially losing their home.**

## Inflation & Interest Rates

This year, inflation rose to its highest measurement across the last four decades.<sup>25</sup> Supply chain issues in conjunction with record inflation and increased production costs have significantly cut into net income, causing some producers to operate at a loss. While the state is expected to have 104,000 jobs in 2022 – a 3.8 percent increase relative to 2021 – risks to continued growth still exist.<sup>26</sup>

The Bureau of Labor Statistics reported that inflation has risen 9.1 percent over the last 12 months, as of June 2022. While wage growth has remained strong in Colorado, **inflation levels reaching historic levels have widened the gap between average earnings and what is defined as a liveable wage.**



<sup>21</sup> Rent - City Living, July 2022, retrieved at: [www.rent.com/blog/cost-of-living-in-colorado](http://www.rent.com/blog/cost-of-living-in-colorado)

<sup>22</sup> Colorado State Demographer's Office, Department of Local Affairs

<sup>23</sup> FHFA All-Transaction Index, Q1 2022

<sup>24</sup> University of Colorado Boulder, Business and Research Division, Colorado 2022 Midyear Economic Update. Volume 88, No. 2, 2022

<sup>25</sup> University of Colorado Boulder, Business and Research Division, Colorado 2022 Midyear Economic Update. Volume 88, No. 2, 2022

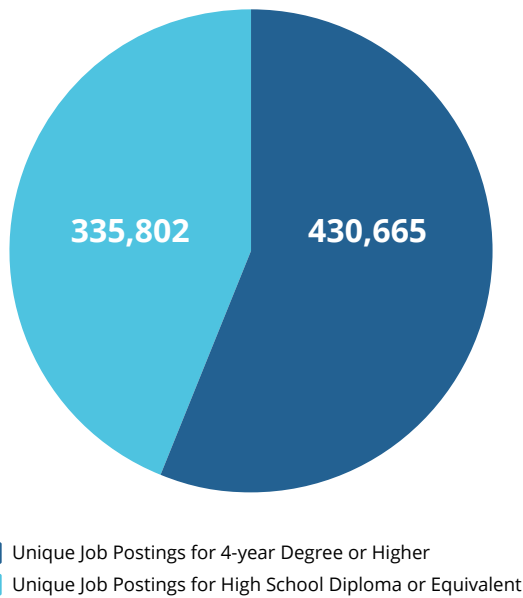
<sup>26</sup> University of Colorado Boulder, Business and Research Division, Colorado 2022 Midyear Economic Update. Volume 88, No. 2, 2022



## LABOR DEMAND BY ATTAINMENT LEVELS

Discussed in the [Colorado Department of Higher Education's 2022 Return On Investment \(ROI\) Report](#), a common way to measure employer demand within a region is through the total number of job postings for particular qualifications. Figure 7 shows the number of job postings from August 2021 to July 2022 disaggregated by education level prerequisites specified by the employer.

**Figure 7**  
**Labor Demand Measured by Statewide Job Postings Over the Last 12 Months in Colorado**



Source: *Lightcast Econometric Modeling, 2022 Q3 Datarun*

During the last 12 months, there were a total of 335,802 unique job postings seeking individuals who have attained a high school diploma or equivalent in Colorado. The median advertised salary associated with these jobs is approximately \$40,600 per year. Colorado employers seeking to fill roles requiring at least a bachelor's degree posted 430,665 unique postings during the same period (an uptick of 22 percent), indicating nearly **95,000 additional opportunities in the labor market for individuals who attained a bachelor's degree or higher.**

Relative to postings requiring a high school diploma or equivalent, the **median salary advertised for individuals with a bachelor's degree or higher is roughly twice the annual amount at \$80,300.** Advertised earnings by employers seeking a postsecondary degree or higher have been steadily increasing over the past three years, climbing by 39.7 percent between August 2019 and July 2022. This growth began to spike in December 2020, just a few months prior to the World Health Organization declaring COVID-19 a pandemic on March 11, 2020.<sup>27</sup> The upward trajectory in wages remained robust throughout the pandemic and afterwards, further supporting the argument that postsecondary education bolsters employment and earnings levels even during volatile and uncertain economic periods.

This is a clear indication that postsecondary educational attainment expands career opportunities and bolsters lifetime earnings. The top five posted occupations separated by attainment levels required for entry are listed in Figure 8.

**Figure 8**  
**Top Posted Occupations by Typical Required Attainment Levels: August 2021 – July 2022**

High School Degree or Equivalent	Bachelor's Degree or Higher
Retail Salespersons	Registered Nurses
Customer Service Representatives	Software Developers
First-Line Supervisors or Retail Sales Workers	Computer Occupations, All Other
Security Guards	Managers, All Other
Maintenance and Repair Workers, General	Sales Representative, Wholesale and Manufacturing, Except Technical and Scientific Products

Source: *Lightcast Econometric Modeling, 2022 Q3 Datarun*

<sup>27</sup> CDC Museum COVID-19 Timeline



## A Cultural Shift Towards Skills-based Hiring & Earn-and-Learn Opportunities

Rising costs of living, financial constraints, responsibilities surrounding family dynamics, and student demand for quicker credential completions has led Colorado's institutions of higher education to respond with new ways of approaching postsecondary education. While wage outcome data supports further education with higher future earnings, postsecondary credential completion surrounding skills-based hiring, training programs, apprenticeships, and certifications provide alternatives to increase employee value and advance clear job pathways.

Innovative efforts by Colorado's colleges for short-term credentials to earn-while-learning in 2022 are highlighted below:

- » Arapahoe Community College has worked closely with regional workforce centers to align workforce certifications with industry needs, boosting entry-level wage expectations by approximately 60 percent in 12-24 months after completion.<sup>28</sup>
- » Metro State University of Denver's new [Career Launchpad](#) offers pathways to high-demand careers and already has an interest from over 1,2000 individuals who have previously completed the free online micro-credential courses provided by their [Skills Lab](#) launched in 2020.
- » "[Micro-pathways](#)," spearheaded by the Colorado Community College System (CCCS), focuses on career pathways for energy and health care sections, mapping out a learning career/learning path towards high-skill, high-wage jobs providing industry-recognized credentials and the ability to be completed in less than a year.

<sup>28</sup> Colorado Public Radio, March 8th, 2022, retrieved from: [www.cpr.org/2022/03/08/colorado-college-students-apprenticeships-certificates](http://www.cpr.org/2022/03/08/colorado-college-students-apprenticeships-certificates)

## Training Opportunities & 2022 Top Jobs

Not all pathways look the same and many Top Jobs in Colorado are achievable through diverse training opportunities. Figure 9 reports some 2022 Top Jobs in Colorado that do not require a bachelor's degree, but instead some type of postsecondary (non-degree) award, apprenticeships, or on-the-job training. While the first group does require higher education experience, the latter two typically require a high school diploma or equivalent.

**Figure 9**  
**Innovative Top Job Career Pathways for All Coloradans**

	Median Hourly Wage	10-year Growth Projection (%)	Annual Openings
<b>Postsecondary Non-degree Award</b>			
Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other	\$36.05	17.1%	508
Aircraft Mechanics and Service Technicians	\$36.23	26.3%	230
Wind Turbine Service Technicians	\$34.85	53.7%	54
Health Information Technologists, Medical Registrars, Surgical Assistants, & Healthcare Practitioners, AO	\$31.78	18.4%	81
Dental Assistants	\$22.20	18.1%	1,308
<b>Apprenticeship</b>			
Electricians	\$28.55	21.6%	2,670
Glaziers	\$23.37	19.1%	237
Carpenters	\$23.31	15.3%	2,105
Plumbers, Pipefitters, and Steamfitters	\$28.41	17.2%	1,489
Structural Iron and Steel Workers	\$28.63	19.9%	145
<b>On-the-job Training</b>			
First-Line Supervisors of Construction Trades and Extraction Workers	\$36.54	18%	2,335
Commercial Pilots	\$50.59	24.9%	158
First-Line Supervisors of Farming, Fishing, and Forestry Workers	\$28.06	17.8%	179
Psychiatric Aides	\$22.04	17.9%	90
First-Line Supervisors of Food Preparation and Serving Workers	\$22.34	17.8%	3,680

Source: *Lightcast Econometric Modeling, 2022 Q3 Datarun*



## IN-DEMAND CROSS-INDUSTRY OCCUPATIONS AND SKILLS

Figure 10 reports Colorado's top 10 industries based on unique job postings from employers. Posting intensity was the highest for Health Care and Social Assistance as well as Retail Trade - both are associated with a 5:1 rate, meaning on average, employers associated with these two industries must repost for a job five times before they find the talent needed to fill a position.

**Figure 10**  
**Colorado's Top Industries**

Industry	Total Unique Postings (August 2021-August 2022)	Median Posting Duration (Days)
Health Care and Social Assistance	887,865	30
Administrative and Support and Waste Management and Remediation Services	529,379	27
Professional, Scientific, and Technical Services	418,905	28
Retail Trade	482,099	29
Manufacturing	303,739	28
Accommodation and Food Services	338,900	30
Educational Services	155,579	31
Finance and Insurance	212,003	28
Information	198,291	28
Wholesale Trade	171,352	28

Source: Lightcast Econometric Modeling, 2022 Q3 Datarun

Figure 11 showcases the 10 fastest growing major occupational groups in Colorado ranked by total employment change. These occupations not only have a higher growth rate, but they also have high average annual openings. The average annual openings take into consideration annual exits (i.e., those leaving the labor force), transfers (i.e., those switching occupations), and growth. The high growth and average annual openings indicate that these occupations are “in-demand.”

**Figure 11**  
**Colorado’s Top 10 Fastest Growing Occupations**

Major Occupational Group	2022 Estimated Employment	Median Annual Wage	Projected Growth Rate (2021-2031)	Annual Openings
Food Preparation	253,921	\$29,910	17.7%	52,194
Transportation and Material Moving	228,414	\$38,280	17.8%	34,449
Business and Financial Operations	254,900	\$77,610	16.9%	26,578
Computer and Mathematical	154,264	\$100,170	28.2%	15,604
Sales and Related	322,778	\$37,250	7.2%	44,531
Construction and Extraction	165,404	\$48,650	17.2%	19,910
Healthcare Practitioners and Technical	157,118	\$77,630	20.5%	11,991
Management	148,241	\$126,460	17.8%	14,877
Educational Instruction and Library	148,242	\$49,840	17.1%	15,611
Office and Administrative Support	349,279	\$43,170	3.7%	41,222

*Source: Colorado Department of Labor and Employment: Office of Labor Market Information*

The fourth column of Figure 11 reports the 10-year projected growth rate, and the third column shows the median annual wages associated with each major occupational group. Outside of Sales and Related and Office and Administrative Support (which are linked to forecasted growth rates below the 15 percent criteria for Top Jobs) all of these categories represent jobs that would identify as Top Jobs if the affiliated earnings met the living wage threshold for the state. In 2022, occupations must earn at least \$71,739 a year to be considered a Tier 1 Top Job and \$39,853 a year for Tier 2 Top Jobs. Only four of the 10 major occupation groups would meet the Tier 1 Top Job earnings threshold and eight out of 10 for Tier 2 Top Jobs.

Shifting focus towards in-demand qualifications, many required skills are common across occupations. Figure 11.5 shows the top 15 skills that are found in job postings in Colorado between August 2021 and August 2022. These skills are pivotal across industries, making them valuable for all workers. The third column of Figure 11.5 shows the share of job seekers who report having attained these proficiencies. Comparing the second and third columns showcases major gaps in sought skills by employers relative to talent gains across job seekers.

**Figure 11.5**  
**Colorado Top 15 Skills Across all Occupations**  
**(Aug. 2021 - Aug. 2022)**

Skill	Frequency in Job Postings	Frequency in Job Seeker Profiles
Customer Service	46%	19%
Communications	44%	8%
Management	26%	17%
Sales	21%	16%
Operations	18%	9%
Detail Oriented	16%	1%
Problem Solving	12%	2%
Computer Literacy	12%	0%
Leadership	12%	14%
Scheduling	10%	2%
Professionalism	10%	0%
Microsoft Office	10%	12%
Multitasking	10%	1%
Microsoft Excel	10%	10%
Interpersonal Communications	10%	1%

Source: *Lightcast Econometric Modeling, 2022 Q3 Datarun*

The use of behavioral definitions of the skills required for a position, in conjunction with competency and skills-based hiring, gives students, job seekers, and organizations a clear understanding of what is required to perform job tasks. Training for employers who want to explore the adoption of competency and skills-based hiring and how it can benefit their business can be accessed through [local workforce centers](#).

## ENTREPRENEURSHIP TRENDS

Business creation has long been a key driver of job growth in the U.S. Colorado's robust entrepreneurial culture remains steadfast in 2022. This is especially true relative to other states and national trends. **Colorado is one of only 19 states that saw positive year-over-year growth rates in business applications.** From July 2021 through July 2022, there have been a total of [9,644 new business applications](#) submitted to the state – representing a growth rate of 5.1 percent relative to the same time last year.



**Entrepreneurial culture** most often refers to local communities that nurture and value innovation, regional development, and job creation.<sup>29</sup>

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Demographics of Entrepreneurs in 2022: The [most recent data](#) reports 41.5 percent of entrepreneurs in the U.S. are women and 58.5 percent are men. Last year, women earned only 91 percent of what men earned. The average age of an employed entrepreneur in the U.S. is 44. Seventy-one percent of entrepreneurs are white, 14.3 percent are Hispanic or Latinx, 6.2 percent are Asian and 6.0 percent (the lowest share) are Black or African American.

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<sup>29</sup> Walzer, N. (Ed.) (2007). Entrepreneurship and Local Economic Development



# SUPPLY

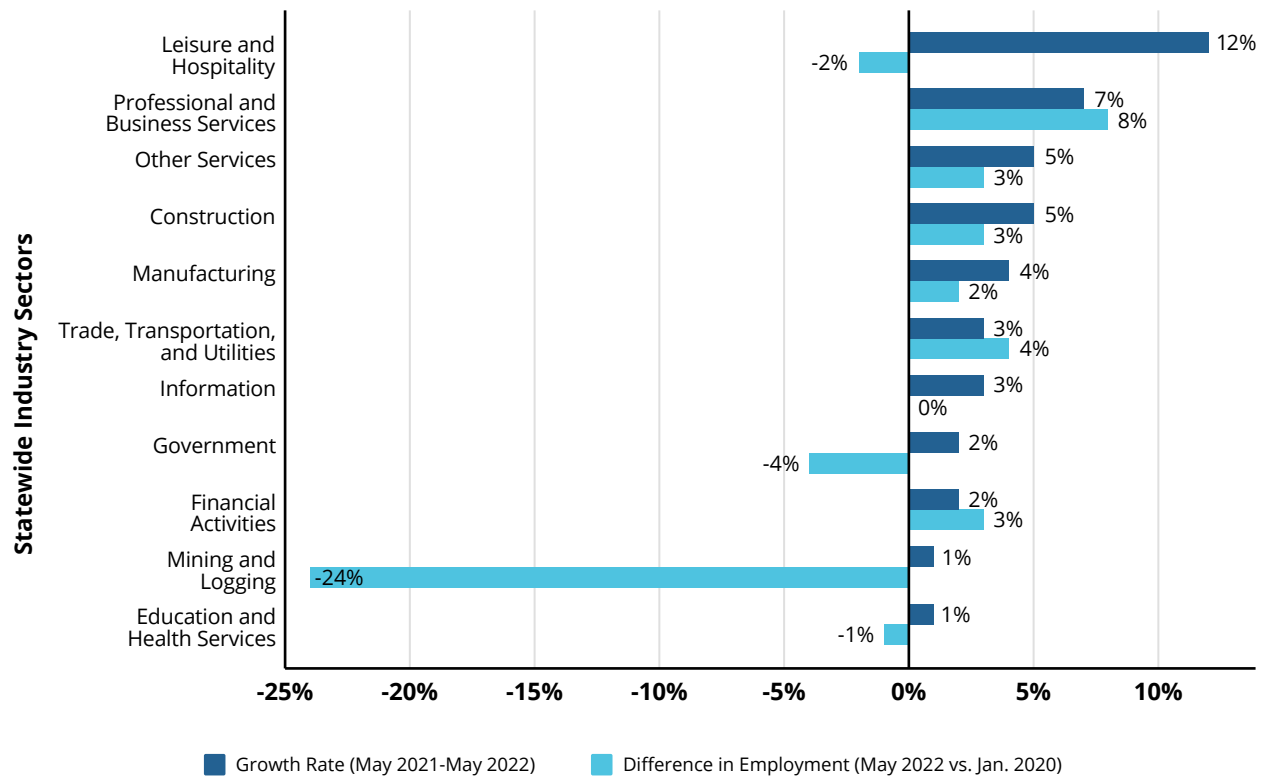


In July 2022, Colorado saw the unemployment rate drop by one-tenth of a percentage point to 3.3 percent, making it the lowest unemployment rate in the state since February 2020 when it was 2.8 percent.<sup>30</sup> According to the [University of Colorado's 2022 Mid-year Economic Update](#), the state's labor force has continued to set records in 2022, with a year-over-year growth ranked 5th and a labor force participation rate ranked 3rd in the U.S. as of August this year, and growth rates posting record highs each month of 2022.

Colorado's employment recovery has varied significantly by major industries. Figure 12 captures these differences by comparing gains and losses over two time periods in Colorado's economy. The dark blue bars report the level of employment growth by industry over the last year between May 2021 and May 2022. The light blue bars measure the difference in employment by industry in May 2022 relative to the pandemic's onset period in the U.S. (January 2020).

Employment numbers in the Mining and Logging, Government, Education and Health Services, and Leisure and Hospitality industries stand out, with recovery levels still lingering below their pre-pandemic levels (despite recent positive growth in the past year for Education and Health Services and Leisure and Hospitality).

**Figure 12**  
**Employment Change in Colorado Across Industries, May 2022**



Source: Office of Labor Market Information, CDLE; University of Colorado, Boulder, 2022 Mid-year Economic Update

<sup>30</sup> Office of Labor Market Information at the Colorado Department of Labor and Employment

Figure 13 lists the top 10 qualifications that current Colorado residents showcase on their resumes. The second column reports the number of times a job seeker's online resume mentioned the associated skill attainment in the state during 2022. These qualifications are typically associated with four major industry career pathways: IT, Transportation and Warehousing, Business and Financing Operations, and Health Care.

**Figure 13**  
**Top 10 Qualifications by Colorado Job Seekers in 2022**

Qualification	Job Seekers Posting with Qualification
Basic Life Support (BLS) Certification	81,633
Advanced Cardiovascular Life Support (ACLS) Certification	28,857
Security Clearance	23,034
Certified Nursing Assistant	19,847
Commercial Driver's License (CDL)	18,618
Licensed Practical Nurse	18,337
Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)	18,276
Bachelor of Science in Nursing (BSN)	18,216
CDL Class A License	13,796
Bachelor of Science in Business	11,999

Source: *Lightcast Econometric Modeling, 2022 Q3 Datarun*

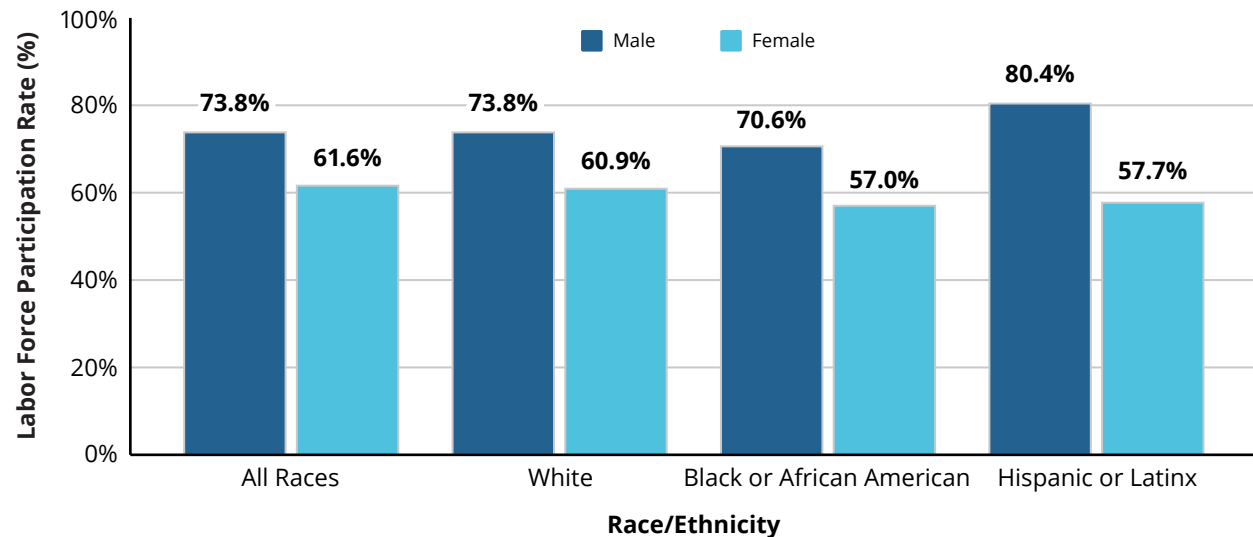
## **EQUITY, DIVERSITY, AND INCLUSION IN THE WORKFORCE<sup>31</sup>**

Figure 14 reports the labor force participation rate (LFPR) in Colorado by gender identity and race/ethnicity for those 16 and older.<sup>32</sup> In alignment with historical data, individuals identifying as male have a higher LFPR than females, regardless of race or ethnicity. On average, this leads to a gap of 12.2 percent in the labor market. Relative to the 2021 Talent Pipeline Report, however, the share of males in Colorado's workforce has decreased by 0.7 percent while the share of females has marginally increased by 0.3 percent.

<sup>31</sup> Indigenous/Native American populations are largely not reflected in the data of this report due to data limitations. This contributes to these populations' invisibility through a data workforce lens and highlights a need for more inclusive data.

<sup>32</sup> The 2021 annual data is the most recent data available for this group because of data collection and suppression constraints. Outside of Black or African American females, each demographic share marginally decreased relative to last year's report. Given Colorado's labor force recovery in 2022, it is worth noting that these percentages are likely to be slightly underreporting current labor force participation rate percentages across demographic groups in the state.

**Figure 14**  
**Labor Force Participation Rate by Gender and Race/Ethnicity (Jan. 2021 - Dec. 2021)**



Source: Current Population Survey, U.S. Bureau of Labor Statistics

Similar to the data in the 2021 and 2020 Talent Pipeline Reports, in 2022 Hispanic and Latinx males hold the highest LFPR in the state at 80.4 percent while Black or African American females continue to have the lowest LFPR at 57 percent. While the latter result is a critical indication of stark equity gaps in Colorado's workforce, the LFPR for this demographic has improved significantly since last year, rising nearly 10 percentage points over the last 12 months with an associated growth rate just over 21 percent.

Overall, Black or African American workers (male and female) have the lowest participation rates of Colorado's workforce for the second year in a row.<sup>33 34</sup> Compared to total labor force participation rate averages across genders in the state, this reflects a gap of 3.2 percent for Black or African American males and 4.6 percent for Black or African American females.

A recent [McKinsey study](#) on why job losses have been greater for the Black or African American worker population since the pandemic showcases how this workforce share is disproportionately represented in low-wage occupations and underrepresented in high-paying jobs. Nearly 50 percent of this population's workforce are concentrated in health care, retail, and accommodation and food services and typically fill lower-paying service roles within these industries.<sup>35</sup> These determinants lead to wage gaps across race and ethnicity in the workforce and are attributed to the drop offs we saw in labor force participation rates for this population.

The current median annual wage for Black or African American workers is estimated to be 30 percent lower than that of white workers.<sup>36</sup> This finding has significant impacts on an earner's purchasing power, economic security, and ability to build wealth. **Black or African American workers make up nearly 13 percent of the national workforce yet earn only 9.6 percent of total wages.**<sup>37</sup>

<sup>33</sup> In 2019, white and Hispanic or Latinx females made up the lowest share of the workforce at 62.9 percent and 63.1 percent, respectively.

<sup>34</sup> Current Population Survey, U.S. Bureau of Labor Statistics

<sup>35</sup> McKinsey Global Institute, June 17, 2021 Report

<sup>36</sup> McKinsey Global Institute, June 17, 2021 Report

<sup>37</sup> McKinsey Global Institute, June 17, 2021 Report

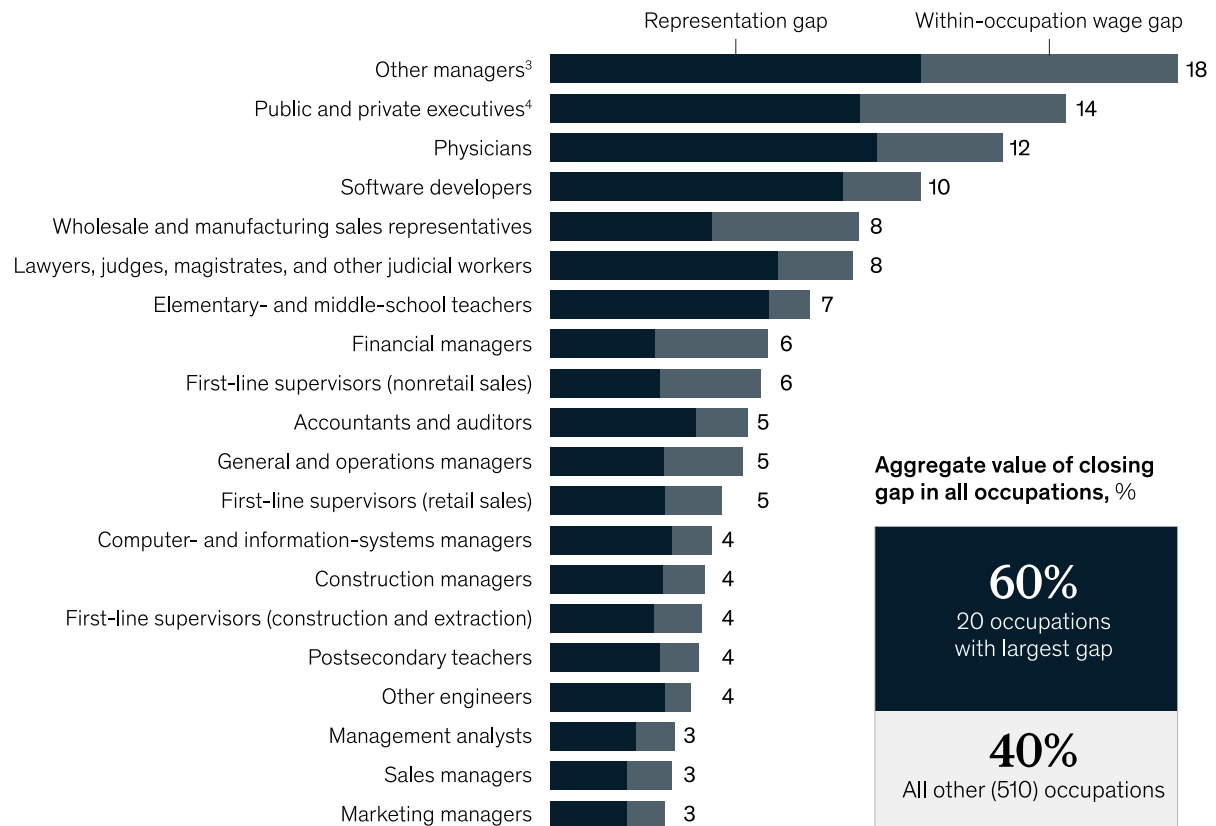


As reported in Figure 15, less than 4 percent of occupational categories account for more than 60 percent of racial wage disparity.<sup>38</sup> These include: (1) managers of frontline workers; (2) other managers and executives; (3) professions requiring postgraduate training (such as lawyers and physicians); (4) professions requiring undergraduate degrees and accreditation (such as teachers and accountants); and (5) technology specialists (such as software developers and computer and information systems managers). Many 2022 Top Jobs are associated with these broad five categories, however if an individual is not earning a livable wage due to racial wage gaps, the value associated with having a Top Job diminishes.

**Figure 15**

**Addressing disparities in less than 4 percent of occupational categories could close more than 60 percent of the aggregate wage gap for Black workers.**

**Aggregate value of closing representation gap<sup>1</sup> and within-occupation wage gap,<sup>2</sup> 20 occupational categories with largest gap for Black workers, \$ billion**



<sup>1</sup>Potential wages if Black representation in this occupation equaled the Black share of the labor force (~13%).

<sup>2</sup>Difference between wages going to Black and white workers within each occupational category.

<sup>3</sup>Eg, health services, natural science, property.

<sup>4</sup>Includes corporate executives, small business owners, legislators, and executives of public entities.

Source: IPUMS USA, five-year data set (2014–18) from US Census Bureau’s American Community Survey; McKinsey Global Institute and McKinsey Institute for Black Economic Mobility analysis

Source: McKinsey & Company, June 2021

<sup>38</sup> McKinsey Global Institute, June 17, 2021 Report

## Disability as a Facet of Diversity

Disability is an important component of equity, diversity, and inclusion (EDI) in the labor market. Coloradans who identify as living with a disability have historically been underrepresented in the workforce, signaling the need for further EDI efforts that speak to this population. While people living with a disability make up about 20 percent of the population, they only make up 4 percent of the U.S. labor force. This has major implications on a person's ability to pay for cost of living expenses and access ongoing training and education opportunities. According to the Supplemental Poverty Measure Census, 21.6 percent of individuals with disabilities were living below poverty thresholds during 2019.<sup>39</sup> More recent data indicates the disabled population still faces major disparities in the workforce: In 2021, only 19.1 percent of individuals with disabilities were employed, compared to 63.7 percent of non-disabled people.

Accessibility and inclusion are not just moral imperatives, but economic and social ones. Employers who hire individuals with disabilities seize an opportunity to discover a vast, historically untapped talent pool. Research shows this workforce population tends to possess a set of skills and experiences that can offer employers a competitive edge, reduce turnover, and improve company culture. According to the U.S. Department of Labor, employers who have embraced disability as a component of their talent strategy report a:

- » 90 percent increase in retention of valued employees;
- » 72 percent increase in employee [productivity](#); and
- » 45 percent increase in workplace safety.<sup>40</sup>

In addition, 38 percent report saved workers' compensation or other insurance costs, and 28 percent report increased profitability. Ninety percent of consumers surveyed "specifically agreed that they would prefer to give their business to companies that hire individuals with disabilities."<sup>41</sup>



Many employers have the organizational will to make structural changes that enhance EDI and labor force participation rates for individuals with a disability but lack the financial resources, bandwidth, staff, and expertise to do so effectively. Workforce sectors can do more to attract and retain talent by partnering with disability-focused organizations, recruiting and retaining employees with disabilities, and including individuals with disabilities in agenda setting.

## Diversity in Colorado's Working Age Population

Across Colorado's working age population between 2015-2020, the largest share of the population increase has come from Hispanic or Latinx individuals (see Figure 16). This demographic could be a key resource in bolstering labor force participation in Colorado looking forward.

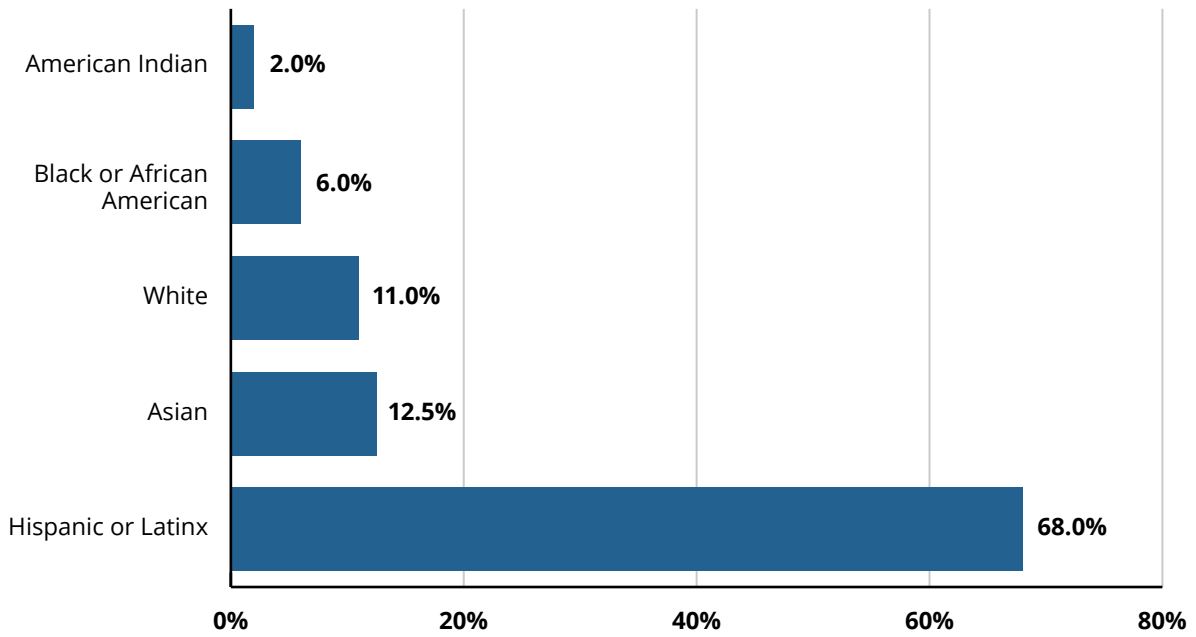
<sup>39</sup> Supplemental Poverty Measure Census, 2019

<sup>40</sup> U.S. Department of Labor, 2018 [www.entrepreneur.com/living/employing-individuals-with-disabilities-may-solve-your/321984](http://www.entrepreneur.com/living/employing-individuals-with-disabilities-may-solve-your/321984)

<sup>41</sup> U.S. Department of Labor, 2018 [www.entrepreneur.com/living/employing-individuals-with-disabilities-may-solve-your/321984](http://www.entrepreneur.com/living/employing-individuals-with-disabilities-may-solve-your/321984)



**Figure 16**  
**Share of Net Increase in Colorado's Working Age Population (2015-2020)**



Source: State Demographer's Office, Colorado Department of Local Affairs

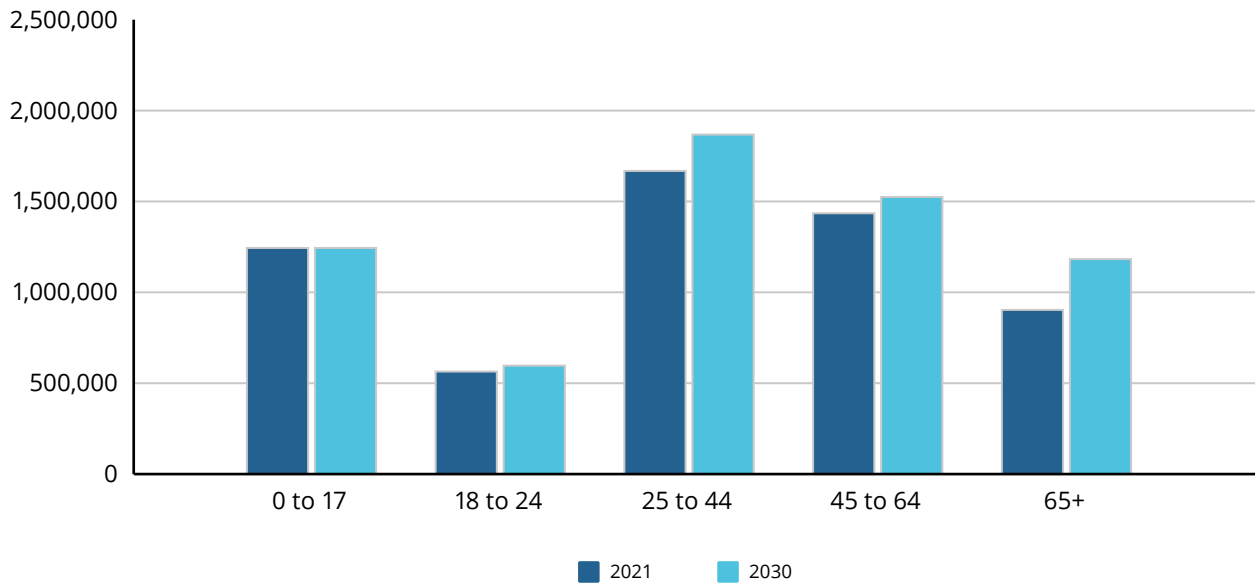


## LOW IN-MIGRATION & AGING IMPACT ON COLORADO'S LABOR FORCE

### Aging Population Means an Aging Workforce

Recent research out of the [Colorado State Demographer's Office](#) signals caution for the state's labor market, as migration patterns and an aging population likely hold heavy weight. In 2021, Colorado was the 6th youngest state while also having the 7th fastest growth of the population 65 and over.<sup>42</sup> Between 2021 and 2030 the 65+ age group is expected to increase from 903,297 to 1,182,816 (approximately 3 percent growth annually).<sup>43</sup> While the state's entire population is projected to grow by 10 percent over the decade, the 65+ population is expected to increase by 30.9 percent (see Figure 17).<sup>44</sup>

**Figure 17**  
Colorado Population Forecast by Age



Source: State Demographer's Office, Colorado Department of Local Affairs

<sup>42</sup> Colorado State Demographer's Office, Department of Local Affairs

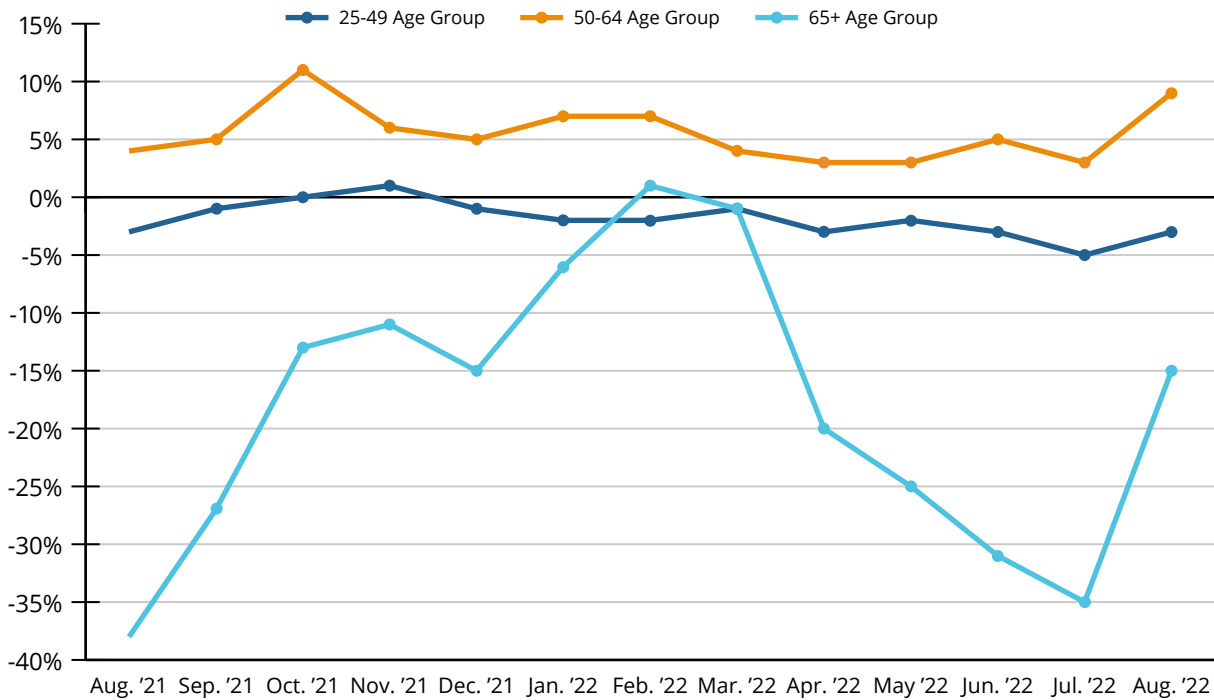
<sup>43</sup> Colorado State Demographer's Office, Department of Local Affairs

<sup>44</sup> Colorado State Demographer's Office, Department of Local Affairs



This growing demographic has a significant impact on Colorado's labor force, as it represents the largest population growth in retirees, causing robust demand for replacement workers and demand for occupations such as caregivers. It additionally puts upward pressure on the housing market (retirees are primarily home owners with lower mobility) and downward pressure on income, transportation, and public finance.<sup>45</sup>

**Figure 18**  
**Colorado's Labor Force Participation Monthly Change in Growth Rate by Age Group**  
**(Aug. 2021 - Aug. 2022)**



Source: State Demographer's Office, Colorado Department of Local Affairs

Since January 2020, the labor force participation rate of Colorado workers in the 50-64 age group (regardless of gender) has increased by 8.5 percent as of August 2022.<sup>46</sup> The participation rate of Coloradans in the 25-49 age group grew by 1.8 percentage points in the third quarter of 2022, however it still remains 2.1 percent below its associated pre-pandemic level.

After months of strong recovery during the first part of the year, the labor force participation rate of Coloradans in the 65+ age group has fallen by more than 4.2 percentage points since March (see Figure 18) and sat at 24.4 percent in August. There are now **30,519 fewer retirement-age workers in Colorado's labor force today** than there were prior to the pandemic.<sup>47</sup>

<sup>45</sup> Colorado State Demographer's Office, Department of Local Affairs

<sup>46</sup> Federal Reserve Economic Data (FRED), August 2022 Labor Force Data Update, by State

<sup>47</sup> Federal Reserve Economic Data (FRED), August 2022 Labor Force Data Update, by State

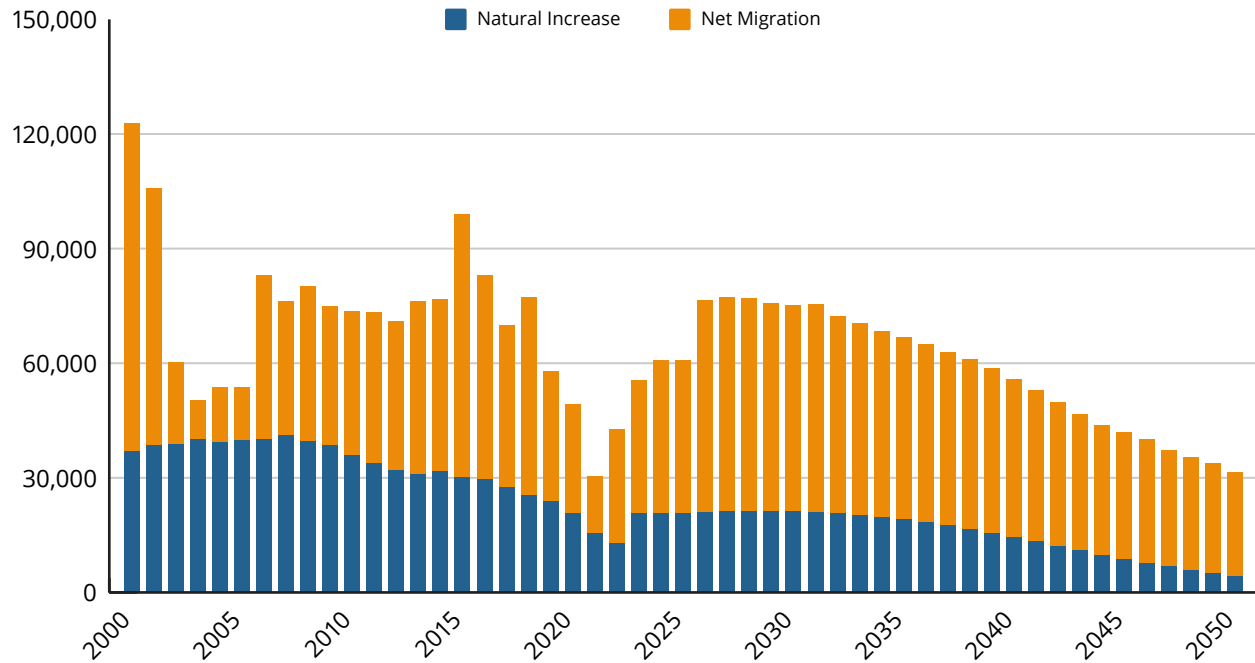
In general, major implications for an aging population largely include:

- » Consumer demand (job creation, occupations, wages)
  - The economy is 70 percent driven by consumer expenditures
- » The labor force (older populations, number of retirements, need to increase labor force participation across all age groups)
- » Housing (household size, mobility, accessibility to housing)<sup>48</sup>

## Migration Flows & Expectations

Colorado faces expected slowdowns in migration inflows. According to data from the State Demographer’s Office, between now and 2050, the projected uptick in migration will be driven by retirees in upcoming years, bolstering the overall net migration. Figure 19 reports historic changes in Colorado’s population levels and expectations moving forward. Both the natural increase and net migration are forecasted to slow in growth in the decades to come.<sup>49</sup>

**Figure 19**  
**Colorado Population Change 2000 – 2050**



Source: State Demographer’s Office, Colorado Department of Local Affairs

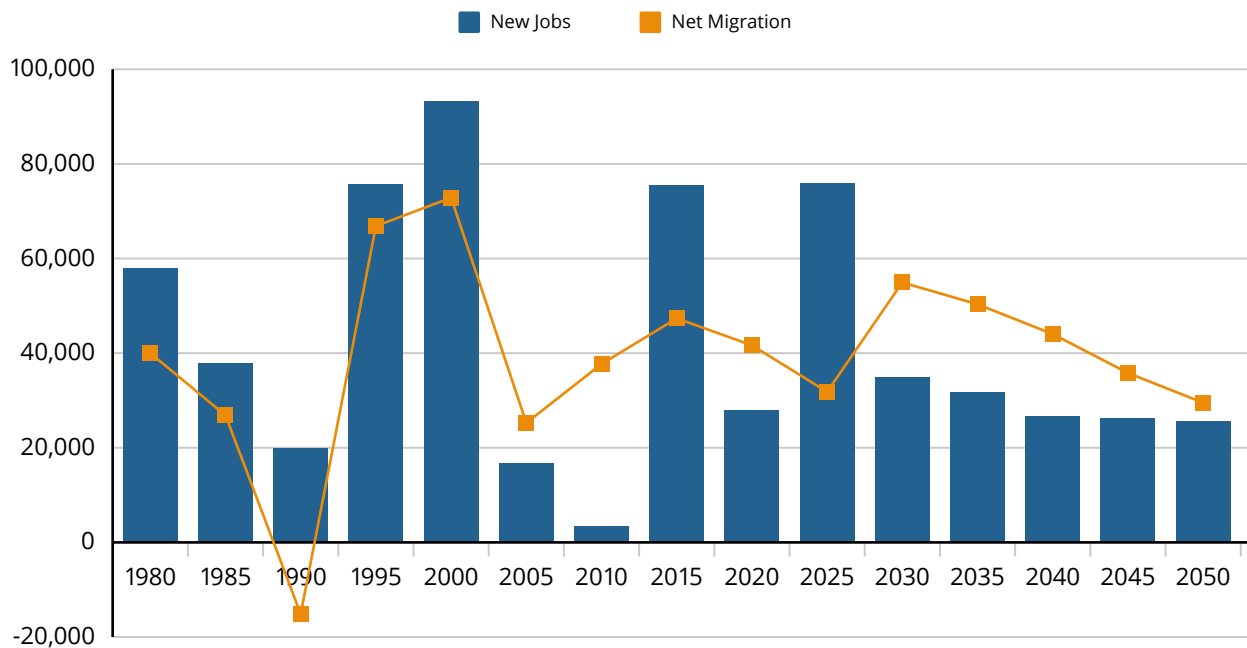
<sup>48</sup> State Demographer’s Office, Department of Local Affairs

<sup>49</sup> State Demographer’s Office, Department of Local Affairs



Migration patterns have a large impact on the workforce, as job openings have a strong correlation on the level of movers to the state. The number of jobs filled in a location represents a strong proxy for net migration flows. Thus, job creation and net migration are compliments of each other and have been for some time (see Figure 20). **Bottom line: jobs are people.**

**Figure 20**  
**Colorado New Jobs and Net Migration**



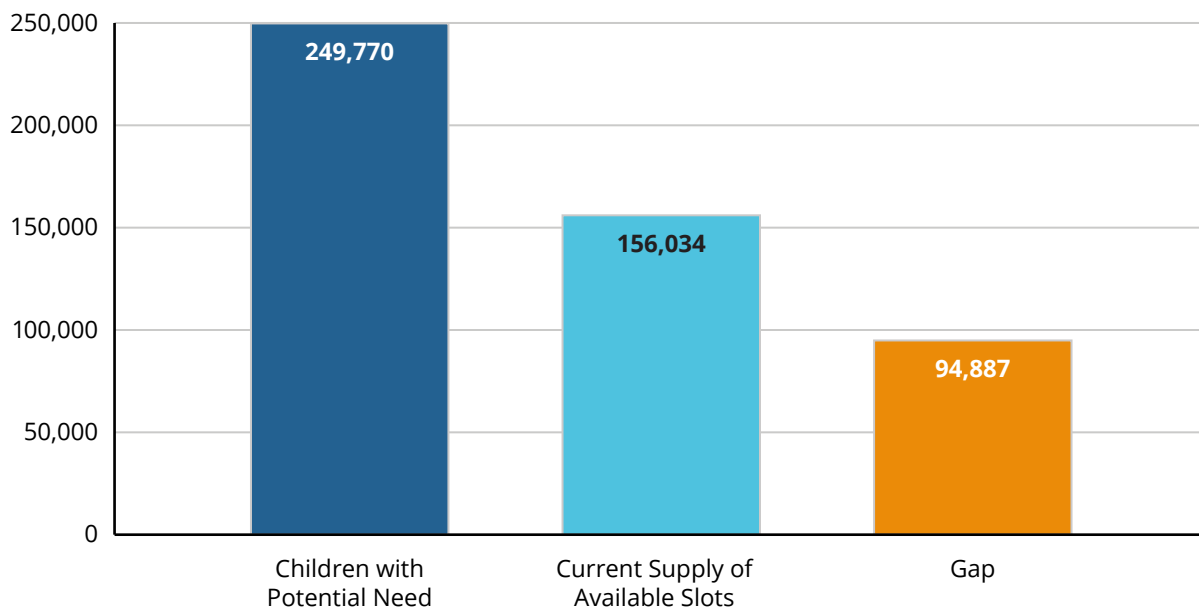
Source: State Demographer's Office, Colorado Department of Local Affairs

## INCREASING CHILD CARE GAP AND GENDER

The success of a thriving economy is dependent on child care that is affordable and accessible, yet child care services in Colorado remain strained, impacting the share of women in the workforce. According to a [recent study](#), 38 percent of Colorado children need child care but go without because their families can't reasonably access this resource. Contributing factors include: (1) operators closing due to industry challenges - the most significant being a tight labor market resulting in a lack of workforce; (2) high costs; and (3) the need for regulatory reform.

Between April 2018 and April 2021, 913 child care programs permanently closed their doors in the state largely due to high occupancy costs, low revenue generation, and logistical challenges - creating a gap of 94,887 children (see Figure 21).<sup>50</sup> Currently, there are only 486 centers still operating in Colorado.

**Figure 21**  
**Colorado's Child Care Gap in 2022**



Source: Bipartisan Policy Center, 2022

**In 2022, Colorado ranked 8th in the U.S. for having the highest child care costs.**<sup>51</sup> According to the U.S. Department of Health and Human Services, families should pay no more than 7 percent of their annual household income on child care resources. This year, however, Colorado families are spending closer to 18 percent of their total earnings on this service. Expenses exponentially increase with the number of children per household, as a family with an infant and toddler would spend nearly 40 percent of the household income on child care, making this service the number one household expense.<sup>52</sup>

<sup>50</sup> Common Sense Institute, Economic Impacts and Opportunities for Improving Affordability and Access Report, July 19, 2022

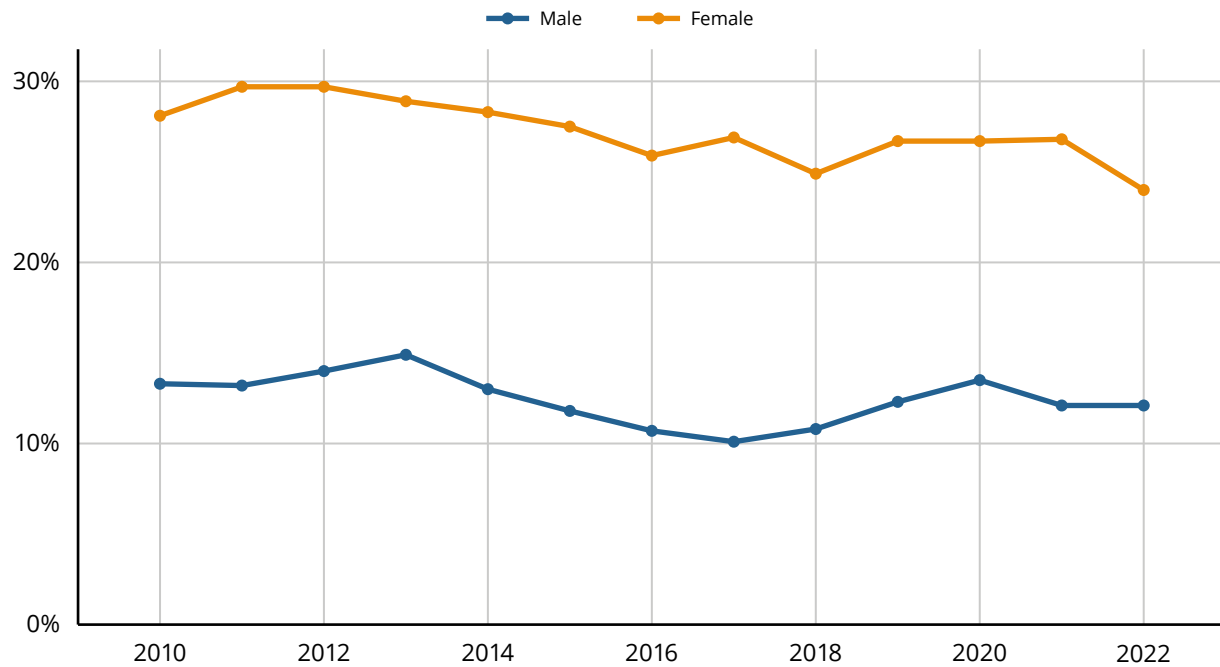
<sup>51</sup> Common Sense Institute, Economic Impacts and Opportunities for Improving Affordability and Access Report, July 19, 2022

<sup>52</sup> Common Sense Institute, Economic Impacts and Opportunities for Improving Affordability and Access Report, July 19, 2022



Surging costs and accessibility issues related to child care, combined with longstanding market failures resulting in less advantages for women in the workforce, have led to significant drops in the labor force participation rate for women. Outside of the longstanding disparities in wages between genders, women also typically represent a higher percentage of the workforce in more temporary/part-time occupations than men, which often makes it more economical for women to leave the workforce when faced with significant cost issues such as child care needs. This year, the share of women in part-time employment is nearly double that of men, at 24 percent relative to 12.1 percent – a difference of 11.9 percent (see Figure 22).<sup>53</sup>

**Figure 22**  
**Share of Colorado Employment, Part-time by Sex**



Source: Colorado Department of Labor and Employment: Office of Labor Market Information

In August this year, the labor force participation rate of Colorado women improved slightly, increasing from 62.6 percent to 65.4 percent - a magnitude that is still, however, 1.57 percentage points below its pre-pandemic level.<sup>54</sup> The national female workforce fell by 0.1 percent during the same period to 56.9 percent - 0.9 percentage points below its pre-pandemic level. **As of August 2022, there are 35,296 fewer women in Colorado's workforce than there were just prior to the onset of the pandemic.**

<sup>53</sup> Office of Labor Market Information, Colorado Department of Labor and Employment

<sup>54</sup> Federal Reserve Economic Data (FRED), August 2022 Labor Force Data Update, by State

## CREDENTIAL ATTAINMENT LEVELS AND LABOR FORCE PARTICIPATION

From August 2021 through July 2022, Coloradans who have a bachelor's degree or higher have the highest labor force participation rate at 76.6 percent. This is a modest increase from 2020 levels and remains just under its pre-pandemic levels by 0.2 percent. Those with less than a high school diploma have a participation rate of 53 percent, a gap of 23.6 percent.

The share of the workforce linked to individuals with a high school diploma or equivalent and those who have attended some college or completed an associate degree also saw upticks in their associated participation rates relative to 2020. Discussed in detail later in the report, as credential attainment increases labor participation increases (see Figure 23), and unemployment decreases (see Figure 25 in the next section).

**Figure 23**

### Colorado Labor Force Participation Rate by Educational Attainment\*

Highest Level of Educational Attainment	2019 Labor Force Participation Rate	2020 Labor Force Participation Rate	August 2021 - July 2022 Labor Force Participation Rate
Less than a high school diploma or equivalent	57.7%	60.1%	53.0%
High school graduate or equivalent, no college**	63.7%	62.6%	63.0%
Some college or associate degree	67.9%	65.5%	66.1%
Bachelor's degree and higher***	76.8%	74.2%	76.6%

\* Labor force participation rate by educational attainment of non-institutional population ages 25+

\*\* Includes persons with a high school diploma or equivalent

\*\*\* Includes person with bachelor's, master's, professional and doctoral degrees

Source: Current Population Survey, U.S. Bureau of Labor Statistics

## Attainment Levels by Race and Ethnicity

Despite having the second-highest statewide attainment rate in the nation, Colorado has much work ahead to close equity gaps and disparities in educational outcomes and access among white Coloradans and Coloradans of color. While white Coloradans have an attainment level of 59.1 percent (6.9 percent short of the state's 66 percent goal), only 25.1 percent of Hispanic or Latinx Coloradans (the state's fastest growing population segment), 30.9 percent of Native American and Alaska Native Coloradans, and 37.9 percent of African American or Black Coloradans have earned a credential.<sup>55</sup>

Colorado plans to reach the 66 percent statewide attainment level goal across all races and ethnicities by 2025 through commitment to:

- » Addressing equity, quality, and student wellbeing;
- » Expanding diverse pathways for student success; and
- » Focusing on racial and ethnic minorities.

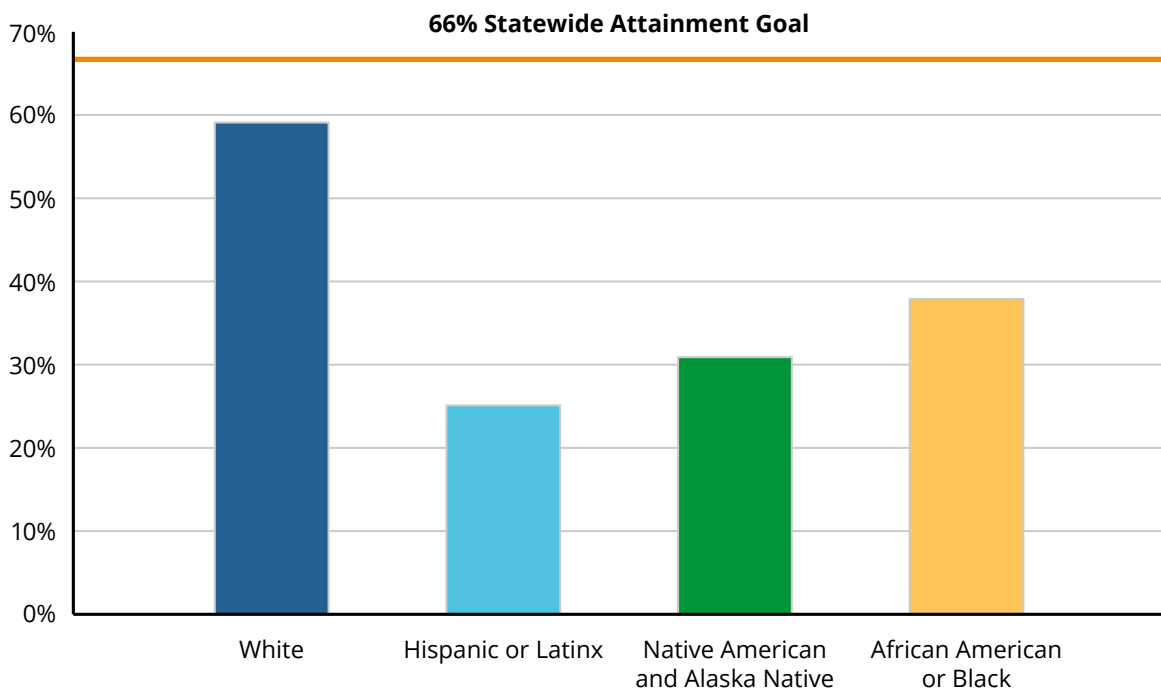
<sup>55</sup> Lumina Foundation Stronger Nation Report

CDHE aligns attainment data with the [Lumina Foundation's Stronger Nation report](#).<sup>56</sup> According to the most recent data available, Colorado's attainment rate sits at 61 percent. The education distribution of Colorado residents ages 25-64 include:

- » 15.4 percent with graduate or professional degrees;
- » 28.2 percent with bachelor's degrees;
- » 8.8 percent with associate degrees;
- » 8.7 percent with a postsecondary certificate;
- » 11 percent with some college but no credential; and
- » 20.5 percent with a high school diploma or equivalent.

Figure 24 reports disparities across Colorado disaggregated by race and ethnicity. These inequities in attainment were significant problems before the pandemic and have since been further exacerbated.<sup>57</sup>

**Figure 24**  
**Educational Outcomes by Race and Ethnicity in Colorado**



Source: [The Lumina Foundation's Stronger Nation report – educational attainment data for Colorado](#)

<sup>56</sup> Following the Census, the Lumina Foundation has chosen not to update attainment level data from 2019 due to concerns about 2020 data impacted by the COVID-19 pandemic. New data will be published by the organization in spring of 2023 and reported in next year's Talent Pipeline Report.

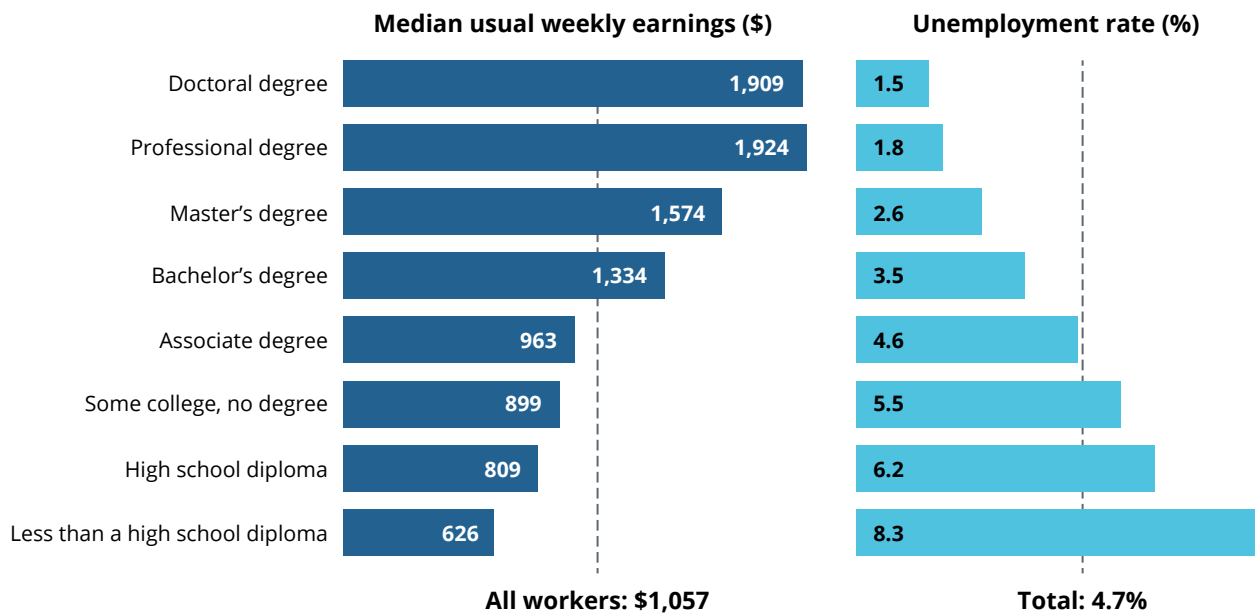
<sup>57</sup> Due to data limitations, educational attainment data by race/ethnicity does not include industry-recognized credentials. Statewide, the Lumina Foundation estimates that approximately 8.8 percent of additional educational attainment is achieved when industry-recognized credentials are included.

## UNEMPLOYMENT

Colorado has one of the lowest unemployment rates in the country (at 3.4 percent as of August 2022), but unemployment levels and median earnings differ significantly based on an individual's educational attainment. Education and the workforce are often conditional on one another. The on-ramps and off-ramps to advancement through postsecondary education and training correlates significantly with an individual's career pathway and a population's labor force participation. Consequently, those with higher levels of education are associated with arguably more favorable employment outcomes; the lower an individual's educational attainment is, the more likely they are to face unemployment. This is true at both national and state levels.

Figure 25 illustrates an inverse correlation between education and unemployment.<sup>58</sup> Thus, **as education increases, employment rates also increase while unemployment decreases.**

**Figure 25**  
**Relationship Between Educational Attainment and the Labor Force: Earnings and Unemployment Rates by Educational Attainment, 2021**



*Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.  
 Source: Current Population Survey, U.S. Bureau of Labor Statistics*

<sup>58</sup> It is important to note that postsecondary credentials not associated with college are not included here due to data limitations, but are still a critical component of employment and value to the workforce.



## Race/Ethnicity

Figure 26 looks at the unemployment rate by race and ethnicity over time in Colorado. The unemployment rate across all races has rebounded significantly from 2020 levels. Between August 2021 and July 2022, the total population's unemployment rate in the state was 3.5 percent, a 3.6 percent decrease from the previous time period. Populations identifying as white and Hispanic or Latinx saw similar drops in unemployment rates, decreasing by 2.5 percent and 4 percent, respectively.

**Figure 26**  
**Colorado Unemployment Rate by Race and Ethnicity**

Race/Ethnicity	2010 Unemployment Rate (%)	2019 Unemployment Rate (%)	June 2020 - June 2021 Unemployment Rate (%)	August 2021 - July 2022 Unemployment Rate (%)
White	8.4%	2.4%	5.7%	3.2%
Black or African American	12.8%	4.0%	13.5%	10.4%
Hispanic or Latinx	13.2%	3.4%	8.0%	4.0%
All Races	8.7%	2.6%	7.1%	3.5%

*\*Unemployment rate by sex and race of civilian non-institutional population ages 16+*  
*Source: Current Population Survey, U.S. Bureau of Labor Statistics*

The third column in Figure 26 reports 2019 data levels to reinforce that the pandemic has exacerbated disparities that predated its impacts on our economy. Although the gaps have narrowed, when comparing August 2021 - July 2022 levels relative to 2019 data, unemployment by race and ethnicity has still not fully rebounded to pre-pandemic levels.

The unemployment rate associated with the Black or African American population is by far the highest rate across demographic groups at 10.4 percent. This indicates that, **while unemployment continues to recover for all races since the pandemic, more Black or African American Coloradans are displaced from their jobs relative to others.**

## Age, Race/Ethnicity

From August 2021 through July 2022, the unemployment rate for Coloradans in the 16-19 age group was 7.6 percent, dropping below its pre-pandemic level of 7.7 percent in 2019. Relative to the 2021 and 2020 Talent Pipeline Reports, this magnitude has decreased by 4 percent and 8.1 percent, respectively.

While unemployment is more prevalent for those within the 16 to 19 age brackets, (see Figure 27), it is obvious that the rebound from the pandemic recession and its impact on unemployment varies significantly across races/ethnicities. Individuals aged 16-19 who identify as Black or African American were most severely impacted through this lens, surging past the average unemployment for this age group by nearly 17 percent.

It is important to note that data indicating unemployment rates for Coloradans 16-19 years old are typically turbulent and less stable from year to year.

**Figure 27**  
**Unemployment Rate for Coloradans by Age and Race/Ethnicity**

Race	August 2021-July 2022 Unemployment Rate (%)
All Races 16-19 Years	7.6%
All Races 20+ Years	3.3%
White 16-19 Years	7.5%
White 20+ Years	3.0%
Black or African American 16-19 Years	24.5%
Black or African American 20+ Years	9.9%
Hispanic or Latinx 16-19 Years	9.4%
Hispanic or Latinx 20+ Years	3.6%

*\*Unemployment rate by sex and race of civilian non-institutional population ages 16+*

*Source: Current Population Survey, U.S. Bureau of Labor Statistics*

## Gender Identity, Race/Ethnicity

Figure 28 shows the unemployment rate by gender identity and race and ethnicity. While Colorado's aggregate female workforce experienced a disproportionate effect on employment due to pandemic-related impacts (such as childcare complications), Black or African American women saw the largest rise in unemployment relative to all other groups, reaching 12.8 percent between August 2021 and July 2022. It is important to mention the rate associated with this population has vastly improved, lowering by 6.5 percent since the 2021 Talent Pipeline Report. However, we will further explore why there continues to be a disproportionate gap in the labor force for Black or African American men and women in 2022 throughout this section of the report.

**Figure 28**  
**Colorado Unemployment Rate by Gender Identity and Race/Ethnicity**

Race	August 2021-July 2022 Unemployment Rate (%)
Male, White	3.3%
Female, White	3.0%
Male, Black or African American	8.5%
Female, Black or African American	12.8%
Male, Hispanic or Latinx	3.7%
Female, Hispanic or Latinx	4.3%

*\*Unemployment rate by sex and race of civilian non-institutional population ages 16+*

*Source: Current Population Survey, U.S. Bureau of Labor Statistics*



## WHO WORKS WHERE: RACE/ETHNICITY AND MAJOR OCCUPATIONAL GROUP<sup>59</sup>

This year, Black or African American workers in Colorado had the highest representation in the following occupational categories:

- » Transportation and Warehousing (10 percent of the occupational group);
- » Administrative and Support and Waste Management and Remediation Services (8 percent);
- » Health Care and Social Assistance (6 percent);
- » Accommodation and Food Services (5 percent); and
- » Government (5 percent).<sup>60</sup>

The occupations associated with these industries have average annual earnings of \$62,916 per job in 2022.

Looking at where a majority of each demographic group works, an estimated 23 percent of Black or African American workers are employed in postal service work (making up roughly a quarter of the state's workforce in this sector), 15 percent are employed in transit and ground passenger transportation, 13 percent are employed in support activities for transportation, and 11 percent are employed in nursing and residential care facilities.<sup>61</sup>

The same approach was used to look at Hispanic or Latinx and white workers. In 2022, Hispanic or Latinx workers had the highest representation in the following occupational categories:

- » Agriculture, Forestry, Fishing and Hunting (25 percent of the occupational group);
- » Administrative and Support and Waste Management and Remediation Services (25 percent);
- » Construction (25 percent);
- » Accommodation and Food Services (24 percent); and
- » Transportation and Warehousing (23 percent).<sup>62</sup>

<sup>59</sup> It is worth noting that these percentages are calculated by observing all races/ethnicities aggregately per major occupational group and are then sorted by highest estimated percent per demographic. Each group's population size varies excessively, and explains why the top 5 groups by race/ethnicity representation do not add up to 100 percent.

<sup>60</sup> Lightcast Econometric Modeling, Q3 Datarun, 2022

<sup>61</sup> Lightcast Econometric Modeling, Q3 Datarun, 2022

<sup>62</sup> Lightcast Econometric Modeling, Q3 Datarun, 2022

Taken together, these occupational groups earn an average annual wage of \$59,320 per job.

Similar to the 2021 Talent Pipeline Report, the major occupational groups that represent a larger share of the Black or African American workforce have slightly higher average earnings per jobs than those linked to Hispanic or Latinx workers in the state. But, as previously noted, data has shown that Black or African American workers often tend to hold lower paying jobs within a high paying sector (such as health care).<sup>63</sup>

In 2022, white workers in Colorado had the highest representation in the following occupational categories:

- » Utilities (83 percent of the occupational group);
- » Professional, Scientific, and Technical Services (82 percent);
- » Arts, Entertainment, and Recreation (80 percent);
- » Information (78 percent); and
- » Mining, Quarrying, and Oil and Gas Extraction (77 percent).<sup>64</sup>

These occupational groups in which white workers have their highest occupational share have average annual earnings equal to approximately \$129,088. This figure is more than double what Black or African American workers make on average per year in the occupational groups that represent their highest population share, creating an earning gap equal to \$66,172. The gap between those occupational groups in which white workers have their highest occupational share and those which Hispanic or Latinx workers have their highest share is an average difference of \$69,768.

## HISTORICALLY MARGINALIZED GROUPS IN COLORADO'S WORKFORCE

### Members of the Workforce who Identify as Living with a Disability

In 2022, there are approximately [856,000 Coloradans](#) 18 years or older who identify as living with a disability. This equates to about 20 percent of the population (or 1 in 5 adults).<sup>65</sup> People with disabilities experience much lower labor force participation rates than those without disabilities for a variety of reasons: lack of transportation, affordable housing, and access to health care, as well as widespread misconceptions among employers and the general public about the many skills people with disabilities bring to the workplace. People with disabilities may also worry that if they get a job or start a business, they'll lose essential government benefits critical to their wellbeing. Fortunately, [it's possible to retain benefits while pursuing employment or self-employment](#).

According to the U.S. Bureau of Labor Statistics, [19.1 percent of people with a disability participated in the workforce during 2021](#).<sup>66</sup> This is compared to 63.7 percent of Americans without a disability who held a job last year.<sup>67</sup> While these percentages seem bleak, many people with disabilities want to work. Yet, across all age groups and educational attainment levels, people with disabilities are much less likely to be employed than those without disabilities.<sup>68</sup>

<sup>63</sup> McKinsey Global Institute, June 17, 2021 Report

<sup>64</sup> Lightcast Econometric Modeling, Q3 Datarun, 2022

<sup>65</sup> Center for Disease Control, 2022

<sup>66</sup> It is worth mentioning that due to the timing of annual reports on individuals with disability, much of the workforce data available is lagged by one year.

<sup>67</sup> U.S. Bureau of Labor Statistics, 2022

<sup>68</sup> U.S. Bureau of Labor Statistics, 2022



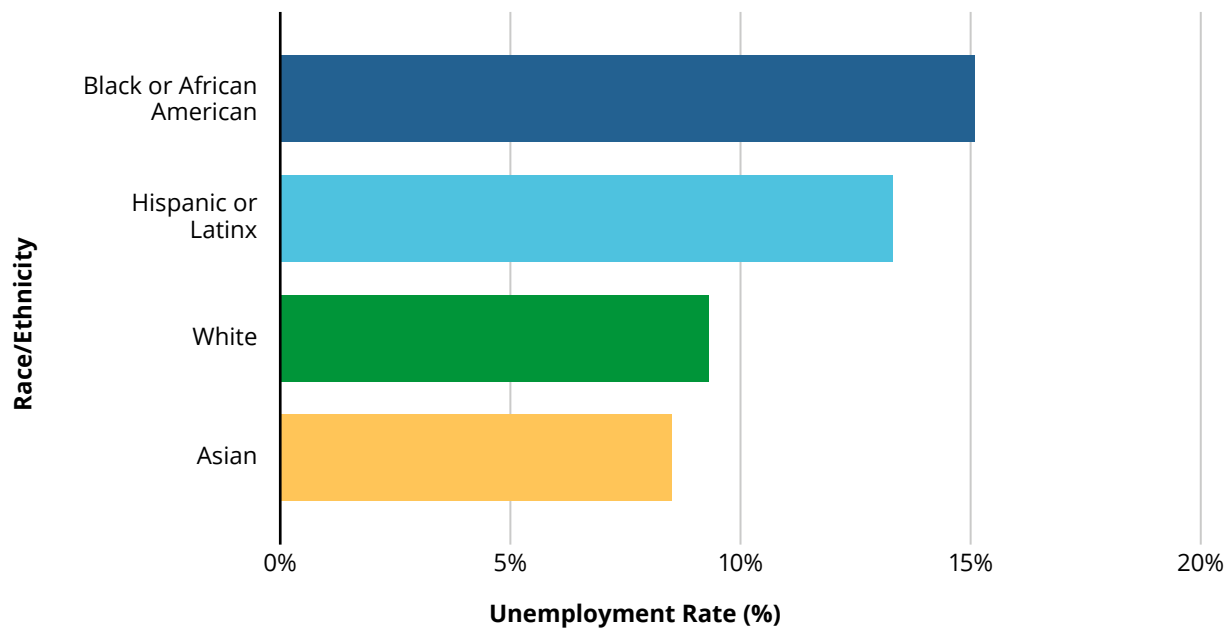
Further, workers with a disability are more likely to be employed part time than those without a disability. Among the share of the population with a disability, [29 percent worked part-time](#), compared to their counterparts with no disability at 16 percent. Out of this share, 14 percent stated they were working part time because their hours had been reduced or because they were unable to find a full-time job.<sup>69</sup>

The **unemployment rate** measures the share of workers in the labor force who do not have a job but who are available for work and actively seeking employment.

The unemployment rate for individuals with disabilities sat at 10.1 percent in 2021, relative to [5.3 percent for civilians without a disability](#). While the unemployment rates for both men and women with a disability decreased from 2020 to 2021, both remain above their 2019 rates. The jobless rates across race and ethnicities for disabled individuals in Colorado are shown in Figure 29. The estimated percentage rates are as follows:

- » Black or African American (15.1 percent);
- » Hispanic or Latinx (13.3 percent);
- » White (9.3 percent); and
- » Asian (8.5 percent).<sup>70</sup>

**Figure 29**  
**Unemployment Rate for Individuals with Disabilities by Race/Ethnicity in Colorado**



Source: Current Population Survey, U.S. Bureau of Labor Statistics

<sup>69</sup> Current Population Survey, 2022

<sup>70</sup> Current Population Survey, 2022

In 2022, Black or African Americans with disabilities in Colorado are associated with the highest unemployment rate across race and ethnicity groups, with unemployment shares outpacing the Hispanic or Latinx population by 1.8 percent, the white population by 5.8 percent, and the Asian population by 6.6 percent.

The unemployment rates for white, Asian, and Hispanic or Latinx individuals with disabilities decreased from 2020 to 2021 while the rate for Black or African American individuals with disabilities showed little change.<sup>71</sup>

By providing career pathways and employment opportunities for people with disabilities, these unemployment rates can continue to improve. This is especially true when considering that nearly **half of all persons with a disability fall into the 65+ age group** (nearly three times larger than the share for those with no disability).<sup>72</sup> Considering Colorado's rapidly aging population, providing more accessibility and opportunities for a larger share of individuals identifying as living with a disability to join the workforce in Colorado could increase the labor force participation rates of two demographics that are historically underutilized in the workforce.

## New Americans

As defined in [HB 21-1150](#), "Immigrant" or "New American" refers to a Coloradan who has arrived - or a person who will arrive - to Colorado as an immigrant or refugee, and includes their children. This population includes: refugees, asylees, special immigrant visa holders, victims of trafficking, recipients of the federal Deferred Action for Childhood Arrival program, and all other immigrants and aspiring citizens seeking opportunity, safety, or reunification of family.

New Americans bring skills and talent and are active in the labor force. At the state level, the [most recent data from the Migration Policy Institute](#) reports **71.2 percent of New Americans in Colorado**



<sup>71</sup> U.S. Bureau of Labor Statistics, 2022

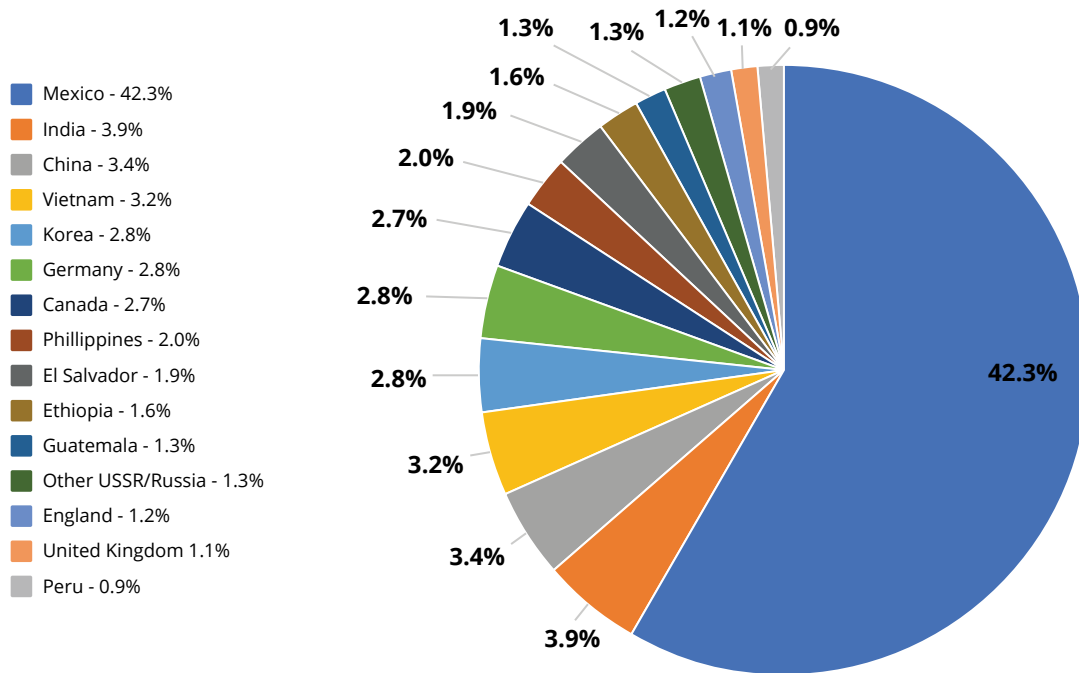
<sup>72</sup> Current Population Survey, 2022

**ages 16 and older participate in the labor force**, outpacing the percentage of U.S. born individuals in the state's workforce by 3.9 percent. Out of this share, nearly 21 percent of New Americans ages 25 and older have attained at least a bachelor's degree and identify as being either underemployed or feel overqualified in their roles based on their skills and attainment levels.<sup>73</sup>

New American communities have long played a vital cultural and economic role in Colorado, contributing to shared prosperity and wellbeing through their hard work, dedication, and love for our state. The community is growing and diversifying; today, one in 10 Coloradans is an immigrant. In addition, over 600,000 Colorado residents (11 percent of Colorado's total population) are native-born Americans with at least one immigrant parent.<sup>74</sup>

Colorado's New American community is not a monolith. Coloradans from Senegal, Mexico, Indonesia, Russia, Ethiopia, Bosnia, Iraq, Cuba, and Venezuela all call Colorado home. The top countries of origin for Colorado's immigrants are Mexico (42.3 percent of immigrants), India (3.9 percent), China (3.4 percent), Vietnam (3.2 percent), Korea (2.8 percent), Germany (2.8 percent) and Canada (2.7 percent).<sup>75</sup> At home, the top languages spoken by Coloradans other than English are Spanish (49 percent), Vietnamese (2.7 percent), Chinese (2.5 percent), Russian (2.1 percent), and Korean (2 percent).<sup>76</sup>

**Figure 30**  
**Top 15 Countries of Birth for Colorado Immigrants in 2022**



Source: *New American Economy, 2022*

<sup>73</sup> U.S. Census Bureau American Community Survey (ACS) and Decennial Census

<sup>74</sup> Colorado Department of Labor and Employment

<sup>75</sup> Colorado Department of Labor and Employment

<sup>76</sup> Colorado Department of Labor and Employment

Some areas of the state have larger immigrant populations than others, but immigrants reside in all corners of Colorado. There are more than 150 languages spoken in Aurora Public Schools, and **in the Denver metro area, 1 in 6 business owners identify as an immigrant.** Other areas of the state are equally as diverse. Rural agriculture communities like the San Luis Valley and the Western Slope employ immigrants and host seasonal workers each year, contributing to the aggregate share of the U.S. agricultural workforce. According to the United States Department of Agriculture (USDA), an [estimated 73 percent of agriculture workers in 2022](#) were born outside of the U.S.<sup>77</sup> Based on findings from the American Farm Bureau Federation, if farmers lost their foreign-born workers this year, [agricultural output would fall by \\$30 to \\$60 billion](#) while increasing food and production costs driven by farmworker shortages.

## Immigrant Entrepreneurship

At the national level, New Americans play an important role associated with entrepreneurship and job creation by continuously opening more new business than the aggregate U.S. population.<sup>78</sup> **Across Colorado, there are 43,684 additional businesses operating in Colorado thanks to New American entrepreneurs.** This equates to \$1.2 billion of total business income generated in the state.<sup>79</sup>

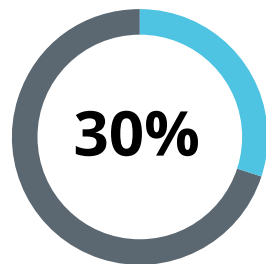
**Figure 31**  
Immigrant Entrepreneurship

# 43,684

Immigrant Entrepreneurs

# \$1.2B

Total Business Income



Share of **Fortune 500** Companies in Colorado Founded by Immigrants or their Children in 2022

Source: The American Immigration Council

<sup>77</sup> Economic Research Service, 2022 USDA

<sup>78</sup> American Community Survey, 2020

<sup>79</sup> American Immigration Council





## Previously Incarcerated/Justice Involved Individuals<sup>80</sup>

The U.S. has the highest level of incarceration in the world, with about 4.5 million people currently on parole or probation.<sup>81</sup> That creates an impacted loss of \$65 billion to the U.S. economy in terms of loss output.<sup>82</sup> Research has shown that stable employment is one of the biggest factors in reducing recidivism as well as bolstering workforce participation, yet the unemployment rate for formerly incarcerated people is nearly five times higher than the unemployment rate for the general population.<sup>83</sup> In Colorado alone, more than 8,500 people leave state prisons each year, many of whom are looking to rejoin the workforce.<sup>84</sup>

[A new study](#) shows that between 34.9 percent to 37.9 percent of those who were previously incarcerated were employed four years after their release, meaning about two-thirds of this population experienced joblessness at any given time.<sup>85</sup> Considering those that do find employment, earnings have historically been lower than the general population, at 53 percent of the median U.S. worker's wage in the first few months after incarceration and 84 cents for every dollar four years later.<sup>86</sup>

Furthermore, according to the Bureau of Justice Statistics, earnings are lowest for Black or African American and Native American people released from federal prison, which is a statistic that has been shown to grow overtime.<sup>87</sup> Hiring individuals who were justice involved into quality jobs is a great way to expand the hiring pool and improve poverty rates both nationally and in Colorado.

<sup>80</sup> It should be noted that current data on this population is very minimal at the state level. This is why this section primarily utilizes national data.

<sup>81</sup> Denver 7 article, August 2022, retrieved at: [www.denver7.com/news/national/programs-working-to-find-employment-for-formerly-incarcerated-people](http://www.denver7.com/news/national/programs-working-to-find-employment-for-formerly-incarcerated-people)

<sup>82</sup> Center for Workforce Inclusion, 2022

<sup>83</sup> Bureau of Justice Statistics

<sup>84</sup> Colorado Department of Corrections

<sup>85</sup> Prison Policy Initiative, February 2022

<sup>86</sup> Prison Policy Initiative, February 2022

<sup>87</sup> Bureau of Justice Statistics

## THE COLORADO PARADOX - REVISITED

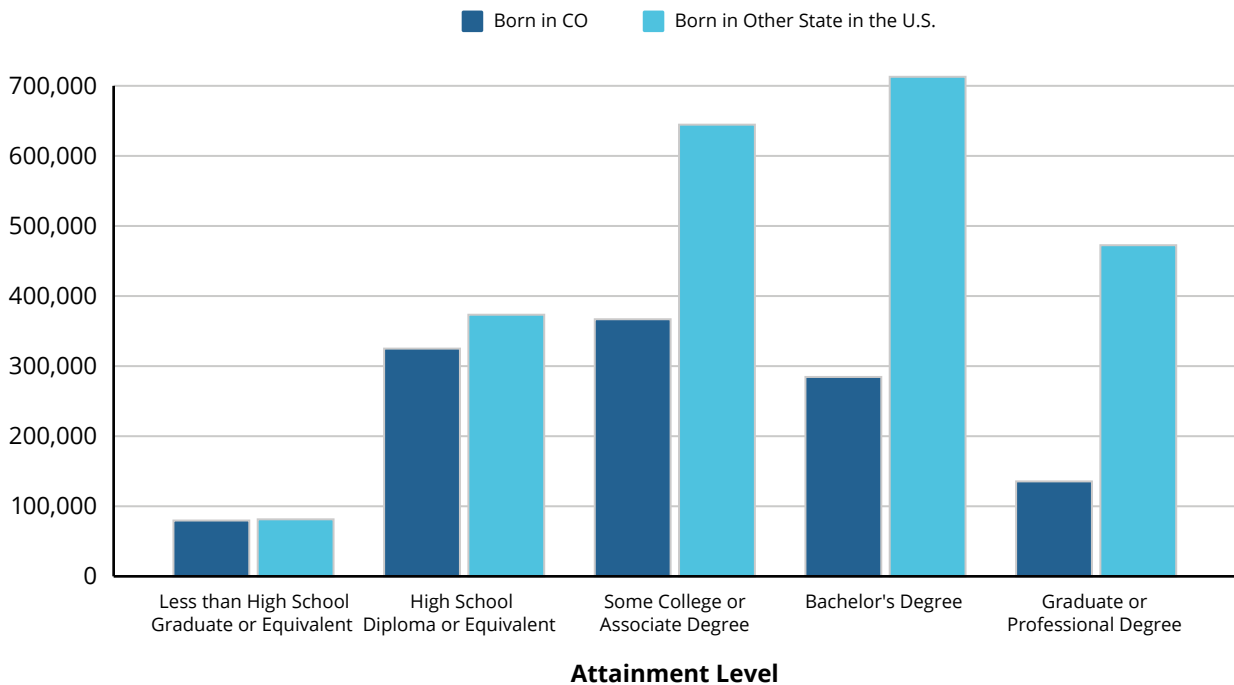
Over the years, much attention has been placed on the so-called “Colorado paradox” in which Colorado — credited as one of the most highly educated states in the nation with a population ranking in the [top five for highest attainment level in 2022](#) — has one of the lowest percentages of high school students completing a college degree. The [2016 Talent Pipeline Report](#) has previously disproven this claim. However, with much discussion around slow population growth and low in-migration patterns, the term “Colorado paradox” has resurfaced among policy leaders and others. To reanalyze the theory’s validity, the CWDC followed a [similar methodology](#) path that the State Demographer’s Office paved in 2015. Here’s what we found:

The majority of the state’s educated workforce was not born in Colorado.

- » As of 2021, Colorado has attracted and retained nearly 2.3 million of its residents over the age of 25 from other origin states - that’s 56 percent of the state’s total population.<sup>88</sup>
- » Only an estimated 29.4 percent of Coloradans ages 25+ were born in the state.<sup>89</sup>

Figures 32 and 33 below compare the differences in attainment levels between residents born in Colorado relative to those who migrated here from other states – the first reporting in total terms and the second displaying percentage terms.

**Figure 32**  
**Colorado’s Educational Attainment by Place of Birth in Total Terms**



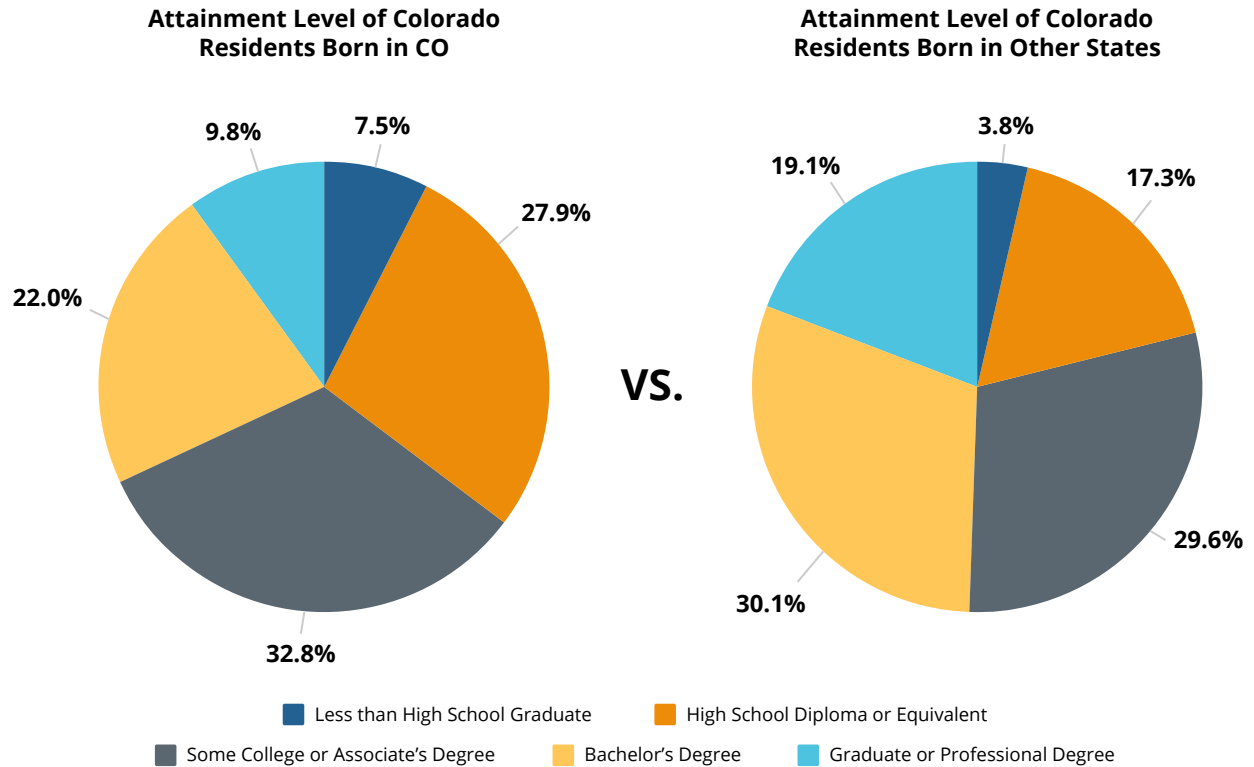
Source: U.S. Census Bureau, 2021 American Community Survey, 1-year estimates

<sup>88</sup> U.S. Census Bureau; 2021 American Community Survey, 1-year estimates

<sup>89</sup> U.S. Census Bureau; 2021 American Community Survey, 1-year estimates

When comparing attainment levels across Colorado residents who were born in the state relative to those born elsewhere, it would appear Colorado-born residents face major disparity gaps in education.

**Figure 33**  
**Colorado Educational Attainment as a Percentage by Place of Birth**



Source: U.S. Census Bureau, 2021 American Community Survey, 1-year estimates

Of the Colorado-born population, 31.8 percent have a bachelor's degree or higher. This is compared to 49.2 percent of migrants from other states (a gap of 17.4 percent between the two populations).<sup>90</sup>

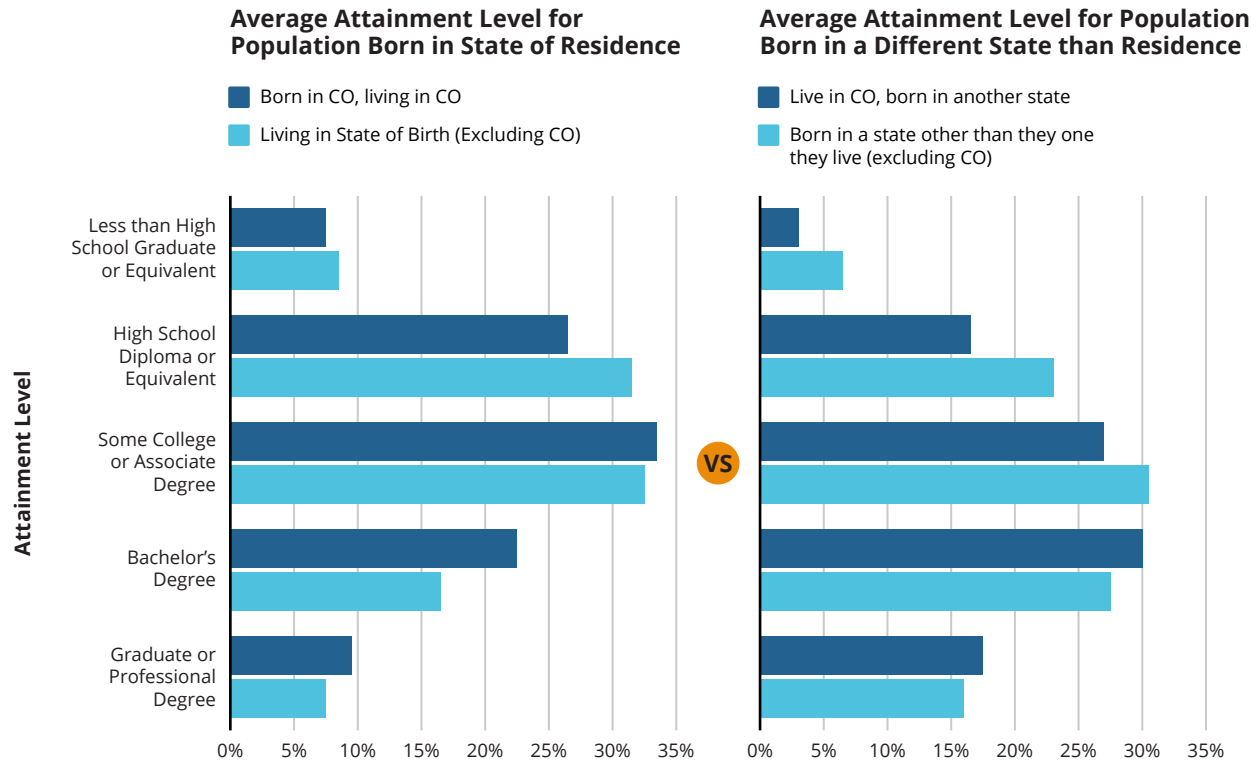
Is the difference in educational attainment Colorado-specific? Or more indicative of state-to-state migration flows? The answer lies in the comparison of educational attainment levels between Colorado-born and non-Colorado-born individuals relative to the national average.

<sup>90</sup> It should be noted that this gap has decreased slightly between 2020 and 2021 by 0.6 percent.

Figure 34 reports the differences in average attainment levels of Colorado-born residents relative to others (25 and older) who remained living in their birth state. In 2021, an estimated 65.5 percent of Colorado-born residents had attained some postsecondary education after high school. This attainment outcome outpaces the share of adults outside of Colorado who remained in their state of birth by 9 percent. **Thus, the average education levels of Colorado-born residents are actually higher than those of other state-born residents.**

**Figure 34**

**Colorado Average Attainment Level for Population Born in State of Residence vs. Population Born in a Different State than Residence**



Source: U.S. Census Bureau, 2021 Job-to-Job Flows

Colorado also has a distinct advantage when comparing average attainment levels for those living in a state in which they were not born.

- » 47.5 percent of Colorado residents not born in the state have received a bachelor's degree or higher (compared to 43.5 percent of movers to other U.S. states)
- » An estimated 74.5 percent of this population in Colorado have attained some postsecondary education after high school (compared to 74 percent for other states).
- » This accounts for a higher level of attainment for movers to Colorado than the nation by 4 percent and 0.5 percent respectively.

Given these findings, **Colorado tends to both attract and retain a highly educated population of people relative to all other states** – both of which hold important weight. With respect to Colorado specifically, we must focus on vastly changing the state's population influx to increase in-migration and accelerate retention through diverse and equitable pathways for student and career success.



# STRATEGIES



A host of state agencies and partners are working to balance the equation of the demand for and the supply of talent in Colorado. The strategies discussed in this section of the report span the systems of the talent development network, including workforce development, economic development, K-12 education, and postsecondary education and training. Many of these strategies have been established through state legislation, and there are opportunities to scale and replicate these programs and practices to create additional positive outcomes for Coloradans.



## QUALITY JOB CREATION AS A BUILDING BLOCK OF A THRIVING ECONOMY

In the wake of the pandemic, Colorado employers faced a tight labor market, soaring inflation and housing costs, increased quit rates, and a slowing population and in-migration growth. In an effort to reduce turnover and attract skilled talent, a focus on creating and enhancing job quality can be a key strategy to ensure a business's long-term success and support a sustainable economy.

Employers have the opportunity to attract and retain talent by providing their employees with:

- » **Livable wages and robust benefits** to provide workers with predictable income that covers basic living expenses and facilitates a healthy, stable life.
- » **Opportunities to advance** that will strengthen Colorado's talent pipeline by including possibilities for upskilling, reskilling, and career advancement.
- » **Pay equity**, which has been shown to increase employee productivity and engagement while lowering turnover rates.
- » A **diverse** staffing ecosystem, **predictable scheduling**, and **safety** in the workplace.





## Increasing Quality Jobs in Colorado

In a rapidly changing economy characterized by globalization, advances in technology, and automation, employers are struggling to attract and retain the skilled workforce they need to grow. As previously mentioned, Colorado is just one of 14 states to exceed its pre-recession job levels. At the same time, it ranks 11th in the country for the number of people voluntarily quitting their jobs.<sup>91</sup>

By providing quality jobs that offer family sustaining wages, safe and inclusive environments, robust benefits, predictable scheduling, professional development, and opportunities to advance, employers can better address their skills gaps, increase the number of qualified applicants to open positions, and improve their retention rates. When intentional, they can also help improve their company's diversity, improving diversity from top to bottom or among both frontline and executive level staff.

Employers that provide high-quality jobs attract a higher number of candidates and experience better retention rates than those who do not. This section of the report highlights two programs initiated by the CWDC and partners to help provide resources that enable employers to measure and improve the quality of their jobs.

[Harvard Business Review](#) did a recent study looking at outcomes from companies committed to providing good jobs. Through utilizing an example of a pet store chain with 45 stores in the northwestern U.S., they found that by raising wages about 30 percent, increasing the percentage of employees to the level they can receive benefits from 65 to 82 percent, and creating a more efficient standard operating procedure:

- » Employee turnover was reduced by 35 percent;
- » Sales per square foot increased by 80.1 percent; and
- » Sales per employee hour increased by 89.3 percent.<sup>92</sup>

Creating jobs that employees value is an investment that benefits both the worker and the employer. It incentivizes employees to be productive and contribute to higher sales and lower costs associated with employee turnover, overtime and unplanned labor, and associated fees.

<sup>91</sup> The Denver Post, June 2022, retrieved at: [www.denverpost.com/2022/06/13/colorado-businesses-hiring-immigration-great-resignation](http://www.denverpost.com/2022/06/13/colorado-businesses-hiring-immigration-great-resignation)

<sup>92</sup> Harvard Business Review, June 2019, retrieved at: <https://hbr.org/2019/06/the-financial-case-for-good-retail-jobs>



## // SPOTLIGHT //

### The Good Jobs Pilot

Through a collaboration between [Working Metrics](#), a workforce analytics company, [Results for America](#) (RFA), and the CWDC, employers can access assessment tools and consulting services to improve job quality at no cost. Through the Good Jobs Pilot, employers use data to assess and benchmark the quality of their jobs and make data-informed decisions to improve with the support of experienced job quality consultants.

By measuring and crafting strategies to improve job quality, employers can catalyze positive business and financial outcomes such as attracting top talent, increasing employee retention, reducing turnover costs, growing the bottom line and value of the business, as well as improving diversity, the wellbeing of employees, their families, communities, and the Colorado economy.

### The Colorado Job Quality Framework

To further the CWDC's mission to enhance and sustain a skills-based talent development network that meets the needs of employers, workers, job seekers, and learners for today and tomorrow, partners in the TalentFOUND Network collaborated to produce the Colorado Job Quality Framework. The framework outlines features of a quality job and lays out practical steps local communities, employers, and leaders can take to improve job quality in Colorado. To learn more about the framework, check out the [Colorado Workforce Development Council's job quality page](#).



## BRIDGING THE GAPS IN THE TALENT PIPELINE

### Colorado Re-Engaged Initiative (CORE)

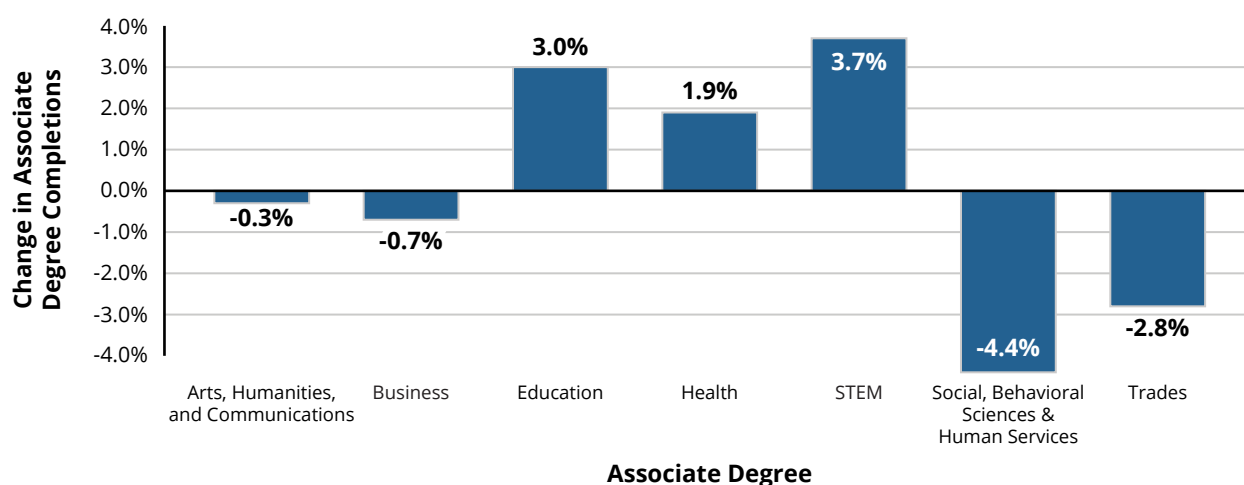
Seeking to address where headwinds exist in student-to-career pipelines, and through funding from the American Rescue Plan, Colorado has allocated \$51 million towards programs that foster credential attainment and are targeted towards students who have disengaged from the postsecondary system. The Colorado Re-Engaged Initiative (CORE) created by [HB21-1330](#) bolsters completion rates across the state by allowing higher education institutions to award students who have not been granted a degree but have earned at least 70 credit hours with an associate degree.

This program has the potential to serve the more than 700,000 Coloradans who have attained some college but no degree. With the enactment of this new legislation, 13,000 individuals who left college within the past three years will be instantly eligible for an associate degree.<sup>93</sup> It also provides incentives for students to consider re-enrolling to complete their previous progress towards a bachelor's degree.

These efforts will ease the significant negative financial impacts previous students faced by having some college but no degree, especially if an individual is left with student loan payments. The Colorado Department of Higher Education estimates the current earning power of attaining an associate degree increases annual wages by an average of \$13,000 to \$15,000.<sup>94</sup> Additionally, this has the potential to bolster completions in high demand fields that have seen drops in student completions in 2021 (see Figure 35), including:

- » Social and Behavioral Sciences and Human Services (declined by 4.4 percent year-over-year);
- » Trades (declined by 2.8 percent year-over-year);
- » Business (declined by 0.7 percent year-over-year), and
- » Arts, Humanities, and Communications (declined by 0.3 percent year-over-year).<sup>95</sup>

**Figure 35**  
**2021 Statewide Year-over-year Percentage Change in Associate Degree Completions in Colorado**



Source: Colorado Department of Higher Education

<sup>93</sup> EdSurge: [www.edsurge.com/news/2021-06-18-many-university-students-don-t-graduate-why-not-give-them-an-associate-degree](https://www.edsurge.com/news/2021-06-18-many-university-students-don-t-graduate-why-not-give-them-an-associate-degree)

<sup>94</sup> EdSurge: [www.edsurge.com/news/2021-06-18-many-university-students-don-t-graduate-why-not-give-them-an-associate-degree](https://www.edsurge.com/news/2021-06-18-many-university-students-don-t-graduate-why-not-give-them-an-associate-degree)

<sup>95</sup> Colorado Department of Higher Education



## Colorado Opportunity Scholarship Initiative

The [Colorado Opportunity Scholarship Initiative \(COSI\)](#) is providing financial assistance and wraparound services to learners as a part of larger efforts to support students who were negatively impacted by the COVID-19 pandemic.

- » **Finish What You Started.** This program prioritizes individuals who have experienced economic loss due to the pandemic and have some college, no degree, or are first-time students admitted in 2019-2020 or 2020-2021 but did not enroll. Participants are provided wraparound student support services and direct financial assistance to support continued persistence and certificate or degree completion.
- » **Back to Work.** The grant prioritizes individuals whose employment was impacted due to the pandemic and provides participants wraparound and financial support to access and complete their credentials or degree. The participants have an incentive to reskill, upskill, or complete industry-recognized credentials aligned with Colorado Top Jobs, prioritizing health care, education, information technology, and jobs with the most significant projected annual opportunities.
- » **Fund My Future.** This grant provides funds to local education providers to implement strategies to increase the number of students who complete the FAFSA/CASFA before high school graduation. The local education provider must require students to complete a student aid application before graduation unless the student is eligible to waive the requirement.

## Reskilling, Upskilling, and Next-skilling Coloradans

Motivated to provide reskilling and retraining opportunities to Coloradans impacted by the pandemic, \$75 million in stimulus funding has been put towards enhancing statewide workforce initiatives through [HB21-1264](#). This bill has allowed for an expansion of the efforts of the public workforce system, and a large amount of funding has flowed to partners in all parts of Colorado, including:

- » **Reskilling, Upskilling, and Next-skilling (RUN) Grants** (\$25 million). These grants are being distributed through local workforce centers and community-based organizations to support opportunities for Coloradans to reskill, upskill, and next-skill by achieving a short-term credential in industries such as IT, health care, energy, hospitality, and early childhood education. As of September 2022, more than 2,700 Coloradans had enrolled in a program and more than 1,000 had completed a short-term credential.
- » **Workforce Innovation Funds** (\$35 million). Local workforce areas granted out funds to community-based partners in support of workforce initiatives that help meet the specific needs of that community. Additionally, the CWDC granted out funds to increase capacity across the state to strengthen training programs through areas including evidence-based practices, support for grant applications and management, capacity building, career coaching and navigation, and staff to support sector partnerships.

In addition, funds from HB21-1264 also supported:

- » **Adult Education** (\$5 million). Additional funds to Adult Education and Literacy Act (ADLA) grantees through the [Office of Adult Education Initiatives](#) to improve the literacy and numeracy skills for employment, job training, or educational advancement.
- » **Career and Technical Education** (\$10 million). Funding was provided for facilities and equipment.

The public workforce system also provides a variety of free services to assist thousands of employers and job seekers across the state each year via its network of locally-run workforce centers. See the infographic on page 68 for more details.



## // SPOTLIGHT //

### Reskilling, Upskilling, and Next-skilling (RUN) Impacts

The opportunities available via reskilling, upskilling, and next-skilling are having impacts across the state.

CF was laid off from a job in the mortgage industry and then got a certificate as a Master Mortgage Underwriter with the support from the local workforce center. Upskilling, in this example, allowed a person who had lost their job to move up.

*"I didn't know what to expect and I was pleasantly surprised. They offered support, a plan and helped with my resume. They covered my training and expenses, which was huge because being underemployed I would not have been able to do that on my own. Today, I'm set to begin working in a job that is related to my career path but one I might not have found without the additional training that I received. I feel better prepared and confident as a job loss can be demoralizing."*

– CF, a laid-off worker who received training through RUN funding

Sally, a mother of two experiencing domestic violence, enrolled in an IT certification program. Today, Sally works as a specialist with an agency and is gaining important experience and skills that will help her advance her career goals. And since the job is remote, she now has the critical flexibility she needs to take care of her children.

*"I was looking for resources that could help me grow in a different field, a field that would help me escape my situation and help me support my family...The Broomfield Workforce Center gave me more hope that I would be able to do more and find a remote job that would allow me to care for my two babies."*

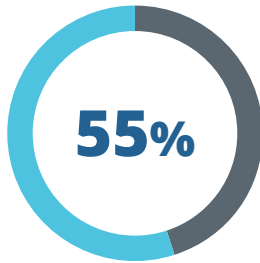
–Sally\*, a domestic abuse survivor and beneficiary of RUN funding

\*Sally is a pseudonym to protect the her identity

# IN COLORADO



**144,413**  
**JOB SEEKERS UTILIZED**  
 THE PUBLIC WORKFORCE  
 SYSTEM IN PY2021



55% OF JOB SEEKERS FROM  
 THE PRIOR YEAR WERE  
**SUCCESSFULLY EMPLOYED**  
**SIX MONTHS AFTER**  
**ACCESSING SERVICES**



**9,337**

**BUSINESSES WERE SERVED**  
 BY THE PUBLIC WORKFORCE  
 SYSTEM IN PY2021

**1,206,450**  
**JOB POSTED**



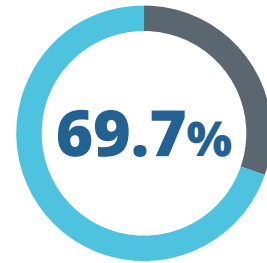
**47,239**

**JOB SEEKERS RECEIVED**  
**IN-PERSON SERVICES**  
 THROUGH OUR STATEWIDE  
 NETWORK OF WORKFORCE  
 CENTERS, SUCH AS RESUME  
 ASSISTANCE AND INTERVIEW  
 SKILLS IN PY2021



**6,004**

INDIVIDUALS WERE  
**ENROLLED IN MORE**  
**EXTENSIVE TRAINING**  
**PROGRAMS** IN PY2021



69.7% OF INDIVIDUALS  
 FROM THE PRIOR YEAR WERE  
**SUCCESSFULLY EMPLOYED**  
**SIX MONTHS AFTER**  
**ACCESSING SERVICES**

## STORIES OF WORKFORCE DEVELOPMENT SUCCESS: NICK

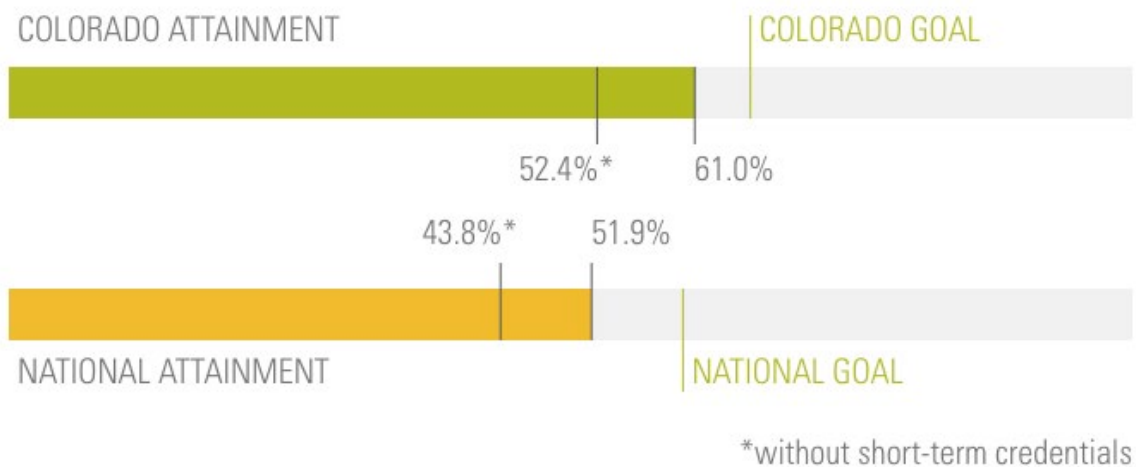
Nick lived out of a camper and was close to being homeless. He was receiving Supplemental Nutrition Assistance Program benefits and had no income when he went into a Colorado workforce center. He wanted to change his career during the pandemic by seeking out a Commercial Driver's License (CDL). The Workforce Innovation and Opportunity Act funds paid for Nick's CDL training and certification. While in training, Nick received assistance for lot rent for his camper, travel, training, and other services needed to ensure his success. After earning his certification, Nick was hired by a national trucking company, and he received a signing bonus with guaranteed earnings of \$1,000 a week.

## Micro Credentials: Leading Change & Expanding Opportunities for Success

Findings from [CDHE's 2022 Return on Investment \(ROI\) Report](#) advocate that demand for improved education-to-career pathways has long been clear. Now, higher education and workforce development are at the center of the recovery agenda for Colorado. According to 2021 findings from the [Bridging the Talent Gap Colorado Labor Market Survey](#), Colorado employers statewide voiced the importance of their workforce seizing additional professional development opportunities to accelerate attainment of top-ranked skills. Aggregately, responses reported roughly half of employers stating that apprenticeship programs (56 percent) and non-degree credentials (46 percent) take priority when screening applications.

One way Colorado is addressing these needs is through building out multiple and linked pathways with shorter-term postsecondary credential opportunities. CDHE believes incremental credentials will be a major driver of student success and complement degree completion in the rapidly evolving global workforce and economy. Short-term credentials have pushed Colorado towards the finish line in reaching the statewide postsecondary credential attainment goal of 66 percent for all residents within the age group of 25-64. Figure 36 showcases this difference. With the **inclusion of workforce certificates (2014) and certificates (2018), aggregate attainment levels have surged by 15.2 percentage points since 2009.**

**Figure 36**  
**Educational Attainment: How Colorado Compares to the Nation**



In addition to comparing Colorado to the nation, the bars above show the difference in attainment with and without short-term credentials.

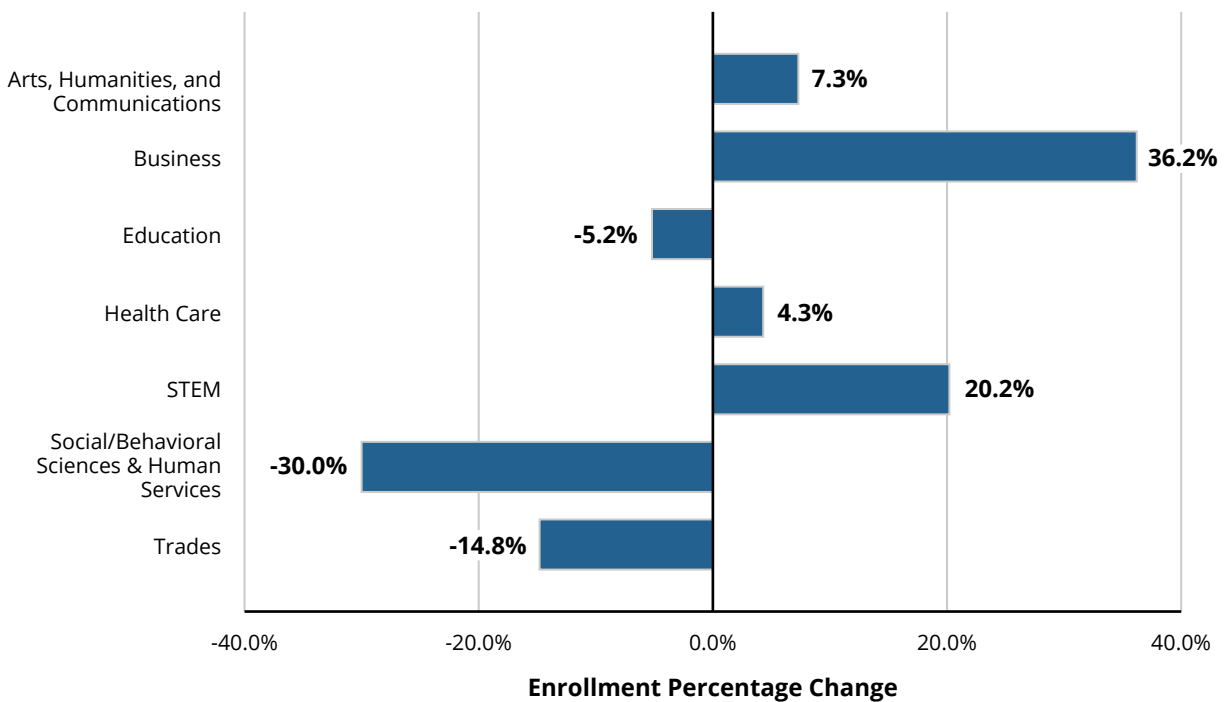
Short-term credentials are an essential part of education beyond high school. These include certificates (added to attainment calculations in 2014) and industry-recognized certifications (added in 2018). The current short-term credential attainment rate in Colorado is 8.7% which includes 5.2% of certificates and 3.5% of certifications. Data about these credentials are not yet collected at the county level or disaggregated by race and ethnicity, so they are omitted from state totals in the charts below.

Source: Lumina Foundation

Figure 37 displays changes in statewide enrollment growth rates for micro-credentials in which completion timing requirements are less than one year. These year-over-year changes compare enrollment levels prior to the pandemic to 2021 levels and represent industry-recognized certifications that help learners advance along career pathways, upskill and reskill to boost their wages, and/or stack certificate programs into a degree. Certification focuses that saw a significant boost in enrollment since the pandemic include:

- » Business (+36.2 percent);
- » STEM courses (+20.2 percent);
- » Arts, Humanities, Communications (+7.3 percent);
- » Health Care (+4.3 percent).

**Figure 37**  
**Micro-Credentials Enrollment Trends in Colorado, Certificate Timing Requirement <1 Year (2019 vs. 2021)**



Source: Colorado Department of Higher Education

## Career Pathways

In Colorado, industry-driven, competency-based career pathways ensure that education, training, and workforce systems stay attuned and responsive to the needs of the labor market in order to:

- » Assure businesses have access to an appropriately skilled talent pipeline.
- » Prepare students and workers with the skills and credentials they need for jobs and careers.

For additional information on career pathways as a strategy please visit the [CWDC career pathways webpage](#). An overview of the key themes that emerged from career pathways discussions with transportation and manufacturing employers from July 2021 to June 2022 can be reviewed in [Appendix D](#).



## EARN-AND-LEARN OPPORTUNITIES

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 include entry and exit points along the way, enabling students to earn and learn.<sup>96</sup>

A **non-degree credential** is a postsecondary certificate, apprenticeship certificate, professional license, or industry certification.<sup>97</sup>

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.<sup>98</sup>

This year legislation was passed ([SB22-192](#)) directing the Colorado Department of Higher Education to lead a process to develop stackable degree options in postsecondary education programs, assess the value of non-degree credentials, and create a framework for evaluating knowledge, skills, and competencies within a higher education context.

This provides learners with the flexibility of on- and off-ramps to educational opportunities while remaining in the workforce and should be valuable to both employers and workers who may not have the time, ability, or financial resources to commit to a long-term program. The vision for this initiative is to align consistent, quality career and educational pathways with industry demand in high-need occupations in the workplace at a state-level scale by 2025. SB22-192 charges the CDHE with:

- » Creating two stackable credential pathways in at least five high-demand growing industries in the state (10 pathways total);

- » Creating a grant program for students at IHEs that offer career and technical education (CTE) awards and associate degrees to pursue non-degree credentials; and
- » Allocating \$800,000 for the Colorado Department of Education for an adult education and literacy grant program to bolster adult learner postsecondary entrance into IHEs and postsecondary credential attainment outcomes.

**Career and technical education (CTE)** refers to courses and programs designed to prepare students for careers in current or emerging professions and provide students with opportunities to explore a career theme of interest while learning a set of technical and employability skills that integrate into or complement their academic studies.



<sup>96</sup> Colorado Department of Higher Education

<sup>97</sup> Colorado Department of Higher Education

<sup>98</sup> Colorado Department of Higher Education

## Credential As You Go

Recognizing that learning occurs in stages, CDHE has partnered with the national [Credential as You Go initiative](#), funded by a grant from the federal [Institute for Education Sciences](#), to develop credentials “on the way” to a bachelor’s degree that signal employability based on accumulated knowledge and skills. Colorado is working with the State University of New York, the University of North Carolina, and the North Carolina Community Colleges to develop and implement this [incremental credentialing system](#).

This system acknowledges and rewards progress towards degrees and certificates by enabling stackable options, more robust transfer mechanisms, and expanded credit for prior learning from work, including industry-recognized credentials. **Credentials as You Go pathways can create positive impacts for populations of color, where a disproportionate share of working adults are unable to step out of the workforce to go back to school due to economic reasons, family obligations, and/or systemic racism.**<sup>99</sup> Equitable access to quality credentials help adult students of color continue learning, earning, and contributing their diverse talents to a better workforce.

## Skills Builders – A Fast Track Way to Upskill and Reskill

**Skills builders** is a term to describe a pattern of behavior across community college students who strategically enroll in postsecondary courses that relate to high-demand industries and provide tools needed to quickly upskill or reskill for employment. In Colorado, this population has seen significant growth in earnings shortly after course completion.

As discussed in CDHE’s 2022 ROI Report, a [new study](#) published in 2022 by the Journal of Higher Education showcases Colorado’s national success in community college skills builders. Motivated by educational and labor market outcomes, the paper’s research analyzes a distinct group of skills builders across four states: Colorado, Ohio, Michigan, and California.

<sup>99</sup> Colorado Department of Higher Education







In Colorado, a sample size of 86,442 new community college students were observed. Most attended their institutions for an average of 1.5 to 1.8 terms, took an average of 2.9 to 3.2 courses, and attained about 6.6 to 9.1 credits. Across Colorado's distribution of credits attempted by program of study for this subgroup, the top five included:

- » Health Professions & Related Programs (22 percent)
- » Computer & Information Sciences (13 percent)
- » Business, Management, Marketing (13 percent)
- » Homeland Security, Law Enforcement, Firefighting (12 percent)
- » Mechanic & Repair Technologies (7 percent)

In terms of attainment outcomes, Colorado's skills builders were:

- » More than three times as likely as non-skills builders to report a goal of a postsecondary certificate (20 percent relative to 6 percent); and
- » More likely than non-skills builders to attain a postsecondary certificate (18 percent versus 10 percent).

Twenty-one percent of the total 86,442 Coloradans decided to enroll in a higher education institution after attending community college, boosting enrollment levels by 18,153 degree-seeking students.

During the quarter after entering community college, Colorado's skills builders' earning levels rose at an average rate of \$509 per quarter. Compared to other states' average quarterly gains, Colorado's skills builder wage outcomes outpace California by \$49, Michigan by \$104, and Ohio by \$60 per quarter.

### **Colorado Community College System (CCCS)**

The Colorado Community College System (CCCS) has been at the national forefront in terms of bolstering enrollment levels across skills builder learners and connecting these learners to quality training and jobs. By providing a platform for students to choose their own educational pathway while providing quality courses, CCCS has created successful shortcuts linking economic mobility with short-term student advancement.

This research can be utilized as a tool aligning with the statewide work being strategized and implemented relating to stackable credentials, work-based learning, and learning while earning opportunities. Currently, about **1 in 8 students (or 13 percent) enrolled in a community college system in Colorado fall into the skills builder definition of learners.** Skill builders' emergent paths can guide institutional work to create:

- » Quick and economically fruitful paths to reskilling and upskilling.
- » Stackable credential pathways informed by high-return workforce opportunities.

## State Apprenticeship Agency - Office of the Future of Work

On June 23, 2021, Governor Polis signed [HB21-1007: State Apprenticeship Agency](#) (SAA) into law, codifying the state's commitment to increase access to earn-and-learn programs that lead to high quality jobs and to build the talent pipeline that industry needs, and creating a State Apprenticeship Agency. The agency is housed at CDLE's Office of the Future of Work (OFOW) and is designed to:

- » Serve as the primary point of contact with the U.S. Department of Labor's Office of Apprenticeship concerning apprentices and registered apprenticeship programs;
- » Accelerate new apprenticeship program growth and assist in promotion and development; and
- » Oversee apprenticeship programs, including registration, required standards for registration, certification, quality assurance, record-keeping, compliance with federal laws and standards, and provision of administrative and technical assistance.

The creation of the SAA reflects the increasing interest in apprenticeships as a way to prepare both workers and employers for the future of work. **Since 2010, the number of new apprentices has grown by 70 percent nationwide.**<sup>100</sup>

The growing number of apprenticeship programs may also indicate a deeper understanding among employers of the benefits of hosting these programs. According to Brookings, many employers with apprenticeship programs report savings on overtime expenses, increased revenue and productivity, and lower recruitment costs as direct benefits. They also say that apprenticeship programs result in a bevy of indirect benefits as well, including increased innovation, improved morale from mentoring junior staff, lower turnover, less need for supervision, lower error rates, the ability to hire talent with company-specific knowledge, the opportunity to develop future managers, and access to much bigger talent pool.

<sup>100</sup> U.S. Department of Labor





## INDUSTRY-SPECIFIC STRATEGIES

### Behavioral Health

It is estimated that 1 in 5 adults in the U.S. ages 18 and older report symptoms of poor mental health. This statistic is much higher in Colorado, however. Based on a 2021 survey by [Indigo Pathways](#), **61 percent of Colorado respondents said they've experienced mental health strain**. Considering the magnitude of individuals who might be suffering from poor mental health, the workplace can be a key location for activities motivated to improve an individual's overall well-being.<sup>101</sup> Addressing mental health issues in the workplace also benefits employers by reducing health care costs for their businesses and employees (costs for treating individuals with mental health disorders and associated health conditions are two to three times higher than those without<sup>102</sup>). Mental health issues and stress and negatively impact an employee's:

- » Job performance and productivity;
- » Engagement with one's work;
- » Communication with coworkers; and
- » Physical capability and daily functioning.<sup>103</sup>

In addition, mental illnesses are associated with higher rates of disability and unemployment. Depression (one of the most prevalent mental illnesses in the U.S.) interferes with an individual's:

- » Ability to complete physical job tasks about 20 percent of the time; and
- » Reduces cognitive performance about 35 percent of the time.<sup>104</sup>

Only an estimated 57 percent of employees who report experiencing symptoms of depression receive mental health treatment.<sup>105</sup>

<sup>101</sup> The Center for Disease Control (CDC)

<sup>102</sup> The Center for Disease Control (CDC)

<sup>103</sup> The Center for Disease Control (CDC)

<sup>104</sup> The Center for Disease Control (CDC)

<sup>105</sup> The Center for Disease Control (CDC)





## Behavioral Health Incentive Program

To strategically address labor shortages while meeting statewide public health and economic development goals, the Colorado Department of Higher Education (CDHE) is allocating millions towards tuition support through the state's Behavioral Health Incentive Program. This program provides financial incentives to rural and low-income Colorado students to obtain a credential in certain behavioral health programs of study. Implemented by [SB21-137](#), \$9 million was dedicated for this effort from the federal American Rescue Plan Act. The program covers an eligible student's in-state tuition in approved programs at Colorado institutions of higher education.

This year, CDHE [approved \\$5 million in grants](#) to five universities (including Colorado Mesa University, Colorado State University, University of Northern Colorado, and University of Denver) that will provide tuition to students pursuing select degrees and certificates in behavioral health. The state estimates the program will serve nearly 400 students in the first two years, with the program lasting a total of four years.

## Creation of the Behavioral Health Administration

The Behavioral Health Administration (BHA) was created in 2022 and released its strategic plan [Strengthening the Behavioral Health Workforce in Colorado: An Approach to Community Partnership](#) on Sept. 1, 2022. This plan was developed in response to [SB22-181](#) and outlines the vision for strengthening the behavioral health workforce in Colorado to ensure we have a behavioral health system that offers meaningful, culturally relevant, and trusted services. The BHA recognizes that in order to improve access to behavioral health care, we must implement strategic efforts to attract and retain a high-quality, diverse, and culturally responsive workforce and identify new ways to accelerate training and entry into behavioral health careers.

Between 2021 and 2022, the BHA engaged stakeholders, people with lived experience, and community members to inform the development of the workforce initiatives in the Administration's plan. The initiatives set in motion by this plan will continue to be monitored, evaluated, and shaped by feedback from community leaders, the Office of the Governor, collaboration with other state agencies, and final authorization by the Colorado General Assembly.

CDHE, CCCS, BHA, industry partners, and others are working to ensure there is a well-defined, intentional career pathway in behavioral health to meet the wellness needs of Coloradans.



## Early Childhood Education

The early childhood education (ECE) workforce—from child care workers and preschool teachers to nurses and counselors—is the fuel that makes a comprehensive system for young children and enables parents to work. This year, the [Colorado Department of Early Childhood \(CDEC\)](#) has been awarded \$21.5 million in Community Innovation and Resilience for Care and Learning Equity (CIRCLE) grants to advance innovation, promote equity, and address tough child care challenges that have been worsened by the pandemic

Nearly 200 organizations across 52 counties (including 106 early care and education providers, 19 early childhood councils, and 63 statewide and local nonprofit organizations) have been allocated one-year CIRCLE grants for projects to:

- » Pilot innovative approaches to make child care more affordable.
- » Plan for and address gaps in infant and toddler care.
- » Boost the ECE workforce by supporting new training, recruitment, and retention efforts.
  - This year, a Compensation & Benefits Task Force has been convened to create a plan to increase compensation and access to benefits for the ECE workforce.
- » Strengthen ECE providers' business practices by expanding support systems and technical assistance.
- » Promote children's health, social-emotional development, and learning, especially children with special needs and dual language learners, through expanded training and specialized support.

The funding is part of over \$275 million from the federal American Rescue Plan Act and the Coronavirus Response and Relief Supplemental Appropriations Act received by Colorado. Governor Polis and the Colorado General Assembly created the CIRCLE Grant program through [SB 21-236](#).

SB 21-236 includes additional strategies to provide direct support to the early childhood workforce. In partnership with the Colorado Department of Higher Education, CDEC is offering coursework [stipends, scholarships, and loan forgiveness](#) to bring new professionals into the field, to support those pursuing certificates and degrees in early childhood, and to retain current staff who are working while paying off student loan debt.

## Early Childhood Workforce Development

The Colorado Department of Education's [Early Childhood Career Navigation](#) supports early childhood professionals by providing backbone support for a community of practice, bringing these entities together to share knowledge, maximize efforts, and reduce duplication. Members of the Early Childhood Career Navigation team also sit at various policy tables to add the career navigation perspective to these conversations.

The Early Childhood Career Navigation team has divided the state into three regions to strengthen state and local partnerships and provide relevant career navigation services. [View the map for contact information for each region.](#)

In addition, the Colorado Department of Early Childhood provides a wide range of workforce development opportunities to Coloradans through the [Professional Development Information System](#) (PDIS) platform. The PDIS allows early childhood professionals to manage their own career and professional growth using an Individual Professional Development Plan, which includes professional experience, education, and training as well as individually constructed growth plans.

The PDIS also issues Early Childhood Professional Credentials at a level reflecting demonstrated competency achievement. The PDIS is designed to support early childhood professionals at all levels of experience and education.

## Agriculture

The Agricultural Workforce Development Program (AWDP) at the Colorado Department of Agriculture (CDA) provides financial incentives to farms, ranches, and agricultural businesses to hire interns and provide them with the hands-on training needed to begin a career in agriculture. Qualified businesses may be reimbursed for up to 50 percent of the actual cost of hiring an intern.

The AWDP is the result of legislation introduced during the 2018 session of the Colorado General Assembly by the Young and Beginning Farmers Interim Study Committee. In its first two years alone, the AWDP has supported 35 internships at 18 different Colorado agricultural businesses. For more information, please see CDA's [Current AWDP Internship Opportunities](#).

## Construction

In 2022, the Colorado Department of Transportation (CDOT) made strategic investments throughout the state to support the development of a safe, skilled, and sustainable construction workforce. With historic infrastructure spending on the horizon, CDOT is committed to funding activities that train and prepare individuals for meaningful employment that will improve the overall quality of life for both workers and the traveling public.

This year, CDOT has actively worked with industry partners and community colleges to develop resources that support individuals seeking a Commercial Drivers License. In 2023 CDOT, together with industry partners, will provide new traffic control training and certification procedures and a work-based learning pathway for flaggers to grow within traffic and work zone safety. These programs will be consistent across the state and provide recognized credentials to completers.

## COLORADO FOR ALL

### New Americans

[Research from the New American Economy](#) spotlights the key role New Americans play in Colorado's economy, particularly surrounding high-need, high-growth sectors including health care, education, and social work. Driven to attract and retain immigrant talent, statewide legislation implemented in 2022 helps ensure Colorado will remain nationally competitive and meet demand across workforce shortages.

The 2022 legislative session saw the passage of many bills intended to support New Americans, including [SB22-140: Expansion Of Experiential Learning Opportunities](#). This bill creates incentives to eligible employers to create high-quality, work-based learning opportunities for adults and youth. As part of this legislation, the Office of New Americans (ONA) is tasked with helping New Americans and English language learners (ELLs) improve their English language skills for specific occupations and careers. By Jan. 1, 2023, ONA aims to create a virtual, career-aligned ESL program that:

- » Ensures ELLs have access to work-based learning, job-training, and employment opportunities, and the supports they need for success;
- » Facilitates work-based learning by providing additional support to help employers and other workforce partners recruit, serve, hire, and promote ELLs;
- » Ensures efficient and effective access to established career-aligned ESL classes;
- » Streamlines access to career-aligned ESL classes through the purchase of licenses to virtual platforms that are then made available to interested workforce partners and employers; and
- » Accelerates the adoption of career-aligned ESL classes into employer and work-based learning and training programs.

The state legislature, through SB22-140, also tasked ONA to create a Global Talent Task Force (GTTF) that is reflective of the diverse representation in the state. With a total of 24 members, the GTTF includes 12 members from the legislature, state agencies, and the Governor's office. The remaining 12 members include: three internationally trained professionals, three representatives of community-based organizations or coalitions serving New Americans, one representative of work-based learning or provider of experiential learning, one representative of an employer participating in a work-based learning program, two representatives of in-demand industries (e.g., education, health care), one representative of local district colleges, and one representative of the CWDC.

The GTTF is tasked to do the following:

- » Study the pathways for obtaining certain in-demand occupational licenses and international credentials to take advantage of the global pool of skilled workers in Colorado.
- » Choose at least five occupations that are responsive to workforce needs (as determined by the annual Colorado Talent Report) and that are occupations in which Colorado has the need for, and an ability to provide oversight, including occupations in early childhood education and care, education, and health care, with a priority given to the practice of nursing.
- » Accelerate and expand the work that CDLE and other state agencies have done to integrate New Americans and internationally trained professionals into the workforce.
- » Provide policy and programmatic recommendations to the Governor and General Assembly to increase the ability of the state to harness the skills of New Americans, including through work-based learning opportunities.
- » On or before Dec. 31, 2023, the GTTF will submit a report with their findings and recommendations to the Office of the Governor and to the General Assembly. Additionally, the report will be made available to the public.



Another law passed in the 2022 legislative session, [SB22-234: Unemployment Compensation](#), established the Benefit Recovery Fund (BRF). The BRF will provide assistance to individuals, regardless of immigration status, who through no fault of their own were separated from employment and are not receiving other state-administered wage replacement assistance.

The ONA will oversee the administration of the BRF. ONA recently published a Request for Proposal and is hoping to shortly select a third-party administrator to accomplish the following objectives:

- » Provide outreach to underemployed individuals who may be eligible for the BRF;
- » Screen each applicant to determine whether they are eligible for the BRF; and
- » Pay recovery benefits to eligible individuals.

Through the creation of [HB21-1194](#), the state created the Immigration Legal Defense Fund (ILDF) to help Colorado's immigrants with their immigration proceedings in order to promote family unity and due process, increase judicial efficiency, and protect civil liberties. On April 25, 2022, Governor Polis signed the 2022-23 Long Bill, whose budget included a 40 percent boost for the ILDF, from \$100,000 to over \$348,000 for state fiscal year 2023.

ONA administers the ILDF awarding grants to qualifying organizations who provide legal advice, counseling, and representation to those subjected to legal immigration proceedings. The law designates 70 percent of the funding to serve immigrants who are detained, and 30 percent can be spent on immigrants who are not detained, with two-thirds of that 30 percent to be used to serve rural areas of Colorado.



The state legislature through [HB21-1150](#) created the [New American Community Advisory Committee \(NACAC\)](#). The inaugural committee members were selected through an application process in the fall of 2021, and the NACAC launched its first meeting in December 2021. The NACAC is composed of a diverse group of refugee and immigrant leaders from across the state, including individuals with different national origins, ethnicities, sexual orientations, immigration statuses, educational, and professional backgrounds.





The NACAC has three core purposes:

- » Invite and collect feedback and experiences on key topics affecting immigrants and refugees across Colorado.
- » Review state-led programs and initiatives and make recommendations for improving immigrant inclusion and access.
- » Strengthen committee members' understanding of how state government works to build a statewide network of leaders who can help build the bridge between state government and New American communities.

This year the NACAC chose employment as one main area of focus. It provided feedback to the Office of the Future of Work on apprenticeships and to the Adams County workforce center on workforce services.

ONA supports the work of the NACAC in partnership with the Colorado Refugee Services Program and Colorado State University's Office of Engagement and Extension. ONA welcomes state partners to engage with the NACAC to ensure their state policies and programs include New Americans' perspectives.

## Increase the Number of Employed Coloradans with Disabilities

Colorado employers can bolster efforts to increase equity, diversity, and inclusion within the workforce through advancing opportunities for people with disabilities. In 2022, [HB22-1255](#) Improve Higher Education for Students with Disabilities was signed into law. In part, the Act will require institutions of higher education for the first time to report data on the number of students with disabilities served. Beginning in 2024 and annually after, the Colorado Department of Higher Education will report on these findings. Analysis of this data completed in conjunction with an Advisory Committee, who is charged with making recommendations to improve outcomes for students with disabilities in higher education, will hopefully contribute to growing the talent pipeline of individuals with disabilities in our state's workforce.

Additionally, in 2022 the Office of Economic Development and International Trade developed [five strategies](#) industry sectors can take to accelerate the deconstruction of labor market barriers faced by individuals who identify as living with a disability while further relaxing constraints on the tight labor market. These proposals are as follows:

1. **Educate your organization.** Understanding disability and building institutional knowledge is a critical first step. There is a lot to learn, and many organizations have successfully walked this path. Here are a few resources that will help you get started: the Division of Vocational Rehabilitation's (DVR) [Business Relations Unit \(BRU\)](#), [Colorado Employment First](#), and [CDHS/Disability Services](#).

## 2. Become a more mindful, inclusive employer.

In the U.S., one in five people identify as having a disability, yet workplaces rarely welcome and celebrate disability identity.

- » Begin with the following questions: Do you provide reasonable accommodations? Are there accessible technologies or policies that allow service animals or flexible working hours? What percentage of your team has a disability?
- » Start with incorporating disability in your employee surveys to create crucial baseline data that will help you understand how many staff self-identify as having disabilities and how you could strengthen your culture of inclusion.
- » As part of the legal requirements of the ADA, we encourage organizations to develop a new reasonable accommodations policy (both for employees and patrons).
  - A free resource for this is the [Job Accommodations Network](#).
  - [Rocky Mountain ADA Center](#) is an excellent resource for gathering employers' legal requirements and best practices.
- » Be [intersectional](#), inclusive, and intentional with your hiring strategies. Simply put, this principle says that we are many things, and they all impact us.
- » Consider doing an organization audit. Becoming a genuinely accessible organization is ongoing and relational. It requires engagement from across your team, but an audit will help you recognize missteps and begin to build an inclusive culture that supports people with disabilities and makes them feel valued and welcome.
- » While making an organization truly inclusive requires time and resources, creating safe spaces for employees can be a valuable—and immediate—offering in the right direction.

**3. Make your communications more accessible.** Changing how you communicate with and about the disability community is essential, but it's also a tangible and practical undertaking for organizations new to disability justice work. Small changes can go a long way.

- » Longer-term efforts include creating an accessible website, videos, and PDFs, and the [National Disability Rights Network](#) provides helpful communication guidelines. Also, check out our recent [webinar on digital accessibility](#) and [Art 4 Access Denver's resource list](#).

**4. Identify opportunities for collaboration with the disability movement.** To date, just two percent of funding for human rights includes people with disabilities, when it should be 10 times that to reflect our population. We know there is power in numbers when advocating for systemic change.

- » Joining forces with the disability community can build a stronger, more united front when taking on an issue and increase attention for disability rights organizations seeking greater visibility and support from the funding community.
- » Likewise, supporting and proactively co-developing policies for education, the economy, and livability for an emerging workforce is essential. Elected officials must continue to understand successful results in job and business creation, wealth building, and community well-being.

**5. Rethink your definition of "justice."** We are all working toward a more fair, equitable world, but that requires expanding how we think about equity and justice. When we seek to be more inclusive, we must ask, "Who are we leaving out?" Undoing and unlearning ableism in our organizations, industries, and arts/cultural space takes real commitment, time, curiosity, and hard work.

## Services for Employers

The Division of Vocational Rehabilitation's (DVR) [Business Relations Unit \(BRU\)](#) is housed at CDLE and provides education to employers and community partners on disability etiquette, ADA basics, hiring myths about people with disabilities, ableism, and more. Services are at no cost to employers and are focused on helping to train employers on building inclusive work environments that embrace disability. The BRU engages with a large untapped talent pool of job seekers with a variety of backgrounds and skills who are motivated to join the labor force. The BRU's goal is to transform the workplace while meeting the specific and unique needs and goals of Colorado employers.



## Age-Inclusive Strategies

As we work to enhance the state's economy, older workers can benefit from support tailored to their distinct needs. To this end, training is provided on an ongoing basis to those working in the public workforce system and their partners as to how to best serve older workers. Additionally, the [Office of the Future of Work](#) is working to expand access to apprenticeships for older workers and address the digital divide.

### // SPOTLIGHT //

#### Northwest Workforce Sub-area

In the fall of 2021, the Northwest Workforce Sub-area incorporated an age-friendly workplace workshop into their business education curriculum. The workshop focused heavily on job quality and tapping into overlooked sources of talent within the challenging local labor market. The workshop included partnerships with the Northwest Colorado Council of Governments and Changing the Narrative, a strategic communications and awareness campaign, to increase understanding of ageism and shift mindsets and practices to end ageism. There were 39 businesses in attendance.

#### Arapahoe/Douglas Works

Arapahoe/Douglas Works! (ADW) works closely with job seekers 40 years and older to meet their employment needs. The agency hosts two annual career fairs that specifically target this population. The Connect 2 Impress Career Fair is held each March, and the Encore Career Fair is held each October. ADW purposefully invites businesses whose hiring needs meet this demographic. ADW also offers new and incumbent training opportunities that allow customers to remain competitive in the current labor market.

When working with businesses, the ADW business services team emphasizes that this population is highly skilled and includes experienced workers, and encourages businesses to be innovative in their hiring processes. The team emphasizes the benefits of age inclusion and diversity and highlights that this workforce population:

- » Has a positive impact on company retention and is committed to the company's long-term goals and successes.
- » Contains reliable and dependable employees who come to work daily and on time.
- » Demonstrates a productive work ethic with increased drive, determination, and commitment to a project when utilizing their experience and knowledge.
- » Acts as mentors to less experienced employees.
- » Enhances team performance when their skills complement less experienced team members.







## Rural Communities and Entrepreneurship

Colorado communities have a history of putting value toward entrepreneur culture by supporting local businesses and encouraging economic growth in rural areas. This trend remains robust in 2022 and can be shown through efforts by institutions of higher education, the new [Rural Opportunities Office \(ROO\)](#) (housed at OEDIT), and industry partners.

### // SPOTLIGHT //

#### Rural Jump-Start Program

This year, [Cold Case Gear](#), a consumer goods start-up based in Pagosa Springs, became the first participant from Archuleta County to be accepted into Colorado's [Rural Jump-Start Program](#). The program requires sponsorship from a local institute of higher education and Durango's Fort Lewis College has come on board as a partner with Cold Case Gear. Together the two will work hand in hand to create unique opportunities for students. Cold Case Gear is helping to diversify Pagosa Spring's economy with year-round jobs and opportunities.

#### Location Neutral Employment (LONE) Community Marketing Grant

The [Location Neutral Employment \(LONE\) Community Marketing Grant](#) provides up to \$5,000 in marketing funds to help rural areas attract out-of-state companies to create new jobs in their communities. After the first wave of funding was allocated, Mesa County will now be home to INFOCU5, a California-based service provider who has decided to relocate to Colorado. This move will bring 400 jobs to the state, including more than 170 location neutral jobs to western Colorado.

#### Clean Energy Economic Development

Colorado School of Mines has been working together with the Office of the Governor, the [U.S. Department of Energy's National Renewable Energy Laboratory \(NREL\)](#), Colorado higher education institutions, and industry partners on clean energy economic development. Through combined efforts to accelerate a green energy workforce, Fortescue Future Industries (FFI) (an Australian-based IT company) has decided to establish a Technology Hub in Colorado that will create more than 150 local jobs in Jefferson County.

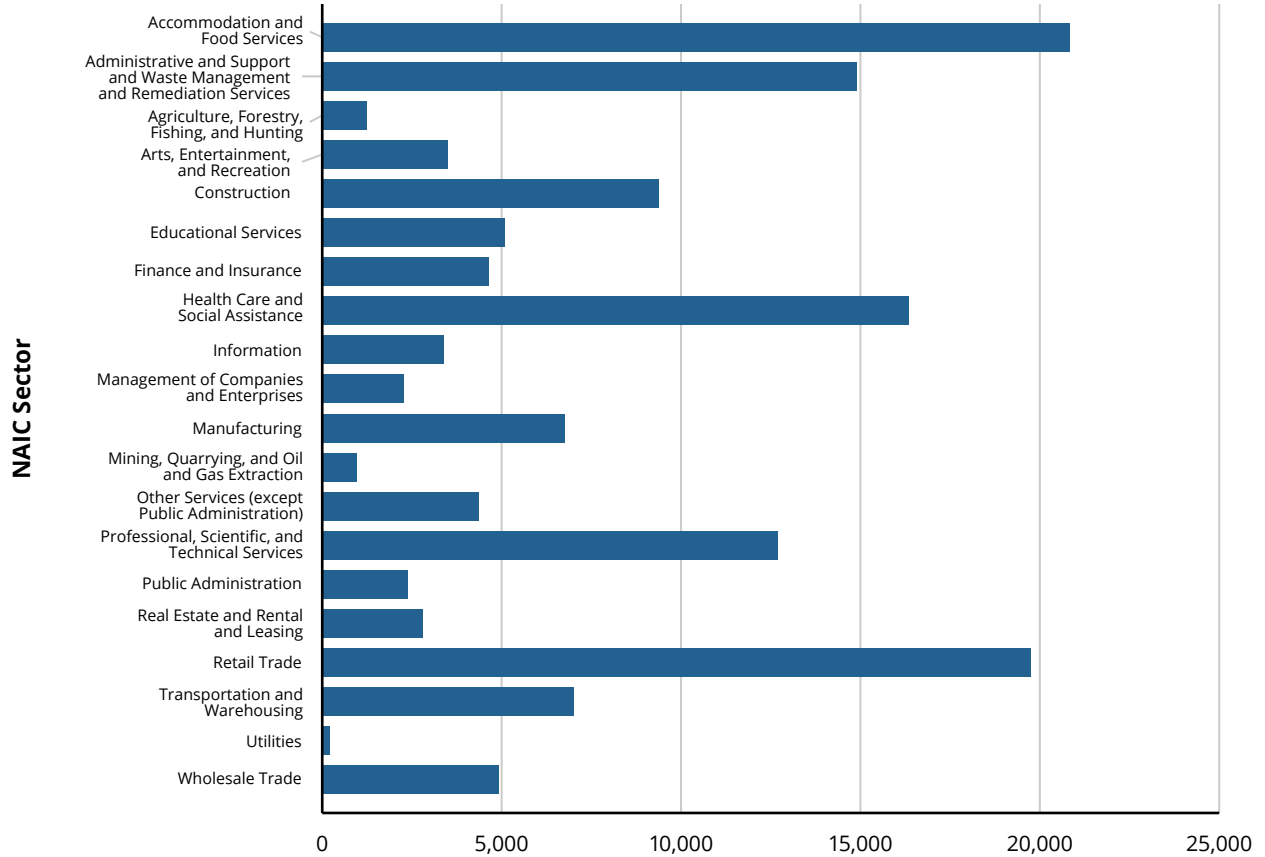
The new Technology Hub will develop green hydrogen and green energy innovations and technology, with a specific focus on decarbonizing hard-to-abate industries that can be quickly commercialized. FFI stated the **decision to choose Colorado over a number of other states is due to its vibrant innovation ecosystem, quality of life, and world-leading research institutions**, including Mines, NREL, National Institute of Standards and Technology (NIST), University of Colorado Boulder, and Colorado State University.

## IN-MIGRATION FLOWS ACROSS INDUSTRIES

Figure 38 displays top hires by industry. These numbers reflect the amount of people choosing to relocate to Colorado for a job. The top industries attracting talent from other states include:

- » Accommodation and Food Services;
- » Health Care and Social Assistance;
- » Retail Trade;
- » Administrative and Support and Waste Management and Remediation Services;
- » Professional, Scientific, and Technical Services, and
- » Construction.

**Figure 38**  
**Hires to Colorado by Industry, 2021**



Source: U.S. Census Bureau; 2021 Job-to-Job Flows

The industries linked to the top hires to the state also reflect high-need/high-demand industries for Colorado. By providing quality jobs to workers, employers have the ability to bolster talent flows both from within the state as well as into the state moving forward.



## LOOKING FORWARD WITH DATA

As we move forward, data will continue to be a critical tool in understanding how we are doing and to help us get where we want to be within our communities and as a state. As with previous years, interested partners may request a presentation for their group or community on the Colorado Talent Pipeline Report via the [CWDC website](#). In addition, there are some virtual tools available to interested partners.

### ColoradoTalentDashboard.com

The goal of the [Colorado Talent Dashboard](#) website is to share talent development-related data to help policy makers, program developers, and talent development organizations make informed decisions about building education, training, and workforce policies and programs. The original Colorado Talent Dashboard website at [coloradotalentdashboard.com](#) was published by the CWDC and partners in 2018. A new and improved version of the site that enhances the user experience, expands the use of data visualization, and establishes the site as the online presence for the data from the annual Talent Pipeline Report launches in late December 2022.

### ColoradoFutureJobs.com

[ColoradoFutureJobs.com](#), a new data-related tool developed by Indigo Pathways, launched in beta in late summer 2022. It aims to help policy makers, program developers, and employers understand the job market moving forward in the “new normal” period as a complement to the Top Jobs list and other available data. Through this tool, data can be disaggregated by county in order to help users understand current, local workforce dynamics. The updated [Colorado Talent Dashboard](#) will point to this new tool.

The Colorado Future Jobs site can:

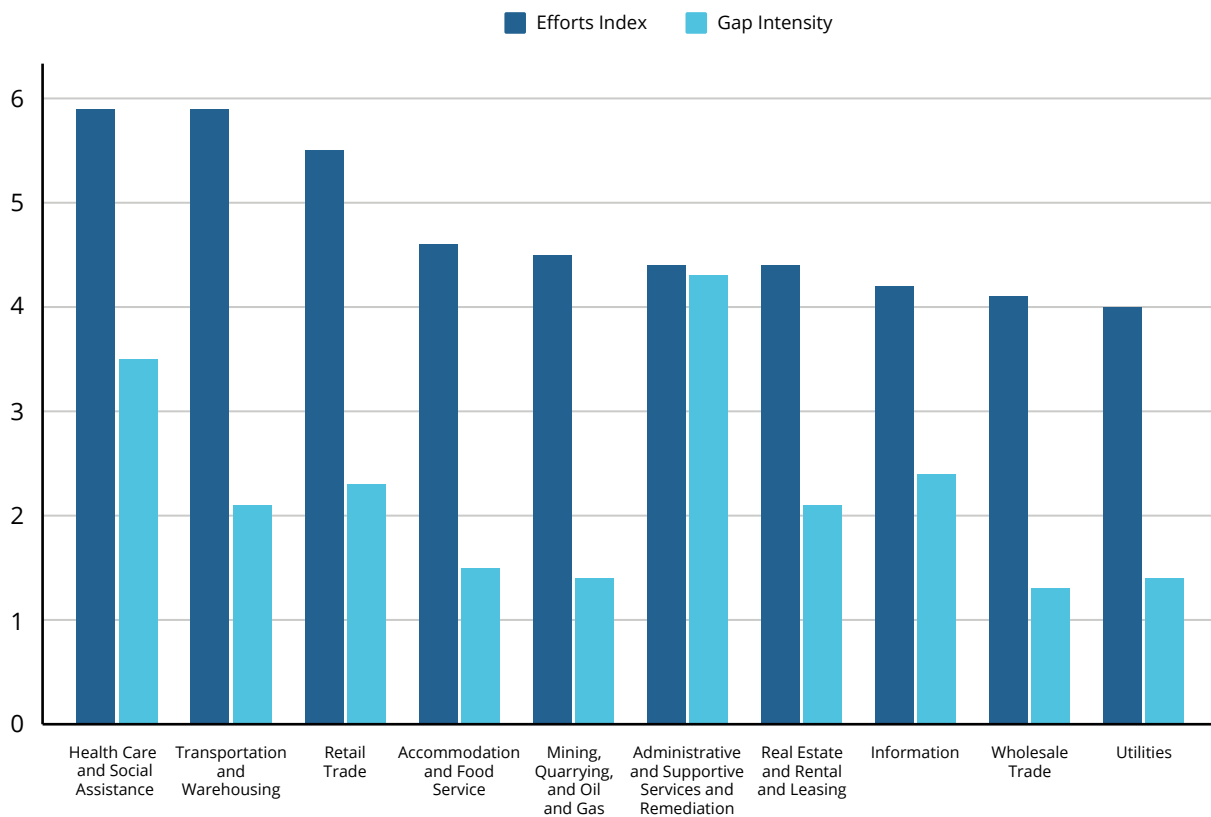
- » Help postsecondary institutions see where additional courses, credentials, and programs are needed based on industry demand;
- » Help employers in understanding why relative talent gaps arise and the challenge comparison; and
- » Help all users in understanding future jobs trends across industries and the state.

Some preliminary results from this project are shown in Figure 39. This visualization shows the top 10 industries statewide in high need and was created utilizing 2-digit and 6-digit NAICS Industry Codes. The number of jobs data is sourced from the Bureau of Labor and Statistics (BLS) and all other inputs were sourced from Lightcast's econometric modeling platform.

The "Effort Index" reports how many times an employer has to post a job in order to fill the position, providing a quick way to view which jobs employers were having to post multiple times to hire in order to grasp an industry's overall hiring challenge. Thus, the higher the index number, the more difficult it is for an employer to find talent to fill a role.

The "Gap Intensity" indicator was created to account for how many jobs are needed overall in each industry. The Gap Intensity modifies the Effort Index based on the ratio between the total number of jobs and the unique postings in an industry. If there are a lot of postings in a particular industry, for example, the Gap Intensity will be greater. If the industry only has a few postings compared to the number of existing jobs, the Gap Intensity will be lower. In other words, the Gap Intensity is a measure of the relative magnitude of the total hiring challenge.

**Figure 39**  
**Effort Index, Gap Intensity by Industry in Colorado**



Source: Colorado Job Forecasting Project



## EmpowermentScore.org

In early 2022, the CWDC and partners launched [empowermentscore.org](https://empowermentscore.org) to measure indicators of economic mobility for Colorado's frontline workforce. The Empowerment Score aims to measure individual, community, and economic characteristics that lead to greater employment stability and increased wages for Colorado workers, and empower state and local decision makers to increase opportunities for individuals to improve their economic status.



This new tool presents data about economic mobility – the ability of someone to change their income or wealth – in an interactive map or chart format that allows users to sort the data by county or region and explore how their area is faring in regard to eight economic mobility indicators (e.g. industry growth and diversity; regional education and training opportunities). This data intends to equip Coloradans to better understand the complex and interrelated factors contributing to economic mobility and inspire state and local action to remove barriers to increasing income and wages for frontline workers.

The [Empowerment Score](https://empowermentscore.org) provides a birds-eye view of the indicators of economic mobility for Colorado's frontline workforce. Viewing the score on the map and in chart format helps understand the variation in the status of indicators across counties in Colorado.

- » **Policymakers** should use the Empowerment Score to consider the factors facilitating and impeding the results that they are seeking from the employment and training system. The score should provoke questions and suggest data sources for data-informed decision making.
- » **Sector partnerships, Chambers of Commerce, Workforce Development Boards, and other industry-led groups** should use the Empowerment Score to focus employers on improving the education and training system, to suggest data sources that could be helpful for tracking key milestones, and to identify the information missing from the score that only employers can provide to drive strategy and assess progress.
- » **TalentFOUND Network partners** should use the Empowerment Score to identify data sources to inform the continuous improvement of their programs, and invite new perspectives and partnerships that inform work with communities statewide as well as to identify opportunities for data sharing and data enhancements.

Secure access to the anonymized data necessary for this tool was made possible through the work of the Colorado Data Trust and the Research Data Lake. More information about the Colorado Data Trust is in [Appendix I](#).

Visit [empowermentscore.org](https://empowermentscore.org) to explore the data, and view the [frequently asked questions](#) to learn more about how the Empowerment Score was created.

## THE IMPORTANCE OF DATA & STATE PARTNERSHIPS

Data is the backbone of each year's Talent Pipeline Report. It is the vital input that shapes the narrative and keeps us informed. The Colorado Workforce Development Council (CWDC) and the Colorado Department of Higher Education (CDHE) rely heavily on many sources of data to make this annual report possible. Much of our data is sourced from our partners at the [Office of Labor Market Information \(LMI\)](#) housed at the Colorado Department of Labor and Employment (CDLE). The LMI team works closely with the U.S. Bureau of Labor Statistics (BLS) to provide updates on:

- » Unemployment and employment rates
- » Job loss and job gains
- » Demographic workforce data

Many of these statistics come from the monthly Current Population Survey (CPS). This data is the main source for unemployment and employment rates throughout the nation and has been consistently utilized throughout all Talent Pipeline Reports.<sup>106</sup>

In addition, we have consistently depended on the reliable data that is published by the [State Demographer's Office](#), housed at the Colorado Department of Local Affairs (DOLA). All of our information on migration patterns and population statistics such as age groups comes from our DOLA partners.

For measuring attainment, this report aligns with [Lumina Foundation's A Stronger Nation: Learning Beyond High School Builds American Talent tool](#). The tool uses a similar methodology from previous Talent Pipeline Reports but includes a wider age range (to account for Colorado's changing age distribution and

current trends within the state suggesting increased demand for educational attainment later in life) as well as a more accurate estimate of short-term credential attainment in Colorado. The shift in data platforms offers strategic advantages, providing more comprehensive state-by-state comparisons while allowing for a more detailed dive into Colorado's equity gaps across education levels.

In addition, this report also measures labor market supply and demand through the [Lightcast Labor Market Data - econometric modeling tool](#). Lightcast gathers and integrates economic, labor market, demographic, education, profile, and job posting data from dozens of government and private-sector sources, creating a comprehensive and current dataset that includes both published data and detailed estimates with full United States coverage.

Industry, occupation, education, demographic, job postings, and profiles data are available at national, state, metropolitan area, and county levels. Zip code estimates are available for employment, earnings, job change, and demographics data. A complete list of data sources utilized can be found [on their website](#).

Lightcast produces annual occupation employment counts data by applying staffing patterns to industry-based job counts data from the BLS QCEW dataset. Job counts for a particular time range are based on the most recent four quarters of data available from [QCEW](#).

Lightcast's Community Indicators data comes from the Census' American Community Survey (ACS) API. Lightcast uses the Census Bureau's latest MSA definitions, but ACS occasionally lags, using older MSA definitions. Lightcast converts the ACS data to current Census Bureau MSAs using a few different methods depending on the data type.

<sup>106</sup> The CPS samples 60,000 eligible households (~110,000 individuals) each month, selected to be representative of the entire population broken into different geographical areas in each state. Part of the sample is changed each month. Each full monthly sample is split into eight different subsamples called rotation groups. Each rotation group is itself a representative sample of the U.S. population. A given rotation group is interviewed for a total of eight months, divided into two equal periods. The group is in the sample for four consecutive months, leaves the sample during the following eight months, and then returns for another four consecutive months. The sample excludes those living in institutions (e.g., correctional, mental health facilities, etc.) and those in the armed forces. The Local Area Unemployment Statistics (LAUS) follows the same procedure as the CPS and is supplemented by the Current Employment Statistics (CES) program, the Quarterly Census of Employment and Wages (QCEW) program, and unemployment insurance (UI) systems data to measure labor force statistics for state and local areas.

# OPPORTUNITIES





The Talent Pipeline Report provides data and strategies to inform the development of legislation and policies as well as the implementation of existing work. The data show that Colorado's workforce continues to be a strength. Opportunities exist now for Coloradans to move into good jobs, and our continued focus on the talent pipeline will ensure that equity is increased statewide and that Colorado works for all.

Additional progress was made through the passage of bills in the 2022 Legislative Session to enhance the connections between our state's education and workforce system. Bold ideas are being developed by local and state experts that can modernize our approaches to skill development and ensure those efforts are responsive to the needs of industry.

Opportunities moving forward build upon previous legislation, policies, and programs. These approaches are levers in our continued work to enhance our talent development system to meet the needs of businesses, job seekers, workers, and learners to support a Colorado for all.



**Enhance opportunities for employers to promote job quality and connect with historically excluded talent to expand access to skilled talent and connect Coloradans with quality jobs.**

- » Incorporate quality metrics and equity impact assessments into procurement processes for publicly-funded projects.
- » Focus programming on and increase availability of resources to underutilized talent pools, such as opportunities for postsecondary credentials, work-based learning, and subsidized employment. Populations to support include justice-involved individuals, New Americans, people of color, rural communities, individuals with disabilities, and older workers.

**Strengthen the state's data infrastructure to better identify longitudinal outcomes of policies and programs, which will help inform decision makers about evidence-based practices and effective methods to close equity gaps.**

- » Connected data across the postsecondary and workforce landscape are vital to the calculation of new measures of success. Develop a statewide longitudinal data system that allows for more disaggregated data between different kinds of postsecondary credentials.
- » As these recommendations around measures of postsecondary and workforce success continue to be developed, work to ensure that 1) data are shared in well-governed, responsible ways across state agencies building on successful efforts such as the Linked Information Network of Colorado (LINC) and the Colorado Data Trust, 2) work is building on already existing data infrastructure, such as that developed in relation to adult education, and 3) the recommendations from [HB21-1330](#) and [HB22-1349](#) are implemented.





Continue current efforts to develop an ecosystem to empower learners/earners to have agency and ownership of their data on their education and employment journeys through digital learner and employment records.

- » Build upon existing offerings supported by state agencies, such as myColorado and My Colorado Journey. The data in this ecosystem are owned by the learner and validated by various stakeholders across education, training, workforce, and industry to demonstrate proof of learning and skills development over the course of an individual's education and career.

**Strengthen critical industries so all businesses can thrive.**

- » Fund sector-specific initiatives to develop regional solutions for talent shortages that will create sustainable solutions beyond stimulus funding.
- » Update, align, and promote existing strategic statewide talent plans for education, early childhood education, and direct-care sectors and develop plans for new areas such as infrastructure and homebuilding.

Increase the availability of connected learning opportunities to smooth the transition from secondary education to the workforce.

- » Implement the recommendations of the HB22-1215 Task Force to create a statewide, comprehensive system for secondary education, postsecondary education, and work-based learning.
- » Support the continuation of apprenticeship efforts, including CO-HELPS and CO-TECH.
- » Develop funding mechanisms to support the development and continuation of a work-based learning ecosystem that allows employers and partners to communicate effectively at the local level, including continuation of the stimulus-funded [Rural Coaction Grants](#).

# APPENDICES



**Appendix A:** [Talent Pipeline Policy Success](#)

**Appendix B:** [Colorado Top Jobs](#)

**Appendix C:** [Colorado Top Jobs by Region](#)

**Appendix D:** [2021-2022 Career Pathways Annual Report – HB15-1274](#)

**Appendix E:** [2022 Sector Strategies Update](#)

**Appendix F:** [Career Development Incentive Program \(CDIP\)  
List of Approved Programs – HB16-1289](#)

**Appendix G:** [HB15-1170 PWR Coordinator Update 2022](#)

**Appendix H:** [PY21 WIOA Annual Report](#)

**Appendix I:** [Update on Colorado Data Trust](#)

**Appendix J:** [Glossary of Equity Terms](#)

**Appendix K:** [Update on Reskilling, Upskilling, and  
Next-skilling \(RUN\) from HB21-1264](#)

Please visit [cfdc.colorado.gov/talent-pipeline-report](https://cfdc.colorado.gov/talent-pipeline-report)  
to access this year's appendices.



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Produced by the Colorado Workforce Development Council  
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