



2018

COLORADO TALENT PIPELINE REPORT



Demand



Supply



Strategies



Recommendations

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



Colorado Workforce
Development Council

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, and the Office of Economic Development and International Trade (OEDIT). Support was provided by the Office of State Planning and Budgeting (OSPB), the State Demography Office at the Department of Local Affairs (DOLA), the Department of Human Services (DHS), the Department of Regulatory Agencies (DORA), the Department of Corrections (DOC), CareerWise Colorado, Young Invincibles, Skillful, and other partners.

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EXECUTIVE SUMMARY

Colorado's annual Talent Pipeline Report, foreseen by the State Legislature as a cornerstone of workforce planning, has supported Colorado's journey to become our Nation's strongest economy. This fifth edition reflects, as with each report since the first in 2014, a collaboration between the Colorado Workforce Development Council and our coalition of state agencies. **Through the analysis of economic demands and current top jobs, Colorado's talent supply, and the success of strategies to impact all components of the talent pipeline, this report assesses where Colorado stands in forging a workforce to meet the demands of today and tomorrow.** Additionally, we recommend steps for a new legislature and Governor to consider as they work for the continued economic vitality of Colorado.

Colorado continues to be an attractive place to live, work, and do business. From 2016-2017, the state had the ninth fastest population growth in the United States.¹ Colorado's population growth, its changing demography, and changes in Colorado's economy will impact the state's talent pipeline. Most importantly, there are still gaps between the skills needed for the future economy and the percentage of Coloradans with the credentials that properly indicate attainment of those skills. This report identifies those gaps and lays out steps to address them. Specifically, by 2020, 74 percent of jobs will require some type of education beyond high school. Colorado's existing labor force has a credential attainment rate of only 55 percent and a look at the future workforce reveals that only 43 percent of Colorado 9th graders are enrolling in a two-year or four-year institution after high school graduation. Focused efforts must continue across all aspects of the talent pipeline in order to reduce this shortfall.

The demand for top jobs in Colorado continues to grow across diverse industries. However, the current education and training system does not develop talent equally for all Coloradans. For Colorado to continue to be a national leader in workforce development, we must better align demand and supply within the talent pipeline. Preparing Colorado's workforce for future demands requires a multi-pronged approach that focuses on all populations within the talent pipeline. The skilled workforce the Colorado economy will need over the next 15 years will come from four groups: 1) the existing labor force of Coloradans 25 years of age and older; 2) the future labor force of Coloradans 24 and under; 3) the underutilized pools of talent; and 4) new Coloradans who move into the state.

To achieve balance across the in-demand industries and different populations in the labor force, the State must understand the realities of the working lives of Coloradans, gaining insights through strong longitudinal data. We must continue to fuel an industry-led system driven by sector partnerships that continues to separate Colorado from other states. Innovations implemented in the past four years are showing successful outcomes, and an opportunity exists to build on that success by placing a future focus on 1) enhancing statewide infrastructure for talent development; 2) eliminating attainment gaps in our education system; and 3) strengthening collaboration and alignment at the state and local levels. For more than 400,000 Colorado adults with some postsecondary education, but no credential, connecting these individuals to training in high demand skills could put them on a path to the middle class while helping to close the skills gap for employers.



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INTRODUCTION

The [Colorado Workforce Development Council](#) (CWDC) “the Council” is a Governor-appointed, business-led coalition leading the integration of efforts to build Colorado’s talent pipeline. The CWDC Office provides strategic, administrative, technical, and logistical support to the CWDC, its steering committees, and task groups; to the Governor’s Business Experiential Learning Commission (BEL Commission); and to other oversight boards responsible for integration of talent development efforts in meeting the needs of the current and future worker and economy, including the State Rehabilitation Council. The CWDC and the CWDC Office make recommendations to the Governor on issues related to talent development. The Office facilitates collaboration among state agencies and partners to ensure effective and efficient leveraging of resources and reduction of redundancies, including managing the support needed to ensure the successful collaboration of partners and agencies. The Office carries out the recommendations and work of the Council, the BEL Commission, and other boards and committees focused on talent development.

The vision of the CWDC is that every Colorado business has access to a skilled workforce and every Coloradan has access to meaningful employment, resulting in statewide economic vitality. To achieve that vision, the CWDC’s mission is to facilitate the creation and sustainability of an industry-led, competency-based Colorado talent development system that appropriately integrates the work of education, training, economic and workforce development to meet the needs of businesses, workers, job seekers, and students.

In 2014, the Legislature authorized the CWDC in C.R.S. 24-46.3-103 to create a cross-agency annual Talent Pipeline Report. The report serves to align the goals and efforts across state agencies and to use data to inform the CWDC’s work along with the broader TalentFOUND Network. As a coalition, we are prepared to implement the strategies outlined in this report to continue driving Colorado’s economic vitality.

Based on the data and analysis in previous talent pipeline reports, the Legislature has passed more than 30 bills that have created positive momentum and developed initiatives that have demonstrable success (Figure 1). (Additional successes can be found in [Appendix C](#))



Figure 1.

TALENT DEVELOPMENT-RELATED PASSED LEGISLATIVE BILLS

See [Appendix C](#) for **Additional Successes**

- HB18-1226 Higher Education Review Degree Program Costs and Outcomes
- HB18-1266 Career Development Success Program Expansion
- HB18-1316 Extend Colorado Department Of Labor And Employment Skilled Worker, Outreach, Recruitment, and Key Training Grant Program (WORK Act) - see HB15-1276
- HB18-1334 Extend Transitional Jobs Program
- HB18-1337 Veterans One-Stop Center in Grand Junction
- HB18-1343 Veterans' Service-to-Career Program
- SB18-005 Rural Economic Advancement of Colorado Towns
- SB18-042 Agricultural Workforce Development Program
- SB18-145 Implement Employment First Recommendations
- HB17-1003 Strategic Plan to Address Teacher Shortage
- HB17-1184 Modern Technology Education in Public Schools
- SB17-292 Colorado Works Employment Opportunities With Wages
- HB16-1073 Electrical Industry Safety and Training Act
- HB16-1103 Clarifying License Pathways for Mental Health Workforce
- HB16-1114 Repeal Duplicate Reporting Requirements for Employers
- HB16-1142 Rural & Frontier Health Care Preceptor Tax Credit
- HB16-1197 Military Veteran Occupational Credentials
- HB16-1198 Computer Courses Fulfill Graduation Requirements
- HB16-1267 Colorado Veterans' Service-to-Career Pilot Program
- HB16-1287 CDLE Pre-apprenticeship & Apprenticeship Study
- HB16-1288 Industry Infrastructure Grant Program
- HB16-1289 Incentives To Complete Career Development Courses -- Career Success Pilot Program
- HB16-1290 Extend (Rehire Colorado) Transitional Jobs Program
- HB16-1302 Workforce Innovation & Opportunity Act
- SB16-077 Employment First For Persons With Disabilities
- SB16-134 Professional Licensing For Military Veterans
- HB16-1034 Emergency Medical Responder Registration
- SB16-104 Recruitment and Retention of Teachers in Rural Areas

TALENT DEVELOPMENT-RELATED PASSED LEGISLATIVE BILLS - CONTINUED

See [Appendix C](#) for Additional Successes

HB16-1082 Area Vocational Schools to Technical Colleges

HB16-1048 Business Enterprise Program for Blind Entrepreneurs

HB16-1100 Tuition Status for Unaccompanied Youth

HB16-1423 Student Data and Education System

SB16-093 Transfer State Independent Living Facilities to CDLE

SB16-179 Unemployment Insurance Classification

HB16-1386 Necessary Document Program

HB15-1030 Employment Services for Veterans Pilot Program

HB15-1170 Increasing Postsecondary and Workforce Readiness

HB15-1230 Creation of Innovative Industries Workforce Development Program

HB15-1270 Authorization for Local Education Providers to Operate Pathways in Technology Early College High Schools

HB15-1271 Funding of Mobile Learning Labs through the Colorado Existing Industries Training Program

HB15-1274 Creation of Career Pathways for Students for Critical Occupations in Growing Industries

HB15-1275 Measures to Support Concurrent Enrollment in Career and Technical Education Programs

HB15-1276 Skilled Worker Outreach, Recruitment, and Key Training Act -- the WORK Act

SB15-082 Authority of Counties to Establish a County Workforce Development Program

This report illustrates how, absent action, the continued growth in jobs combined with shifting demographics could yield larger skill gaps.

To prepare the workforce, focus must be placed on our state's educational system, from early childhood to postsecondary institutions, as the education industry has primary responsibility for developing Colorado's future workforce. At the same time, most of the workers Colorado needs over the next 15 years are already in the workforce. Therefore, we should also focus on training and upskilling the existing labor force above the age of 25 and the underutilized talent pools who need support to join the labor force. Finally, net migration is slowing, and that source of talent cannot be relied upon to meet future demands.



DEMAND: UNDERSTANDING THE NEEDS OF COLORADO'S ECONOMY

COLORADO'S TOP JOBS

The Talent Pipeline Report uses labor-market projections from the Colorado Department of Labor and Employment (CDLE) Office of Labor Market Information to identify top jobs as those that meet three criteria:

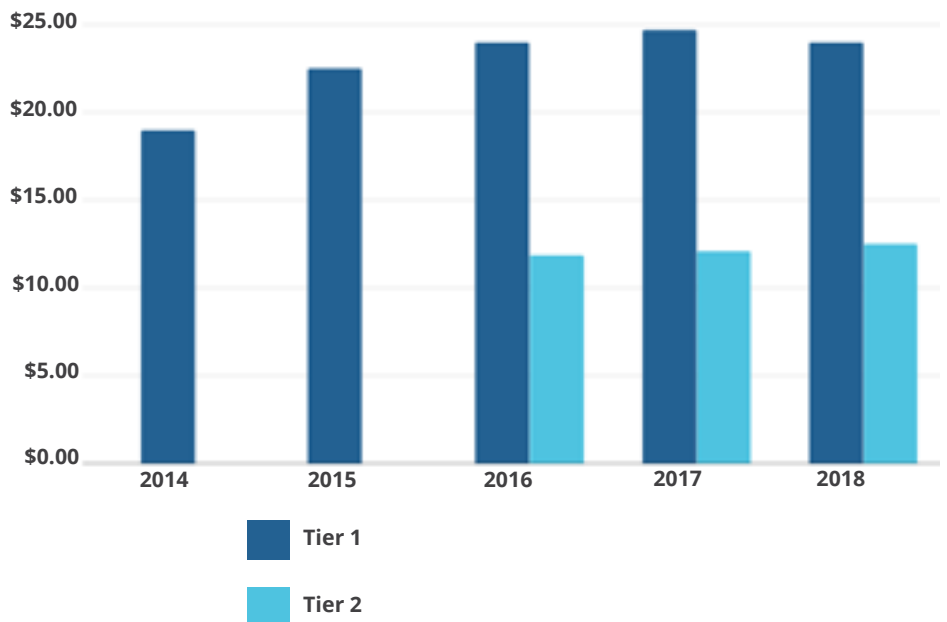
1. Projected high annual openings (>40)
2. Above-average growth rates (>2.05% per year)
3. A good wage

Top jobs are categorized into two earnings tiers; Tier 1 includes jobs that have median earnings at or above \$23.94 per hour – a living wage for a family with two adults (one working) and one child. Tier 2 includes jobs that have median earnings of \$12.47 per hour – they meet a living-wage benchmark for an individual. There are additional jobs that do not typically pay a high wage but are in high demand or could lead to a higher-paying in-demand job.

What are the tiers?

- **Tier 1** includes jobs that have median earnings at or above **\$23.94 per hour** – a living wage for a family with two adults (one working) and one child.
- **Tier 2** includes jobs that have median earnings of **\$12.47 per hour** – they meet a living-wage benchmark for an individual.

Figure 2.
Living Wage for Top Jobs



Source: Colorado Department of Labor and Employment

Figure 2 displays the changes in the hourly wage tied to each tier since the first Talent Pipeline Report in 2014. Since 2016, when the report began tracking Tier 2 jobs, the hourly wage value has trended up, even when controlling for inflation.

For Tier 1 jobs, 2018 saw the first decrease over the prior year (by 75 cents, inflation-controlled) in the hourly earnings required for inclusion in Tier 1. Tier 2 job wage values have gone up 62 cents per hour between 2016 and 2018.

Average hourly earnings in Colorado link to the level of formal education or training that an individual has. Figure 3 shows the relationship between education and job tier. The majority of Tier 1 jobs require at least a 4-year degree, based on existing job postings.

Figure 3.
Number of Occupations in Each Tier by Required Education Level

	Tier 1 Jobs	Tier 2 Jobs
Less than High School	4	43
High School Diploma or Equivalency	51	111
Some College, No Degree	17	2
Associate Degree	28	9
Bachelor's Degree	111	14
Graduate/Professional Degree	42	6
Source: Colorado Department of Labor and Employment		

Figure 4 ranks top jobs by projected annual openings for the next 10 years while also showing the typical education/training entry point for each occupation.

Figure 4.

Top Jobs by Education and Training Entry Point (sorted by number of annual openings)

No Formal Education	High School or Equivalency	Some College, No Degree	Associate Degree	Bachelor's Degree	Graduate and Professional Degrees
Janitors and Cleaners, Except Maids and Housekeeping Cleaners 6,143	Customer Service Representatives 6,897	Bookkeeping Accounting, and Auditing Clerks, 3,699	Preschool Teachers, Except Special Education 1,134	Business Operations Specialists, All Other 5,269	Lawyers 935
Cooks, Restaurant 5,831	Office Clerks, General 6,352	Heavy and Tractor-Trailer Truck Drivers 3,518	Paralegals and Legal Assistants 852	General and Operations Managers 4,949	Mental Health Counselors 902
Laborers and Freight, Stock, and Material Movers, Hand 5,703	Secretaries and Administrative Assistants, Except Legal, Medical, 5,874	Nursing Assistants 3,067	Veterinary Technologists and Technicians 489	Registered Nurses 4,603	Health Specialties Teachers, Postsecondary 718
Stock Clerks and Order Fillers 5,056	Sales Representatives, Services, All Other 3,981	Teacher Assistants 2,451	Dental Hygienists 449	Accountants and Auditors 4,574	Educational, Guidance, School, and Vocational Counselors 612
Landscaping and Groundskeeping Workers 4,654	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products 3,882	Hairdressers, Hairstylist, and Cosmetologist 2,047	Computer Network Support Specialists 358	Software Developers, Applications 3,124	Community and Social Service Specialists, All Other 550
Construction Laborers 4,168	Receptionists and Information Clerks 3,308	Medical Assistants 1,732	Web Developers 354	Elementary School Teachers, Except Special Education 2,531	Physical Therapists 485
Home Health Aides 2,767	Maintenance and Repair Workers, General 3,133	Automotive Service Technicians and Mechanics 1,602	Radiologic Technologists and Technicians 305	Market Research Analysts and Marketing Specialists 2,406	Education Administrators, Elementary and Secondary School 470
Counter and Rental Clerks 2,156	First-Line Supervisors of Retail Sales Workers 3,029	Computer User Support 1,508	Architectural and Civil Drafters 285	Managers, All Other 1,692	Instructional Coordinators 410
Cooks, Institution and Cafeteria 1,393	Electricians 2,985	Massage Therapists 1,433	Human Resources Assistants, Except Payroll and Timekeeping 285	Coaches and Scouts 1,599	Healthcare Social Workers 373
Industrial Truck and Tractor Operators 1,205	First-Line Supervisors of Food Preparation and Serving Workers 2,918	Dental Assistants 1,054	Physical Therapist Assistants 218	Secondary School Teachers, Except Special and Career/Technical Ed 1,561	Pharmacists 372

Source: Colorado Department of Labor and Employment

Top jobs, while concentrated in a few sectors, are not limited to one industry (see [Appendix A](#)) and differ across Colorado ([Appendix B](#)). Colorado’s growing economy has created an economic reality where industry growth has been diverse. Over the next decade the following two-digit North American Industry Classification System (NAICS) groups are projected to grow by greater than, or equal to, 15 percent:²

- Health Care and Social Assistance- 27%
- Mining, Quarrying, and Oil and Gas Extraction- 21%
- Professional, Scientific, and Technical Services- 19%
- Educational Services- 18%
- Management of Companies and Enterprises- 16%
- Construction- 15%
- Government- 15%
- Accommodations and Food Service- 15%

Despite the diversity of these industries, there are commonalities that exist in the skills required to obtain and perform successfully in these roles.

Figure 5.
Top Common Skills



Common Skills	Frequency in Job Postings
Management	26%
Sales	16%
Customer Service	15%
Communications	14%
Operations	13%
Leadership	9%
Innovation	7%
Driving	7%
Problem Solving	6%
Research	4%

Figure 5 displays the top 10 skills in Colorado job posts in 2017. These skills, many of which are referred to as soft skills or essential skills, are the characteristics employers see as being of high value. Each top job also requires technical competencies, yet hiring practices are primarily based on degree requirements that may or may not accurately indicate a candidate’s capabilities of performing on the job. Because certificates, certifications, and diplomas are not always an adequate measure of skills and competencies, it is important for businesses to articulate the definitions of these skills and for individuals and communities to gain a shared understanding of their meaning so that all parties fully understand expectations and can properly align training and development opportunities to meet the needs of business.

Source: Colorado Department of Labor and Employment



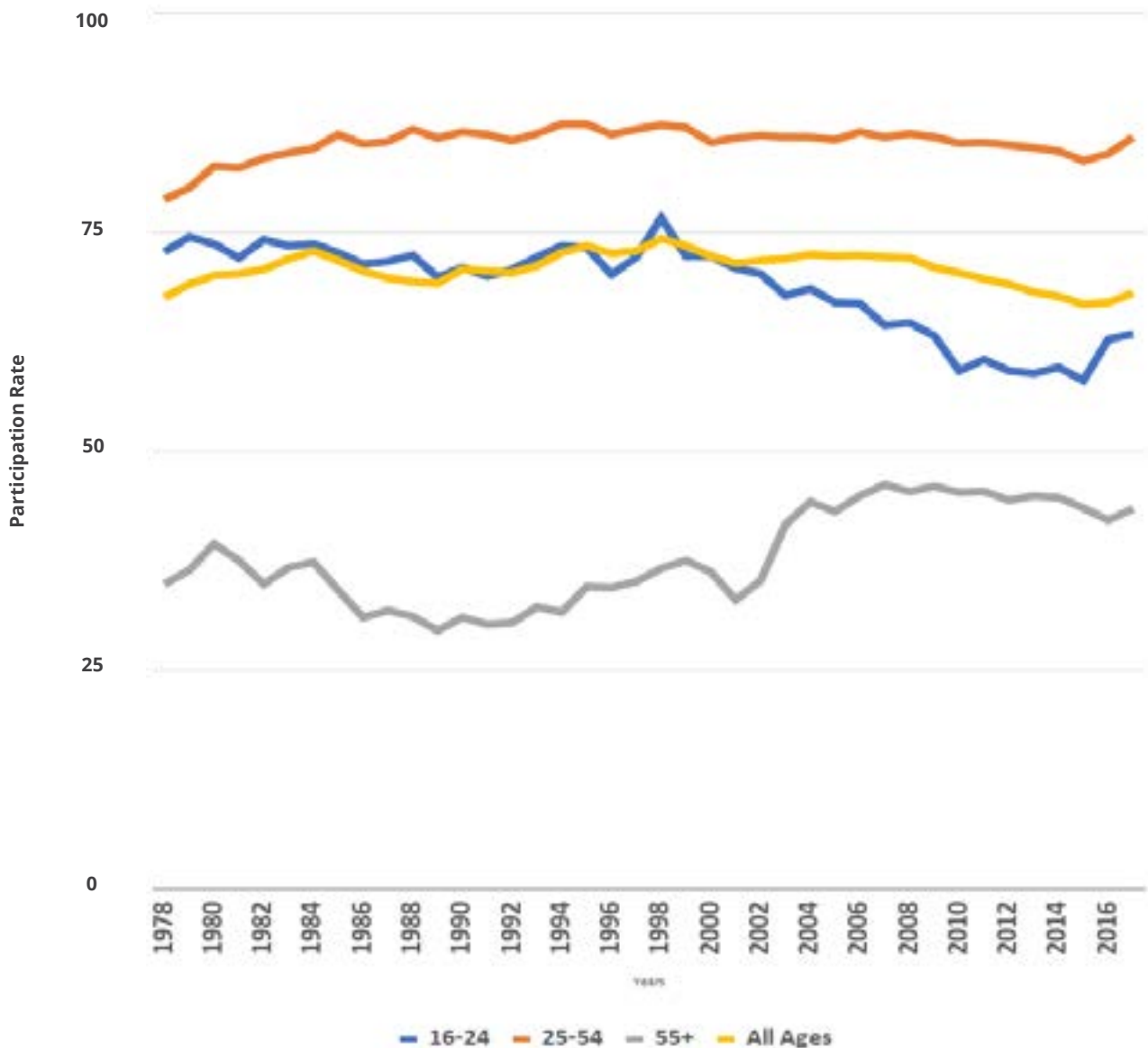
SUPPLY: UNDERSTANDING COLORADO'S TALENT

COLORADO'S WORKFORCE BY THE NUMBERS

Since the Great Recession, Colorado's economy has come back strong, creating jobs in a tight labor market for individuals and business. Colorado sits six percentage points short of its historic high labor participation rate of 74.3 percent in 1998 (Figure 6). Near the end of 2018, 3,096,024 Coloradans were in the labor force. While the plateauing of labor participation parallels national trends, examining the labor participation rate offers a chance to understand opportunities for improving Colorado's talent pipeline even as the state reaches "full employment" levels.

Figure 6.

Colorado Labor Participation Rate by Age



Source: Colorado Department of Labor and Employment

CURRENT LABOR FORCE 25+

Labor participation is highest between the ages of 25-54 (Figure 7). Since the early 2000s, labor participation for Coloradans over 55 has increased. During that same period, the state also experienced significant decreases in labor participation for ages 16-24. While this report does not argue causality, Colorado's growing aging population - when coupled with historically high labor participation amongst older Coloradans - affects the labor participation of other age groups across Colorado ([more information on Colorado's aging workforce can be found in the 2017 Talent Pipeline Report](#)).

Labor Force Participation Rate Definition

The Labor Force Participation Rate is the percent of the civilian noninstitutionalized population, over the age of 16, that is either employed or unemployed (unemployed: individuals seeking work but unable to find employment).

Birth rates have slowed in Colorado contributing to a “tabling effect” on the age demographics with the share of each age group coming closer to equal percentages. Further, Figure 8 shows that the over 55 age group is becoming a more significant percentage of the labor force, and the prime working ages of 25-54 are shrinking. Figure 7 illustrates the current labor participation rates by age.

Figure 7.

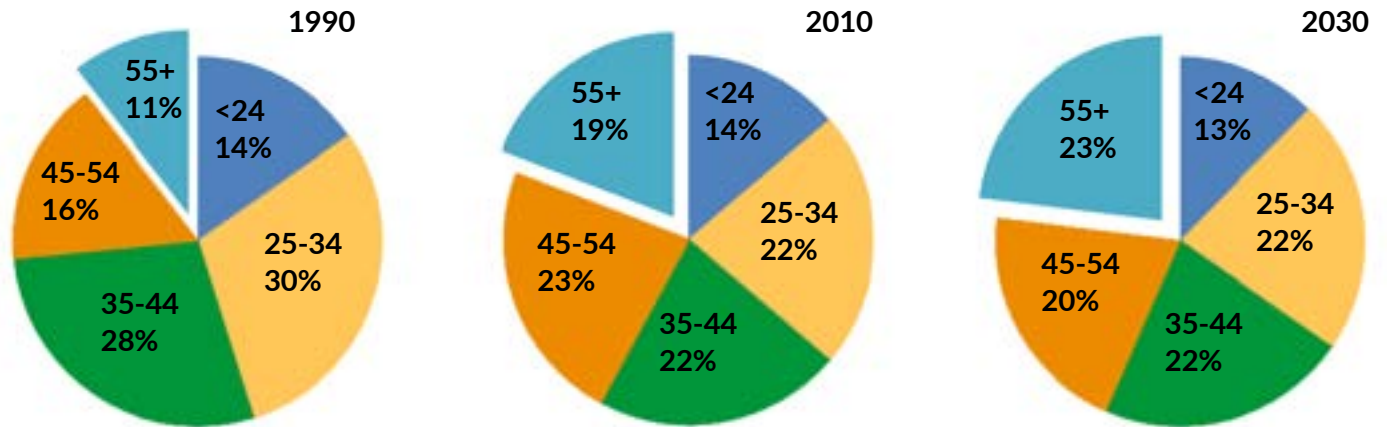
2017 Labor Participation by Age

Age Cohort	Labor Force Participation Rate
Age 16-19	37.4
Age 20-24	80.1
Age 25-34	87.7
Age 35-44	85.8
Age 45-54	83.7
Age 55-64	66.1
Age 65+	23.2

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

Figure 8.

Age Share of Labor Force



Beyond age distinctions, the labor participation rate reveals substantive differences across race/ethnicity and gender identity. As with national trends, men have higher rates of labor participation in Colorado (Figure 9), with the widest margin in Colorado between males and females in the state’s Hispanic community.

In 2017, Colorado ranked 8th in the country in labor participation rate.
In July 2018, Colorado ranked 4th in the country in labor participation rate.

Figure 9.

Colorado Labor Force Participation Rate by Gender Identity and Race/Ethnicity (2017)

Gender Identity, Race/Ethnicity	Labor Force Participation Rate
Male, All Race/Ethnicity	75.4
Female, All Race/ Ethnicity	61.8
Male, White	74.8
Female, White	61.5
Male, Black/African American	79.2
Female, Black/African American	65.6
Male, Hispanic	75.9
Female, Hispanic	58.2

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

One of the strongest predictors of labor participation is educational attainment. Coloradans with a bachelor’s degree or more participate in the labor force at a rate twenty points higher than those with less than a high school education (Figure 10). Each additional level of education and training an individual earns increases the likelihood that they will participate in the labor force in some fashion (Figure 10). Once in the labor force, a lack of education and training is also a strong predictor of unemployment. Recognizing the predictive value of attainment for the state’s economy, Colorado is focused on raising postsecondary attainment both inside and outside of higher education.

Figure 10.
Colorado Labor Force Participation Rate by Education Attainment (2017)*

Highest Level of Educational Attainment	Labor Force Participation Rate
Less than high school diploma	51.6
High school graduates, no college**	63.2
Some college or associate degree	68.4
Bachelor’s degree and higher***	76.1

*Labor force participation rate by education attainment of non-institutional population ages 25+
 **Includes person with a high school diploma or equivalent
 ***Includes person with bachelor’s, master’s, professional and doctoral degree
 Source: Current Population Survey; U.S. Bureau of Labor Statistics



56.2%
of Coloradans have
a postsecondary
credential


Currently, Colorado ranks in the top five highest states for postsecondary attainment.³ As highlighted in the [2017 Talent Pipeline Report](#) the rise in Colorado’s attainment is partly due to the highly educated population that has relocated to Colorado. The importance of in-migration is especially seen in those between the ages of 25-34, who are helping to increase the strength of Colorado’s talent pipeline (Figure 11). However, migration is slowing, and it cannot be relied upon as the primary means to meet workforce demands across Colorado.

Figure 11.

Colorado Educational Attainment by Age

	18-24 years old	25-34 years old	35-44 years old	45-64 years old	65+ years old
Less than 9th grade	1.3%	2.8%	4.3%	3.4%	4.9%
9th to 12th grade, no diploma	12.4%	6.2%	5.5%	4.5%	5.7%
High school graduate (includes equivalency)	28.7%	20.3%	18.4%	22.2%	26.0%
Some college, no degree	42.1%	23.2%	20.5%	22.1%	22.6%
Associate degree	4.3%	8.7%	8.8%	9.3%	5.8%
Bachelor's degree	10.4%	28.4%	26.6%	23.5%	19.1%
Graduate or professional degree	0.7%	10.4%	15.8%	15.1%	15.9%

Source: AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016



37.1% of white students earned a credential in four years, compared to ...
28% of American Indian/Alaskan Natives
27% of Hispanics
18.9% of African Americans

Colorado’s climb to the top of the educational attainment rankings has not been enjoyed by all Coloradans. Large gaps between sub-groups of the population persist in the areas of retention and completion throughout Colorado’s postsecondary system.

The Colorado Department of Higher Education highlighted statewide needs and the challenges that the state faces in postsecondary credential attainment in its 2017 master plan, [Colorado Rises, Advancing Education and Talent Development](#). Among other strategic goals, the master plan prioritizes erasing equity gaps among traditionally underserved populations—in particular the state’s Hispanic population: “Colorado’s largest- and fastest-growing ethnic group, Hispanic/Latino, has the lowest average educational attainment and the lowest college enrollment rate of any ethnic group in the state.” Without an increase in educational attainment in Colorado’s Hispanic community, the state’s economy will lack the labor business will demand in the knowledge economy.

CDHE estimates that at the end of 2016, Colorado had an overall postsecondary attainment level of 56.2 percent;⁴ meaning that 56 percent of Coloradans have either a certificate, associate’s, bachelor’s, and/or a graduate/professional degree. This gap will cause Colorado to fall short of the 74 percent attainment rate needed to meet the job demands in 2020.

THE LABOR FORCE AGE 24 AND UNDER

Over the past two decades, youth labor participation has been decreasing in Colorado (Figure 12). Relative to other states, Colorado ranks 22nd in labor participation for youth 16-19, and ninth for youth 20-24. While those numbers overall are positive, gaps exist based on varying factors. When analyzing the data by gender identity, participation is almost equal for individuals 16-19, but for individuals 20-24 there is a 12 percent participation gap between men and women in the labor force (Figure 12).

Figure 12.

Youth Labor Participation Rate by Age and Gender Identity

Age	Male Participation Rate	Female Participation Rate
Age 16-19	37.3%	37.5%
Age 20-24	86.3%	74.3%

Source: Colorado Department of Labor and Employment

There are several reasons for this gap, chiefly that females stay in school at higher rates than males.

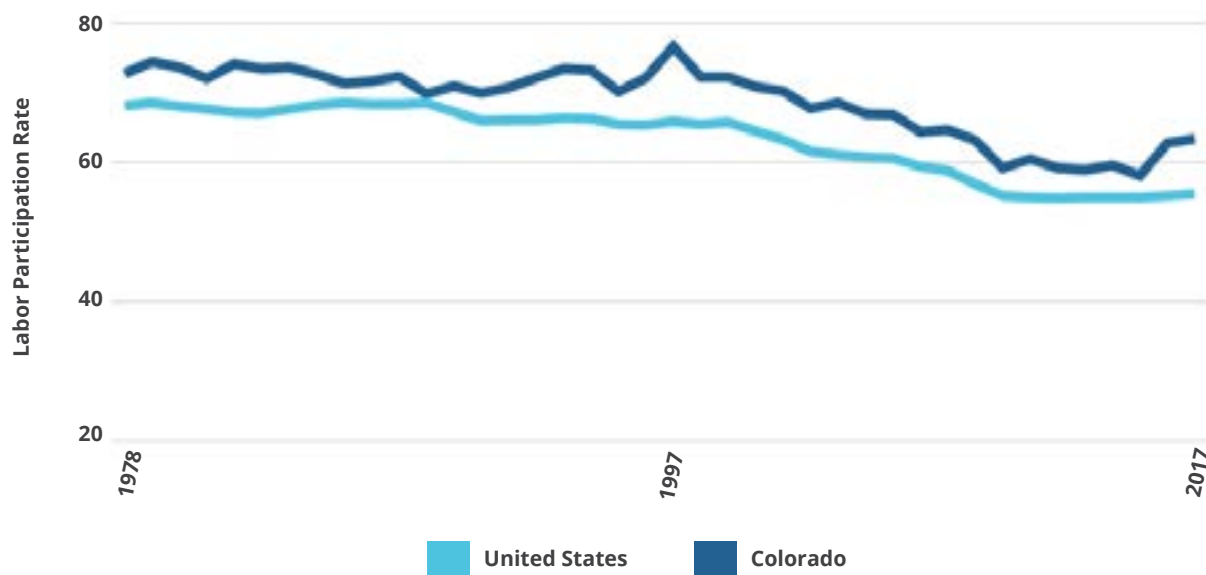
Therefore, it is possible some of the gaps can be explained by females upskilling through higher education rather than participation in the labor force. However, nationally, 70 percent of college students work while attending school, so gaps cannot be fully explained by postsecondary enrollment.

Taken together, the labor participation rate for those 16-24 years old was 63.4 percent in 2017; five percent lower than the overall Colorado labor participation rate of 68 percent (Figure 13).

Figure 13.

Labor Force Participation Rate for Coloradans Aged 16-24

Source: Colorado Department of Labor and Employment



Even when youth choose to enter the labor force, employment is not equally accessible. Unemployment rates for youth 16-19 years old differ widely by race/ethnic groups (Figure 14), signaling structural barriers to employment for racial/ethnic minority Coloradans.

Figure 14.
Unemployment Rate for Coloradans 16-19 Years Old (2017)

Race/Ethnic Identity	Unemployment Rate
All Races	8.9%
White	8.3%
Black	27.6%
Hispanic	4.8%

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

The disparities in employment and labor participation must be addressed because over the last half decade, enrollment statewide in the K-12 education system has been flat. In the 2017-2018 school year, the system saw a total enrollment of 909,865 students. Looking forward, the Colorado Demographer’s Office does not project K-12 enrollment to increase. Therefore, as Colorado’s labor demands increase, the state must rely on higher attainment levels of the students exiting the K-12 system to meet growing demand.

The pipeline begins with early childhood education and preparing children to be “kindergarten ready.” For the 2017-2018 school year, only 48.6 percent of kindergartners entered into the K-12 system meeting all six of the state’s readiness domains.⁵ Significant gaps exist based on the economic status of students; 34.9 percent of students on free and reduced lunch (FRL) met all six-domain readiness standards, while 55.7 percent of non-FRL met all six domains.⁶ This data highlights that education opportunity gaps start early and many Coloradans are coming into the K-12 system at varying readiness levels.

Contributing to this situation is the lack of access to early childhood education. According to the U.S. Census, there are 403,934 estimated children below the age of six in Colorado; of those roughly 24 percent are in single-parent households.⁷ There are currently 5,068 licensed child care facilities in Colorado representing an aggregate licensed capacity of 260,246 children.⁸

The demographics of Colorado continue to shift, and as racial minority groups become a larger percentage of the state's population, areas of inequity within the talent pipeline need to be addressed to ensure the state has a well-trained labor force. A measure of this within the K-12 system is the inequities between attainment levels of various populations as it pertains to four-year high school graduation rate. Figure 15 and Figure 16 show wide disparities exist between groups across Colorado.

Figure 15.

4-Year High School Graduation Rates for the Class of 2017

All Students	79%
Students with Disabilities	56.8%
Students with Limited English Proficiency	64.6%
Economic Disadvantaged Students	68.5%
Students in Title I Schools	56.5%
Students Experiencing Homelessness	55.8%
Gifted-Talented	93%

Source: Colorado Department of Education

Figure 16.

4-Year High School Graduation Rates for the Class of 2017 by Race/Ethnic Identity

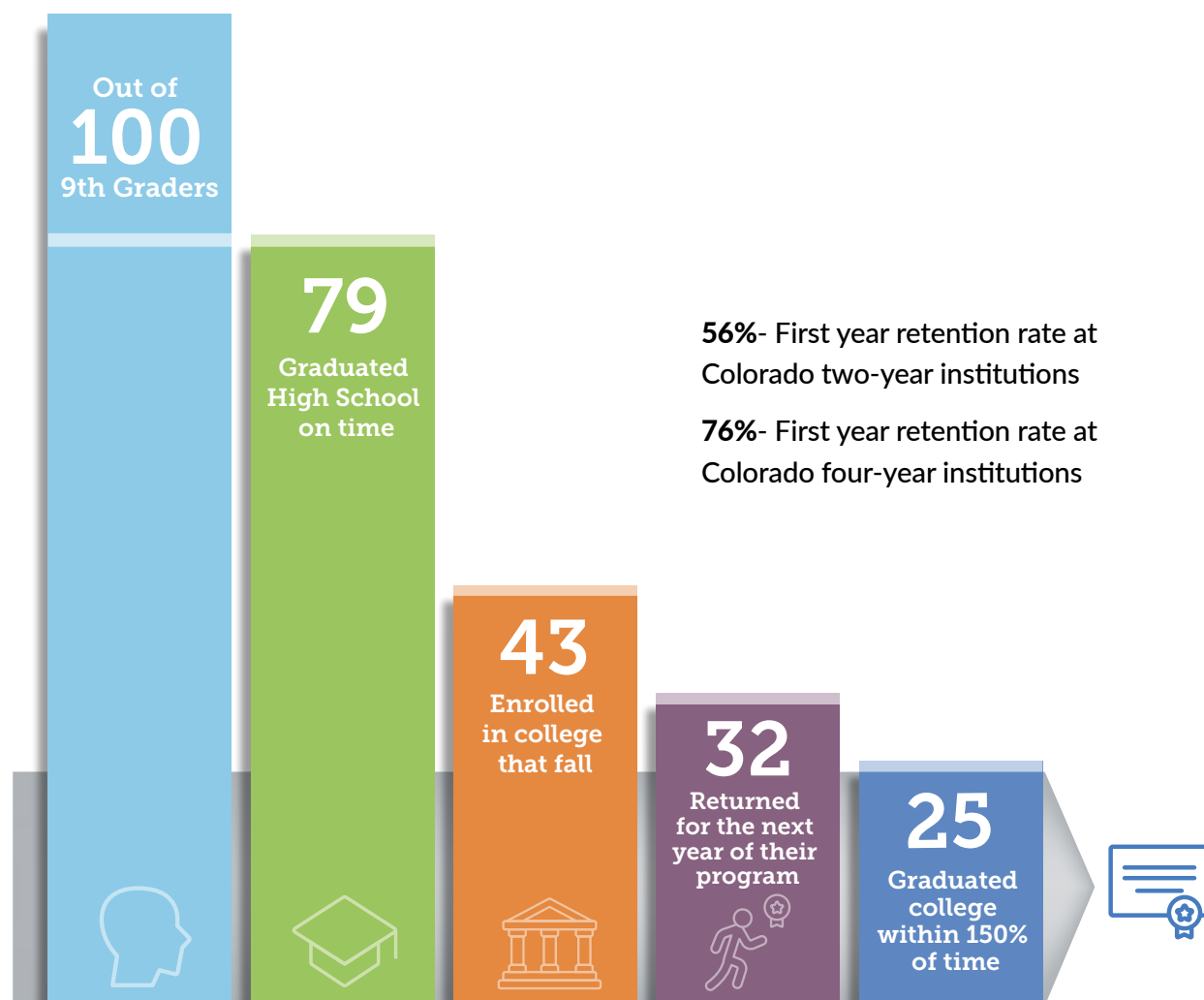
All Students	79%
White (not Hispanic)	83.9%
Black/African American	71.9%
Hispanic/Latinx	71.1%
American Indian/Native Alaskan	64.1%
Asian	89.8%
Native Hawaiian/Pacific Islander	76.5%
Two or More Races	80.2%

Source: Colorado Department of Education

While examining the four-year graduation rate can highlight disparities, an indicator of the health of the K-12 pipeline is better viewed through a cohort lens. Figure 17 depicts the current journey of 100 9th graders in Colorado.

Figure 17.

The K-12 Through College Talent Pipeline in Colorado



Source: Colorado Department of Higher Education. Numbers are approximate based on available data.

Students completing college within 150 percent of time has increased two percentage points since the last analysis. Yet, 74 percent of jobs will require education beyond high school by 2020. Therefore, having only 43 percent of 9th graders enroll in college after high school presents the biggest barrier to economic growth.

UNDERUTILIZED TALENT POOLS

People who have been involved in the justice system, individuals with disabilities, older Coloradans, and veterans are underutilized as resources to fortify our talent pipeline.

Corrections and Re-Entry Population

75%
of DOC's population has
a High School Diploma
or Alternative Credential

The upskilling that occurs within the corrections system does not, however, equal employability. In Colorado **32.6 percent of parolees are unemployed.**

The 2017 Colorado Department of Corrections (DOC) funding bill appropriated \$18 million to education services within DOC. For the recent year of available data (2017), the Colorado Department of Corrections and its partners awarded 3,713 certificates and 674 GED to 2,848 offenders. In addition, 504 academic courses that do not offer certificates (such as English as a Second Language and Adult Basic Education 1) were completed. Throughout a year, more than 11,000 offenders enroll in educational programming through DOC.

Coloradans with Disabilities

The Division of Vocational Rehabilitation (DVR), located in CDLE, works to help Coloradans with a disability prepare for and obtain employment. Currently, **10.4 percent of Coloradans have a disability compared to 12.5 percent nationally.**⁹ Broken down below are the number of individuals in Colorado with the disability types defined by the U.S. Census:¹⁰

- Hearing Difficulty, 183,130
- Vision Difficulty, 101,463
- Cognitive Difficulty, 195,474
- Ambulatory Difficulty, 262,869
- Self-care Difficulty, 91,698
- Independent-living Difficulty, 174,661

1 in 10
Coloradans has a Disability

Members of the disability community face multiple barriers to employment. Groups like DVR are working to help break down barriers for these Coloradans. In the 2018 fiscal year, DVR saw more than 15,599 clients across Colorado, 33 percent of whom had cognitive or communicative impairment, which is considered to have some of the highest barriers to entry.

Older Coloradans

As illustrated earlier, Coloradans age 65 and older have steadily increased as a percentage of the overall labor force. About one in five adults over the age of 65 are still working at least part time, and this group brings extensive skills and experience to the workforce. As the youngest segment of the workforce continues to decrease, we will increasingly need to look to older Coloradans to help maintain our workforce. Currently, tax structures and societal norms promote the concept of working full-time until a certain age and then not working at all beyond that age. That paradigm may need to shift in order to engage more older workers to fulfill the demands of the economy.

Colorado Veterans

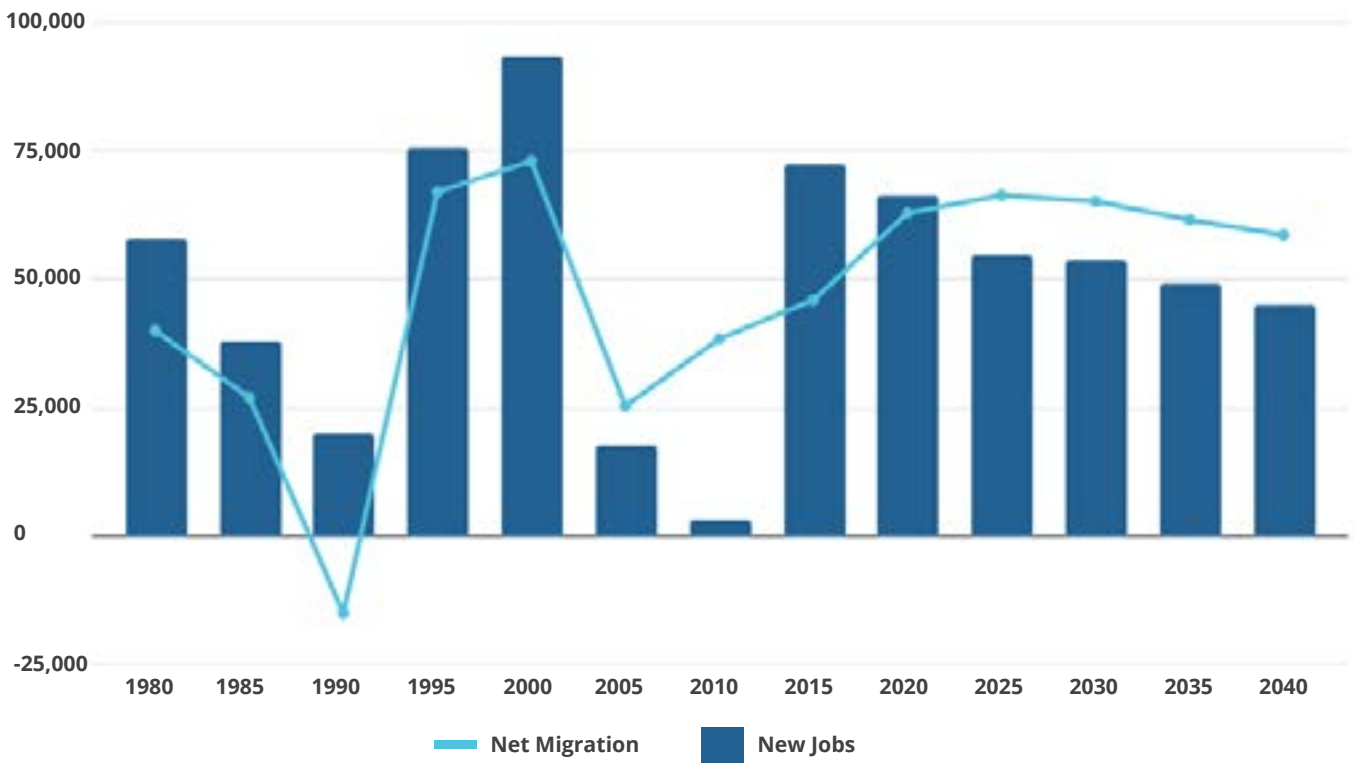
There are an estimated 383,699 veterans across Colorado; accounting for 9.4 percent of the state's population.¹¹ 75.4 percent of Colorado Veterans have education and training beyond high school, compared to 68.4 percent of non-veterans.¹² Despite these higher levels of attainment overall, Colorado veterans are more likely to be unemployed than nonveterans (3.7 percent unemployment rate in 2017 compared to 2.7 percent for nonveterans).¹³ Colorado's veterans offer the state a wealth of skills and knowledge that are important for the state's continued economic success. One reality is that veterans experience specific barriers to taking the skills and competencies gained during their service and translating military credentials to civilian occupations; making it essential for Colorado to provide veterans with the support needed to ensure they can thrive. Recognizing the high value veterans bring, the state and partners are working to ensure Colorado veterans can fully participate in the labor force.

NEW COLORADANS

Since 1990, a factor that has positively contributed to Colorado's economic prosperity has been the net migration effects due to new jobs. Figure 18 displays Colorado's net migration, which is the difference between the number of people moving into a geographic space and the number of people leaving, over the last three decades. In 1990, Colorado experienced a substantial increase in net-migration; from 2000 to 2003, the state saw dramatic decreases. Figure 18 also illustrates the connection between jobs and people; as new jobs increase so does net migration.

Figure 18.

Colorado New Jobs and Net Migration



Source: State Demography Office at the Department of Local Affairs

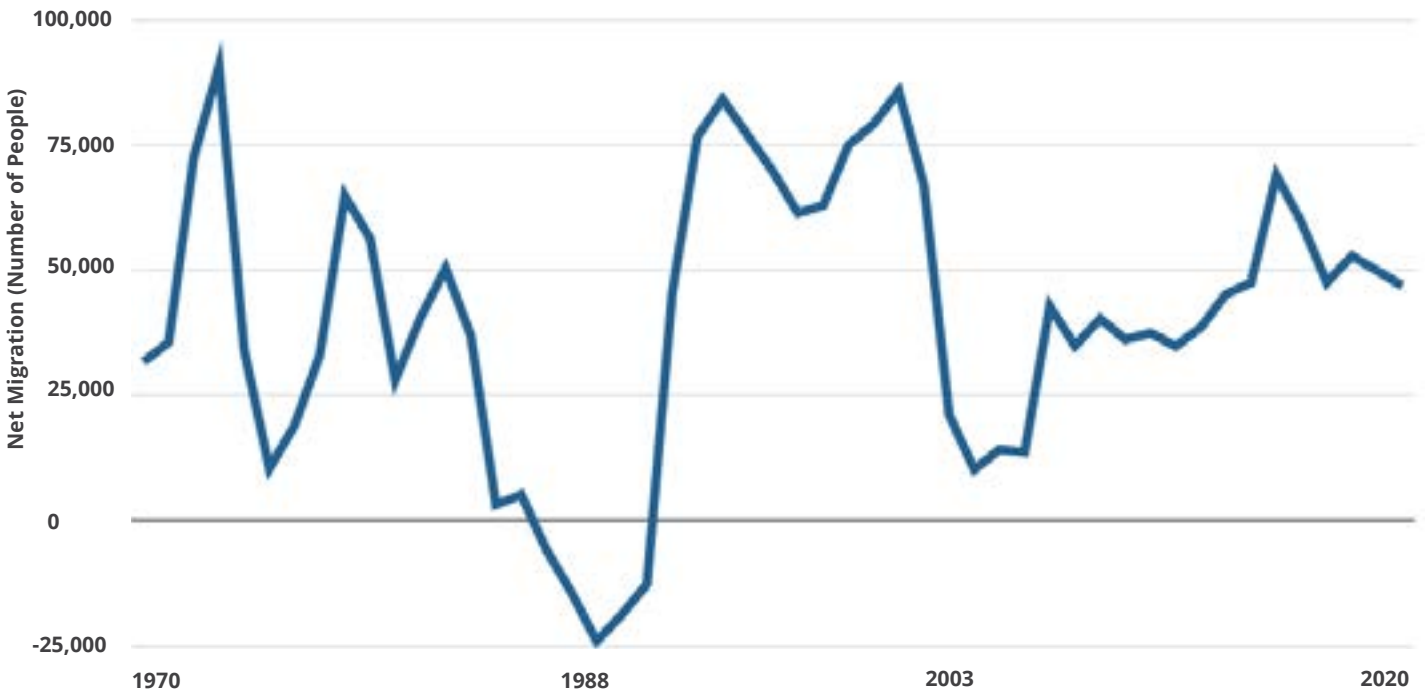
The [2017 Talent Pipeline Report](#) explored where Colorado is gaining and losing talent:

Top Talent Losses	Top Talent Gains
1. Washington	1. Illinois
2. Oregon	2. Texas
3. Idaho	3. California
4. Arizona	4. New York
5. Nevada	5. Kansas

To avoid duplication, this section focuses on a macro level examination of the impact of migration trends on Colorado’s talent pipeline.

Historically, Colorado has experienced large increases in net migration followed by steep decreases. Since the early 2000s the state has seen continued increases, yet since 2015 net migration—while positive—has been on the decline; it is projected to remain on a decline through 2020 (Figure 19).

Figure 19.
Colorado Net Migration 1970 - 2020



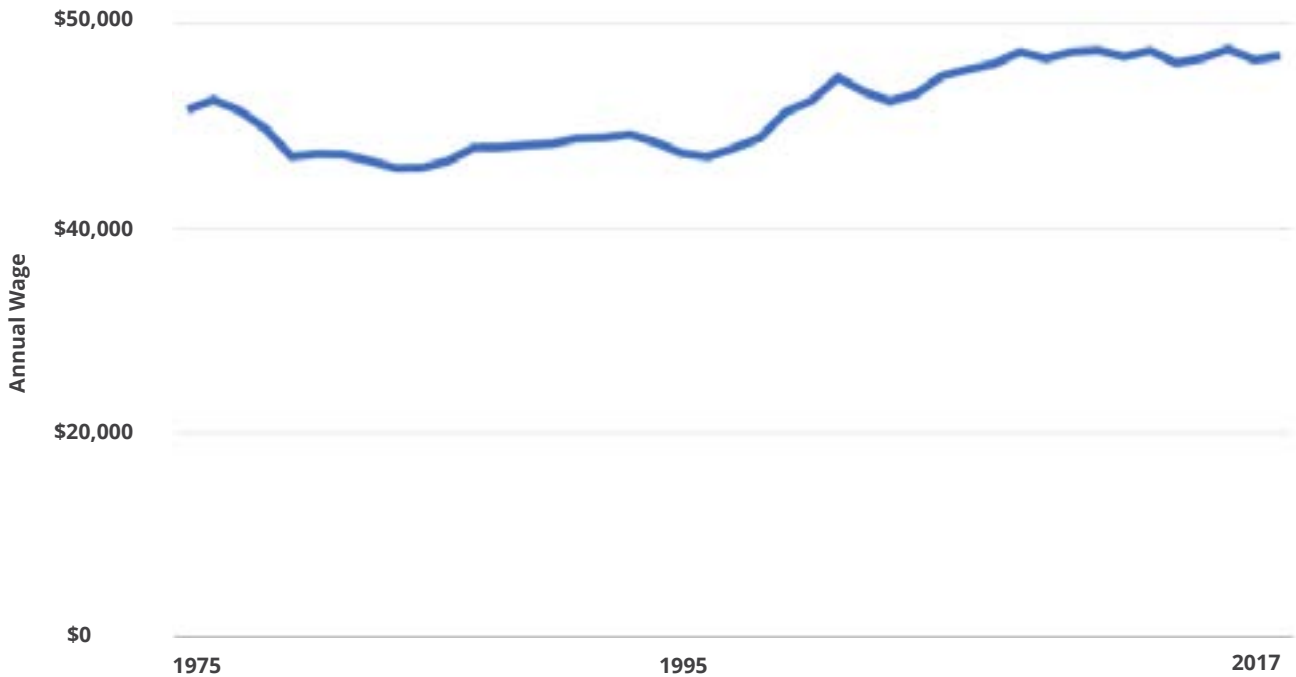
The slowing of net migration will impact Colorado’s talent pipeline. As the economy continues to demand individuals with higher levels of credentials, skills, and competencies, Colorado will not be able to rely on the level of net migration of individuals as the source of talent that it did in the decade from 2005 to 2015. Instead, we must fortify Colorado’s home-grown talent pipeline to supply the talent demanded by industry in the twenty-first century knowledge economy.

COMPLICATING FACTORS

More than 70,000 Coloradans not in the labor force say that they want a job, but they are not counted toward the state’s unemployment statistics.¹⁴ Therefore, Colorado must address the systemic barriers contributing to these individuals remaining outside the labor force in order to increase the supply of talent. Researching the specific barriers that exist can identify steps that both the legislative and executive branches can take to improve the talent pipeline.

Additionally, as the economy has recovered from the Great Recession, the average Coloradan has experienced little to no real wage growth (Figure 20). While nominal wages have increased, due to the increasing cost of living, Coloradans have not experienced a meaningful increase in their buying power for goods and services.

Figure 20.
Colorado Real Annual Average Wage (2017 Dollars)



Source: Bureau of Labor Statistics

A lack of growth in real wages prevents Coloradans from increasing their buying power, and it also prevents individuals from having an income that can be used for education and training, for either themselves or their children. The expense of **housing, childcare, food, and transportation are examples of the rising cost on Colorado families; these costs may not seem connected to the talent pipeline, but they create additional barriers for individuals wanting to upskill.** A lack of real wage growth coupled with rising costs for education and training makes postsecondary attainment and education less accessible for many Coloradans.



STRATEGIES: BALANCING THE EQUATION

The above analysis demonstrates that while Colorado's evolving economy continues to demand individuals with more education, training, and skills, Colorado's supply and the programs supporting the supply are not able to keep up. The response must be multifaceted in order to address challenges along the talent pipeline. There is also a need for an increased number of businesses in the private sector to become co-developers of talent, partnering with existing education systems to maximize resources and knowledge transfer to meet industry demands.

The programs currently being implemented are making progress. The strategies which follow, combined with the new commitments outlined in the recommendations section, will keep Colorado's economy moving forward. These existing promising practices are targeted at both meeting the talent pipeline demands of today and further strengthening the talent development system so that Colorado can supply the talent of the future, even as the state experiences demographic and economic shifts. Meeting these needs will require continued investment in innovative methods across the entire pipeline from early childhood to adult learners, while also focusing on providing opportunities for Colorado's often underutilized talent pool populations.

Efforts are being focused on both the demand and the supply side.

To address demand:

- Strengthen public-private partnerships
- Implement a competency-based ecosystem to reduce degree requirements and focus on developing skills
- Further develop career pathways

To address supply, strategies are organized by population impacted:

- Existing labor force ages 25+
- Future labor force under 25
- Underutilized talent pools

DEMAND SIDE STRATEGIES

Public-Private Partnerships

Colorado has set itself apart nationally in the implementation of [Next Gen Sector Partnerships](#). This model has worked very well to develop 26 partnerships throughout the state. Expertise in the implementation of the model has been developed by local workforce center staff and state agency staff. [Despite the success of sector partnerships as described on the CWDC website](#), the model has not worked sufficiently to bridge geographic divides in parts of rural Colorado, and it must be tailored to meet the needs of varying aspects of our state's economy. Specifically, in 2018 the CWDC began working with the education sector as an industry partner. The sector partnership model is being deployed, and it is being customized on demand to respond to the unique needs of that industry.

Through sector partnerships, industry leaders can articulate the skills that are most needed for critical occupations and can actively work on implementing competency-based hiring practices. Given the diverse makeup of our state's labor force, it is unrealistic to assume that the skills gap can be closed by sending all Coloradans through a traditional, full-time associate's or bachelor's degree program. Therefore, employers must be engaged in competency identification with the work of initiatives like Skillful Colorado and Colorado's industry-led career pathway development supported by HB15-1274 in order to send better signals to job seekers and to training programs.

Colorado's approach to talent development relies on strong public private partnerships, with businesses joining the education system as co-creators of talent development. Figure 21 displays visually how these partnerships work to drive systemic change and enhance our state's talent pipeline.

ACTIONS IN GROWING COLORADO'S TALENT PIPELINE

A skilled talent pipeline is essential to state-wide economic vitality. In Colorado, we believe industry-led, public-private partnerships are the framework for effectively developing the pipeline with the right skills.

This graphic emphasizes key steps businesses can take in developing talent.



Figure 21.

By focusing on the skills needed to do the job rather than relying on the use of credentials as proxies for skills, Colorado can better ensure alignment between the needs of business and the training of employees. A credential in Colorado is a document, certificate, or qualification recognizing attainment of measurable skills. Over the past two decades, the use of a four-year degree, specifically, as a proxy for skills has increased dramatically, resulting in confusing signals and contributing to our current skills gap. As the job market continues to shift, an increased focus on both hard and soft skills when hiring, rather than focusing solely on degrees as a proxy, is necessary to open up talent pools and accurately train the current labor force.

About Skillful Colorado

Skillful Colorado, a nonprofit initiative of the Markle Foundation, Microsoft, and LinkedIn, is dedicated to enabling all Coloradans – particularly those without a four-year college degree – to secure good jobs in a changing economy. Working with the state of Colorado and many local partners, including employers, educators, and workforce development organizations, Skillful Colorado seeks to create a labor market in which skills are valued, and people can more easily access the information and education they need to keep pace with technology's impact on work. Since its founding in 2016, Skillful Colorado has engaged with thousands of Colorado companies on the benefits of skills-based hiring and employment practices and trained hundreds of employers on how to put them into practice. Recognizing the importance of guidance and support, Skillful Colorado designed and operates the Skillful Governor's Coaching Corps and Community of Practice, programs to equip career coaches with tools, data, and training to better serve the state's job seekers. These coaches serve thousands of Coloradans every month. Skillful Colorado continues to deepen its engagement with employers and the organizations that serve them and expand its statewide reach, helping to create opportunities for job seekers and workers. To learn more about Skillful Colorado, visit Skillful.com.

Developing Career Pathways

When the competencies for critical occupations in an industry have been identified, that information can fuel the development of career pathway systems and programs that help Coloradans advance toward meaningful employment. The development of Colorado career pathways for in-demand industries started with support of [HB 15-1274](#), which since 2015 has produced statewide and regionalized occupation pathways for all individuals throughout Colorado in:

- Information technology
- Business operations
- Healthcare
- Cybersecurity
- Construction
- Advanced manufacturing

These career pathways help individuals find more than just a high-demand job. Instead, they help an individual navigate high-demand careers leading to long-term individual prosperity, creating a larger Colorado tax base, and fulfilling the economic demands of the shifting economy. During the 2017-2018 FY, Colorado focused on creating pathways for cybersecurity and business operations ([Appendix D](#)).

The education sector, which serves as the foundation for Colorado's talent pipeline, was identified as the industry of focus for career pathway development in the 2018-2019 fiscal year. The CWDC and Colorado Community College System will collaborate with state and local education industry leaders to focus on career pathway development for the early childhood and education industry. Specific occupations to be examined include teacher assistants, preschool teachers, secondary teachers, early education administrators, and postsecondary teachers. Through this year-long focus, along with the creation of a statewide sector partnership for education, Colorado will build knowledge for improving the state's education talent pipeline through aligned career pathways.

SPOTLIGHT

The Education Industry: Investing in Colorado's Future

In the twenty-first century economy, a liquid or adaptive skill set is required to meet the needs of business. Individuals must develop agile mindsets and pursue lifelong learning and skill development. Preparing individuals to meet the demands of the evolving economy, therefore, requires increased collaboration across business and the education and training delivery system.

Traditionally, education has operated in distinct silos and been perceived as a bureaucratic institution that is slow to change. In a shift from a traditional service perspective, partners along the educational continuum (early childhood, K-12 and postsecondary) need to view themselves as an industry. Leveraging their similarities and dependencies as an industry will allow for a more systemic approach to addressing the needs of education. Ultimately, this collective approach facilitates the creation of multiple pathways into the industry, allowing education to become responsive to its own needs and able to better serve the talent needs of Colorado's economy.

The education industry not only supplies the talent demands for Colorado's future but has a substantial everyday economic impact on the state.

Colorado's Education Industry by the Numbers:

- Colorado's 4th largest industry by employment
- \$10.3 billion in annual payroll
- More than 221,000 Coloradans employed in the industry (8% of the labor force)
- More than 10,000 employers
- 16,000 annual job openings, more than 50,000 jobs over five years

To address the ongoing economic realities of the education sector, the industry came together across early childhood, K-12, and postsecondary to launch a statewide education sector partnership on Oct. 25, 2018. Through this partnership, Colorado will serve as a national leader in systematically addressing the talent needs of one of the most foundational industries of a thriving economy.

Purpose for Launching a Statewide Education Sector Partnership:

- The Statewide Education Sector Partnership will serve as a model for regional education sector partnerships, setting the tone for strategic leadership and response partners across the state. The value in launching regional education partnerships across the state is critical to the economic impact in Colorado.
- Identify a set of actions that are needed at the state-level to strengthen the education industry and solve persistent and growing workforce challenges.
- Serve as a statewide connection point for regional educational partnerships.

The Benefits to Colorado:

- A joint understanding across the education continuum about the economic footprint of the education industry.
- The shift in mindset among those who deliver education services to view themselves as a connected industry with unique talent needs, not just a service provider.

One of the focuses of the Statewide Education Sector Partnership is to ensure the critical demands for talent in education are systematically addressed. For the past five years, the state has experienced declines in enrollment in educator programs,¹⁵ while also experiencing ongoing diversity gaps in the educator training pipeline.¹⁶ If Colorado allows these gaps to linger, we risk reversing our state's economic growth and undermining our position as a national leader. Specifically, Colorado sees demand in:

- Early childhood education and care (44 percent increase in openings)
- Special education (32 percent increase in openings)
- Middle and high school mathematics and science (27 percent increase in openings)

SUPPLY SIDE STRATEGIES

Strategies to Address the Existing Labor Force 25+

The existing labor force of adults 25 and older requires adaptable models that deliver upskilling and training opportunities. Promising practices include the implementation of work-based learning, as well as two-generation approaches that provide training opportunities while also addressing specific barriers to employment.

Work-Based Learning

Work-based learning (WBL) is a key strategy in Colorado to close both the skills and opportunity gaps and to meet the shifting talent demands of the economy. In most states, education agencies are leading the charge with WBL, and business often takes a passive role in informing the development of new programming. Colorado is one of the few states where business is helping to lead critical initiatives related to talent development. Industry-led initiatives help strengthen alignment between the needs of business and the programs created in the public sector. Colorado's WBL initiatives benefit from innovations spurred through the establishment of the Business Experiential Learning (BEL) Commission, driven by industry leaders and investment from the existing public workforce and education systems.

In 2015, the BEL Commission was formed with many leaders from private industry. The Commission was tasked with identifying experiential learning gaps within the state and developing systemic solutions to fill those gaps. After a study of leading demand-driven systems throughout the world, BEL identified WBL and, more specifically, apprenticeships as a proven strategy to close the skill gap throughout the state. BEL works in collaboration with the CWDC and other state and local stakeholders to develop systematic solutions for integrating WBL that meets the needs of Colorado's economy.

During 2017-2018, BEL worked with business leaders and state agencies to identify five priorities to advance work-based learning in Colorado:

1. Providing guidance and input to support the development of high-quality work-based learning initiatives
2. Shifting public perception and awareness of work-based learning opportunities
3. Working with businesses to identify opportunities to promote skill-based hiring and work-based learning as strategies to address talent shortages
4. Engaging the education and training providers to support them in teaching what people need to know to succeed in Colorado's economy
5. Supporting the promotion of a policy environment to advance and promote the work of the BEL Commission

The strategies identified by the BEL Commission are operationalized through the public workforce system and education system. Colorado has become a national leader in WBL by aligning efforts across those sectors and by creating a common framework in which to operate.

Through this collaborative work, it became clear there are varying definitions of “work-based learning.” To address this challenge, public and private partners came together, convened by the CWDC, to create Colorado’s Work-Based Learning Continuum (Figure 22). The continuum divides work-based learning into three broad categories: learning about work, learning through work, and learning at work. Each of these experiences provides learners with a variety of opportunities to extend their knowledge, skills, and competencies.

Figure 22.



Across Colorado's WBL Continuum, there are opportunities for individuals to gain skills in an applied setting while also gaining further understanding of the various facets of in-demand industries. Through scaling WBL experiences, Colorado has the long-term ability to set a new vision for the country and to solidify the role of WBL in education and training.

Important to Colorado's success is the state's role in national discussions on WBL through the National Governors Association's WBL Policy Academy. Involvement in this initiative brings together state program leadership to hear and implement best practices, while also sharing Colorado's successes with other states and territories. At a local level, communities across Colorado are collaborating with state agencies and departments to create more WBL opportunities. Through collaborations involving education, business, and the public workforce system, more Coloradans are earning and learning through WBL experiences.

Workforce Innovation and Opportunity Act - Title I Programs

The federal Workforce Innovation and Opportunity Act (WIOA) funds programs delivered through county and state-run workforce centers serving eligible adults, dislocated workers, and youth who need additional employment services, education, and training to enter or reenter the workforce. Among the many services offered are work-based learning options, including:

- On-the-job training
- Apprenticeships
- Internships/work experiences
- Virtual job shadowing

More than 5,000 job seekers take advantage of these services each year. These programs are administered by the Work-Based Learning Unit within CDLE's Workforce Development Programs. The unit was established in 2017 at the request of the Governor to align, oversee, and coordinate all work-based learning and apprenticeship strategies within CDLE and the local workforce areas. Additional information on public workforce system programs, as well as impact stories of customers, can be found in the PY17 WIOA Annual Report in [Appendix F](#).

Innovative Industries Internship (III) Program – House Bill 15-1230

CDLE received a state general fund grant to launch the Innovative Industries Internship program on Jan. 1, 2016. The program provides funding for up to 90 internships annually and is designed to incentivize businesses in innovative industries to build their talent pipeline through aligned education and work-based learning. The program model provides half of the cost associated with internships with a cap of \$5,000 per internship. The state provides reimbursements directly to businesses and links employers and interns to the local workforce areas for ongoing support. The program provides web-based applications, internship resources, program orientation, evaluations, and billing. Employers work directly with the state program coordinator, and the state also contracts with six industry associations to assist with program development and employer outreach.

The program has been tremendously popular with Colorado employers. Demand from employers for additional interns continues to exceed current program funding. The full report for Fiscal Year 2018 can be seen in [Appendix K](#). Program outcomes from inception through June 30, 2018, are as follows:

- **424 internships** have been approved throughout Colorado since program launch.
- **279 businesses** within the eight innovative industries have been approved since program inception, of which 7% are Rural, and 93% are within the Metro Denver area.
- Participating interns were making a minimum of \$10.20/hr and up to \$27/hr. **Average hourly wage is \$15.06.**

WBL Learning Labs

The TalentFOUND Sector Summit on Work-based Learning was hosted in October 2017 and convened leaders across Colorado to identify opportunities to advance work-based learning. During the summit, the CWDC introduced the Thriving Work-based Learning Communities Model. The model provides a framework to support cross-sector community collaboration to develop strong work-based learning opportunities as a strategy for strengthening regional economies. Following the summit, the CWDC released \$450,000 in flexible grant funds to 10 entities to increase capacity in communities to collaborate across business, education, and workforce and support the implementation of the model. In addition to funding, grantees are engaging in a 12-month WBL Learning Lab to explore challenges faced across initiatives and engage in peer-problem solving to strengthen collaboration and high quality work-based learning policies and practices.

Apprenticeships

For decades apprenticeships have been a successful strategy to fill the talent pipeline for a limited number of industries and servicing a narrow demographic of Coloradans. It is essential for Colorado to work to diversify businesses taking part in apprenticeships as well as ensure the accessibility of apprenticeships to all Coloradans. Currently, Colorado's apprentices are predominantly male and white. If apprenticeships are going to open new pathways for all Coloradans, the state must work to ensure equitable access. In the fall of 2018, [Young Invincibles released a report](#) that studied the current makeup of Colorado's apprenticeship market. Here are three of their key findings:

1. Only 6% of active apprentices in Colorado identify as being a woman.
2. Among active female apprentices, only 4% are in Tier 1 top jobs.
3. Women in registered apprenticeships in Colorado complete at a rate of 40% compared to 27% for male registered apprenticeships.

In November 2016, the Colorado Department of Labor and Employment received the ApprenticeshipUSA State Expansion grant. This \$1.8 million grant initially ran from November 2016 - April 2018, and in May of 2018, CDLE successfully secured an additional \$1 million continuation grant to continue the work through Oct. 31, 2020. Together these two funding sources are supporting work to increase the number and diversity of registered apprenticeship programs in Colorado, as well as further aligning them with the state's employment, education, and economic development systems. These grants are also increasing the level of support for individual apprentices within the programs. Although the grant period has been extended by USDOL through Oct. 31, 2020, CDLE has already exceeded all grant goals for program development and demographic inclusion, as shown in Figure 23.

Figure 23.

ApprenticeshipUSA Grant Outcomes as of June 30, 2018

Performance Indicator	State Goal	Actual Achieved	Percentage of Goal
# New Apprentices	248	632	254%
# New Registered Apprenticeship (RA)	9	24	266%
# New Employers Engaged	45	203	451%
# Apprentices with WIOA Services	248	268	108%
# Women Enrolled in RA	12	85	708%
# Youth (16-24) Enrolled in RA	74	87	117%
# Persons with Disabilities Enrolled in RA	12	22	183%
# Minorities Enrolled in RA	84	115	136%

To expand apprenticeship opportunities for opportunity youth and adults, workforce staff and partners pursued recruitment of businesses and industry intermediaries to participate in building both the local sector partnerships and the statewide network of apprenticeships. Similarly, grant partner CareerWise Colorado expanded its efforts to embed pre-apprenticeships and apprenticeships in secondary schools across the state. As of July 31, 2018, 33 new sponsors had registered their apprenticeship programs in the state. These new sponsors, as well as existing sponsors, added 56 new apprenticeships in diverse occupations throughout the state. Also, CDLE and workforce center staff engaged in apprenticeship conversations with more than 200 businesses. This work is fundamentally changing the way Colorado’s workforce and educational systems approach employment and training for youth and adults.

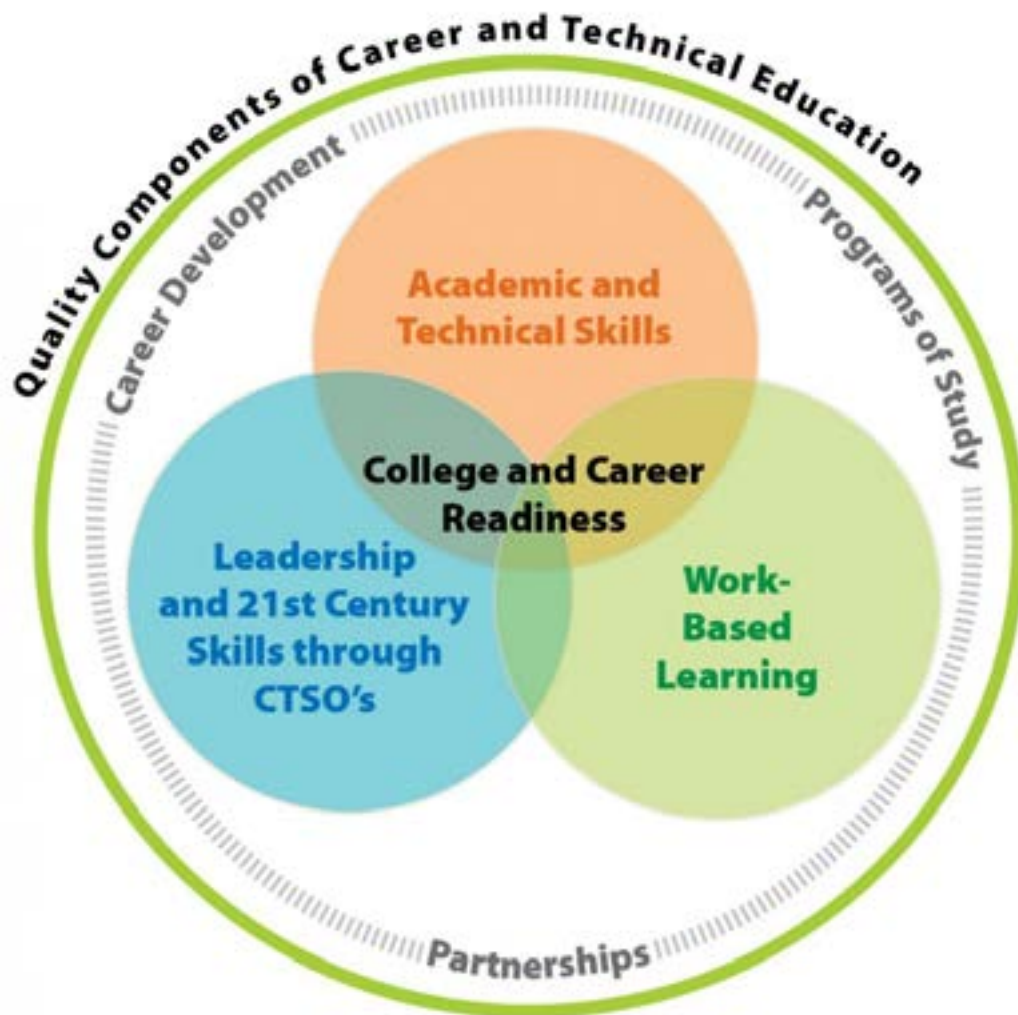
In June 2018, a cross-agency communications committee launched a public awareness campaign, titled Apprenticeship Evolution, which includes a website, TV and radio spots, and social media. The website includes video testimonials of apprentices and businesses who are engaged in apprenticeship programs. As of the end of September 2018, the total number of television and radio spots was 22,204, in addition to 3,057,954 digital media impressions. Collectively these efforts, along with a growing number of private partnerships, are helping to continue Colorado’s competitive success.

Career and Technical Education

Colorado Career and Technical Education (CTE) ensures a thriving Colorado economy by providing relevant and rigorous education that is connected, responsive, and real through programs in local education agencies, institutions of higher education, and the Department of Corrections. CTE programs are connected to occupations that are high-wage, high-skill, and/or in-demand across all industry sectors in Colorado. Each of the more than 2,000 CTE programs across the state require work-based learning. Programs provide access to WBL experiences from across the Colorado WBL Continuum, and opportunities are guided by local or regional business and industry advisory committees who also inform curriculum in each CTE program.

Figure 24.

Colorado’s CTE delivery model depicting quality components of career and technical education



In the 2016-17 academic year, 39 percent of Colorado high school students took at least one CTE course, with 103,802 individual high school students enrolled in 1,376 CTE programs across 185 schools in 154 districts. Development of middle school CTE programs is an emerging area, and, in 2017, there were 117 CTE programs across 96 schools in 46 districts. On the other end of the pipeline, Colorado has 545 CTE programs across 19 postsecondary institutions. This translates to 21,176 postsecondary certificates and associated degrees earned in the 2016-17 academic year that match to high-wage, high-skill, and/or in-demand areas.

For individuals connected to the employment, education, or training programs described above, WBL is a critical component to develop the skills needed for the future economy. To meet the demand, however, the total number of people accessing training programs must be expanded. This can be achieved by increasing awareness of training programs that lead to in-demand careers, and through reducing the barriers that keep people out of the classroom.

Skilled Worker Outreach, Recruitment, and Key Training (WORK) Act

The WORK Act is intended to increase awareness of, and enrollment in, Colorado's skilled worker training programs to grow Colorado's skilled workforce. The original three-year grant provided \$10 million for marketing and updating training to meet industry standards, so that businesses' need for skilled workers could be met. The program is administered in annual cycles, and outreach under this grant is targeted to populations typically underrepresented in their industry such as veterans, youth, dislocated workers, ex-offenders, and residents of neighborhoods impacted by large infrastructure projects in Denver. This program was extended in 2018 through HB18-1316. A full report on the past fiscal year can be found in [Appendix G](#), and a summary of the results is below.

WORK Act Grant Cycles

Cycle 1 Extension - July 1, 2017 – Aug. 31, 2018 three successful Cycle 1 grantees were awarded \$1,306,000 (data through June 30, 2018).

- 1,622 students were actively recruited through outreach efforts
- 728 completed training ranging from 30-day boot camps to certificate programs
- 587 completers employed

Cycle 2 - May 1, 2017 - June 30, 2018 eight new grantees were awarded \$3,213,523. Three were granted no-cost extensions concluding Dec. 31, 2018 (data through June 30, 2018).

- 5,899 students were actively recruited through outreach efforts
- 2,402 completed training, ranging from 4-week pre-apprenticeships to 6-month apprenticeship programs
- 1,175 completers employed

Cycle 3 - Jan. 31, 2018 - May 31, 2019 eight grantees were awarded \$3,098,218. Industries include: Financial Services, Health & Wellness, Infrastructure Engineering, and Tourism & Outdoor Recreation (data through June 30, 2018).

- 3,661 students were actively recruited through outreach efforts
- 416 completed training, from one week intensive to three-year youth apprenticeships
- 124 completers employed

Eliminating Barriers

As discussed in the supply analysis of this report, the high costs of services, such as childcare, can prevent Coloradans from accessing training opportunities. In order to enroll more individuals in training, childcare needs can be met through programs directly connected to education and training providers. Early childhood education services housed within higher education institutions help to meet the goals of [Colorado's Two-Generation Model](#), which holistically supports the education and well-being of children and their adult caregivers.

Since 2011, five Colorado postsecondary institutions have received a total of \$3.6 million dollars through the U.S Department of Education's Child Care Access Means Parents in School program (CCAMPIS). The purpose of this program is to "support low-income parents in postsecondary education through the provision of campus-based child care services." As part of [Colorado's 2Gen Action Plan](#), CDHE is committed to engaging more Colorado institutions in applying for CCAMPIS grants.

Below are two spotlights of how Colorado institutions of higher education are working to meet the needs of learners and their families to create equitable postsecondary pathways.

SPOTLIGHT

The Campbell Child and Family Center - Fort Lewis College

Located at Fort Lewis College in southwestern Colorado, the Campbell Center provides high-quality programs that deliver a safe and nurturing environment while promoting the development of young children. The center offers programs that meet the 10 NAEYC Early Childhood Program Standards. Using a blended-funding model, the Campbell Center works to meet the needs of a diverse population. While the center has been thriving in reaching a wide audience of families, they recognize a need to support more Fort Lewis students. The college has a majority-minority racial/ethnic population and is in a community where many families do not meet the state's definition of earning a living wage. To address this, the Campbell Center offers financial subsidies and tuition support to families. Additionally, student-parents have the highest priority in enrollment and have the availability of before and after school care for their children, as well as after hours during midterm and final exam weeks. With student-friendly policies, the Campbell Center is helping to create more equitable educational pathways for both young children and their student parents, effectively supporting two-generations within one program model.

“ Thank you for helping me with my tuition assistance for my child’s daycare. With your donation I have been able to continue my education to better our future. Without your donation I would not be where I am today. I am a single mother, a full-time student [who graduates this spring], and I maintain two jobs. Thank you for helping me with my future as well as [my child’s].”

- Fort Lewis Student and Parent

”

Without the financial assistance offered by the Campbell Center, this student and her child’s educational pathways would have been negatively affected.

An additional benefit of being located at Fort Lewis College, beyond helping students to overcome the barrier of childcare, is that the center collaborates with programs across the college. A result of this collaboration is that early childhood education teachers earn work-based learning credit at the Center, as well as in the local public schools, helping to fulfill the growing demand for early childhood teachers while staffing the center. These results make the Campbell Center a win for students, parents, and the local economy.

SPOTLIGHT

The Children's Center at Red Rocks Community College

The Children's Center at Red Rocks Community College was founded in 1998.

Their mission is to:

- Support children as they learn about and explore their uniqueness and the world in which they live.
- Offer rich experiences in a respectful, safe, and caring learning environment.
- Foster nurturing relationships between children, staff, and families.
- Empower families as experts of their children and as their first teachers.
- Provide a demonstration/lab site.
- Act as a beacon for the community by modeling high-quality early care and education.

The center is licensed for 54 children ages 18-months to kindergarten entry, with a waitlist of more than 100. Twenty-five percent of the waitlist is students at Red Rocks.

The Children's Center voluntarily participates in the Child Care Assistance Program reserving 10% of their slots for families who are moving towards self-sufficiency. Also, the center is a private site serving children who are eligible for the Colorado Preschool Program.

In the summer of 2013, the Children's Center applied for and received a \$471,780 grant through the U.S. Department of Education Child Care Access Means Parents in School program (CCAMPIS).

Since 2013 they have helped 74 Red Rocks Community College students (57 of whom were first-generation students) move toward meeting their educational goals.

The Children's Center regularly collaborates with the Red Rocks Community College ECE Department. They provide training and instruction opportunities for Center staff, while the Center offers mentor teachers for the ECE Department. This year the ECE department is offering concurrent enrollment to students at McLain Community High School in Lakewood, and the Children's Center staff can mentor and guide six students.

At the Children’s Center, they understand that learning cannot take place until a child’s social and emotional needs are met, and they partner with the Jefferson Center for Mental Health and City of Lakewood Head Start for mental health consultation services.

“ When I found out this facility had CCAMPIS, I was excited because I was finally able to put [my daughter] in daycare. CCAMPIS will help tremendously because I will be able to have daycare assistance. I will be able to focus on the necessities she needs like diapers, wipes, clothes, etc.

- Cierra

”

The Campbell Center and the Children’s Center are prime examples of how Colorado can invest in both the short- and long-term talent pipeline through one initiative. These centers and others like them throughout Colorado depend on grant dollars to support the most in-need families. The state of Colorado has an opportunity to play a greater role in investing in early childhood education, especially through programs that also help empower parents.

Strategies to Address the Future Labor Force Under 25

Colorado's future labor force includes two groups who receive specialized focus: individuals involved in early childhood and the K-12 system, often referred to as in-school youth, and individuals ages 16 to 24 who may be disconnected from these systems, referred to as opportunity youth.

In-school youth in Colorado are able to access several different innovative programs to prepare for entering the workforce or postsecondary education.

Career Success Development Program (HB16-1289 & HB18-1266)

This program is designed to incentivize school districts to offer various types of credentials and educational programs to high school students. During each year of the pilot program, demand for the program has exceeded the available funds. In 2018, the legislature granted additional funding and transitioned the program from a pilot to a full implementation status. Additional information can be found in [Appendix J](#).

2017-18 Program Facts:

- 37 school districts in Colorado reported students who completed qualified credentials in at least one of the three tiers.
- 5,689 total qualifying credentials/courses were reported.
- Students at all high school grade levels received various qualified industry credentials or completed AP courses, the majority of which were in 11th and 12th grades.
- Due to the high number of industry-identified certificates reported, only the first tier of credentials was funded. (See funding request vs. those funded in Figure 25)

How is the funding distributed?

Participating districts or charter schools can receive up to \$1,000 for each student who successfully completes one of the qualified programs. The specific dollar amount of each incentive depends on the total number of completed programs in the state and the number and type of completed programs reported by districts. Incentives are distributed in tiered order:

1. Industry certification programs,
2. Internships, residencies, construction industry pre-apprenticeships or construction industry apprenticeships, and
3. Computer science Advanced Placement courses.

Figure 25.

Request for Career Success Development Program Funding for 2017-2018

Qualified Programs	Number Reported by Districts	Number Funded	Amount Funded by the State
Industry-Recognized Credentials	3,655	3,655	\$2M
Internships	921	0	\$0
Residency Programs	38	0	\$0
Construction Industry Pre-Apprenticeships	184	0	\$0
Construction Industry Apprenticeships	0	0	\$0
Advanced Placement Computer Science Courses	891	0	\$0

Source: Colorado Department of Education

CareerWise Colorado

CareerWise is the first statewide modern youth-apprenticeship system in the United States. The nonprofit intermediary connects K-12, higher education, and industry to develop an applied-learning environment that creates multiple pathways to college and career for students, and the framework for businesses to create profitable, long-term talent acquisition strategies. Through its business-led, student-centered model, CareerWise brings together public and private stakeholders to ensure students have access to the skills and knowledge they need for financial and academic success, and that businesses have access to highly-trained talent.

Modern Youth Apprenticeship:

- Offers opportunities in 21st-century fields such as IT, financial services, advanced manufacturing, business operations, and healthcare
- The three-year program ensures apprentices are skilled employees ready to enter the workforce and businesses realize a positive ROI on apprentice production in in-demand positions



Governor's Summer Job Hunt Program

The Governor's Summer Job Hunt (GSJH) is a federally funded, statewide program which assists Colorado's youth, ages 14-24, with career exploration, workforce readiness, and interest-based job search. During the 2017 calendar year, **41,589 youth and young adults registered for the program statewide, with a 60 percent entered employment rate**. Registrations dropped slightly from 2017 but remain high despite Colorado's extremely low unemployment rate. Local workforce areas continue to market their services aggressively to in-school youth via school districts, and to all youth through local partner organizations ([Appendix F](#)).

- More than 21,000 youth received direct services.
- Statewide, more than 10,000 youth participated directly in local job fairs, career events, and workshops.

SPOTLIGHT

GSJH Local Impact

Weld County

Employment Services of Weld County (ESWC) strived toward increased dedication to rural youth in the South Weld County region. ESWC accomplished this goal by partnering with Fort Lupton High School, Weld Central High School, Aims Community College, and local employers to expose more youth to postsecondary education opportunities and work experience.

One big success for ESWC was the collaborative effort from all programs to solidify the program known as Weld Works 4 Youth. This summer employment program came back to life after a seven-year hiatus. The program was able to employ a total of 47 young adults ages 14-17 and provide life skills workshops throughout the summer. The reintroduction of the program was a success that they hope to continue for years to come.

Larimer County

During the spring of 2017, the Larimer County Workforce Center (LCWC) created a summer work experience program for low-income youth, ages 16-18. The program was titled the LCWC Community Summer Internship (CSI) program and was funded in partnership from Community Services Block Grant (CSBG) and Colorado Works resources. CSI work experiences provided employment skill development, opportunities to explore careers, networking connections with adult business professionals, and added summer income to young adults and their families. Additionally, CSI strived to align work experiences within a career pathway that participants identified as an area of interest. This was completed through initial career exploration activities to support future career decision making. Internships were designed for 25 hours per week over the course of 10 weeks with wages subsidized at \$10 per hour. Twelve local businesses participated by hosting and training interns.

Postsecondary Enrollment

While the programs for in-school youth are preparing students for life after high school, there are still a multitude of social and economic barriers to gaining the skills required to earn a well-paying job. When it comes to postsecondary and workforce engagement, one of the most significant obstacles for individuals is finances. At the federal level, students who complete the FAFSA are eligible for several financial supports relating to upskilling. However, Colorado ranks near the bottom in the country in FAFSA completion, which significantly reduces the number of individuals pursuing education beyond high school.

Free Application for Federal Student Aid (FAFSA)

Every year thousands of Colorado high school students fill out the Free Application for Federal Student Aid (FAFSA). Once completed, students are eligible to receive grants and loans from the U.S. Department of Education. Across the country, FAFSA completion is recognized as a predictor of postsecondary enrollment.¹⁷ Of those who complete the FAFSA, 90 percent will enroll in college within one year. **Only 50 percent of high school seniors complete the FAFSA; this puts Colorado 47th for FAFSA completion according to the National College Access Network.** Colorado is ahead of only Washington, Arizona, Alaska, and Utah. Leading the country at the state-level for FAFSA completion are Louisiana, Tennessee, and the District of Columbia. For Tennessee and the District of Columbia, students must complete the FAFSA to receive state aid, providing a strong incentive for students to complete the form. In Louisiana, completing the FAFSA, or submitting one of three waivers, is a high school graduation requirement.

Colorado's low percentage of learners completing the FAFSA - across the education and training pipeline - negatively impacts the state's ability to meet talent demands and ensure equitable access to postsecondary opportunities.

As a state, Colorado high school seniors left **47 million dollars in federal Pell Grant aid on the table in 2017 alone.**¹⁸ The number is even higher if adult learners and other forms of postsecondary aid, such as state aid, work study, and private scholarships could be accounted for. It is these millions of dollars which students could use to upskill and help meet the demand of Colorado's shifting labor market. Nearly 15,000 high school seniors who are eligible for Pell Grants do not take advantage of the funding, which is negatively affecting the student's own economic and social mobility while also hindering Colorado from meeting its attainment goals.

In 2017

\$47 Million

of Pell Grant aid was left on the table by
Colorado high school seniors

It is important to note the difficulties in completing a FAFSA. While the federal government continues to work to improve the FAFSA application process through technology, such as the FAFSA app that was released in the summer of 2018, the process is still time-consuming for learners and their families. To offset these difficulties, it is essential for Colorado and its educational institutions to support students and their guardians during the application process. As Colorado continues to strive to improve its talent pipeline through the individuals accessing education, it is vital that the state invest direct dollars into increasing the percentage of graduating seniors completing the FAFSA. Through increasing FAFSA completions, Colorado will create a larger pool of students that are eligible for federal dollars. The end result will be increased enrollment and support to better leverage federal funds and improve Colorado's attainment level.

Addressing Employment Gaps for Opportunity Youth

Individuals ages 16-24 in the opportunity youth population face a multitude of intersectional barriers that may prevent them from gaining the education and training they need to take part in the labor force. There are more than 63,000 opportunity youth in Colorado who face a wide variety of challenges to re-engaging in education or the workforce. These challenges include having limited English proficiency, being pregnant or parenting, being former foster youth, having disabilities, or having been involved with the judicial system. According to the Opportunity Youth Initiative, "After age 25, the lifetime social burden related to health, crime, and public assistance associated with each opportunity youth who stays disconnected totals \$529,000. Under-employed and unemployed opportunity youth in the United States represent a total loss of \$11 billion in foregone tax contributions annually."

According to a Jobs for the Future report, “Young people who are out of school and unemployed need substantial preparation and supports to get and keep a job or succeed in postsecondary education.” In November of 2018, the [Denver Opportunity Youth Initiative released a report that highlighted that the state is handcuffed due to the lack of robust data](#). To create strong and grounded policy, Colorado must work to understand the Opportunity Youth population. Programs across Colorado are working to close the economic and social divides by developing career pathway programs where Opportunity Youth are the focus and not an afterthought.

Pre-Apprenticeship Programs

In Metro Denver, the Denver Opportunity Youth Initiative, in partnership with the Greater Metro Denver Health Care Partnership, Adams County Workforce Center, Denver Workforce Services, Arapahoe/Douglas Works!, and the Central Colorado Area Health Education Center provided a unique healthcare learning opportunity for opportunity youth, a Healthcare Pre-Apprenticeship Pilot. The Healthcare Pre-Apprenticeship program brings together community-based organizations, employers, and local workforce centers to accomplish a common goal of creating a training on-ramp for young adults into healthcare careers.

“

This generation of students want to make a difference, and healthcare is an excellent opportunity to make a difference. Students were able to learn about the healthcare industry and all the opportunities available to them to jump-start their career, and employers were able to “widen our scope of who we appeal to from a job candidate perspective.

- Erin Lawless, director of human resources for Colavria Hospitality

”

Angelina Velasquez, a 19-year-old recent graduate from Florence Crittenton High School for young parents, knew she wanted to have a career in healthcare but was not sure how to start. She enrolled in the Healthcare Pre-Apprenticeship program in June of 2018 after a teacher introduced the opportunity to her.

“

Healthcare is cool; there are so many different things you can do. My long-term goals are to be in college, have a job and have a place for myself and my child.

- Ms. Velasquez

”

Ms. Velasquez enjoyed visiting the cadaver lab and being able to look at the organs the most while in the program. After graduating Ms. Velasquez was employed at a Colavria long-term care facility where they will help her earn her certified nursing assistant certification.

Mobile Work-based Learning

The Division of Youth Services contracted with Pueblo Community College to bring a unique hands-on learning experience to six youth within Grand Mesa Youth Services Center in Grand Junction. The college brought their Welding Mobile Learning Lab on site to the facility in April of 2018 and offered students a five-week program resulting in industry-recognized credentials in welding and OSHA certification. Five students completed the program, while one decided welding was not for them. Before the program started, the youth completed virtual welding training modules and wrote an essay to be selected to participate. Students said the following about their experience:

“

The welding program was a great opportunity for me. It taught me a lot, and I am very grateful for the opportunity.

- Nathanyel

”

“

It is a cool experience, and it is a learning opportunity for us to step outside of our comfort zones and learn something new.

- Sienna

”

Workforce Programs

Statewide, CDLE’s Work-Based Learning Unit and local workforce centers have utilized federal funding including the Workforce Innovation and Opportunity Act to develop work-based learning opportunities across the spectrum from job shadowing to apprenticeships to help opportunity youth ages 16-24 enter sustainable career pathway programs.

Career Navigation Toolkit

With support from the CWDC, the Denver Opportunity Youth Initiative has created a [career navigation toolkit](#); resources like this help individuals navigate a changing economic landscape. Investing in opportunity youth is not a one-size-fits-all approach and requires multiple organizations and funding streams to come together for lasting social change. Across Colorado successful models have incorporated paid work-based learning opportunities, strong partnerships with business and other community stakeholders, positive youth development and continued support services, and linkages to career pathways.

Strategies to Address Underutilized Talent Pools

In order to expand the labor force to meet the needs of Colorado's economy, solutions must be tested and scaled that equip the underutilized talent pools to succeed. These examples demonstrate successful initiatives and offer insight on what else can be explored.

Corrections and Re-Entry Population

The Colorado Department of Corrections (DOC) has proactively focused on education for its populations since 1990. Key activities are listed below:

1990- Colorado established an educational department within DOC. The goal of the legislation was to provide competency-based education programming for those in the department's custody.

2010- Provisions were added that "encouraged the use of career technical skills to determine program provisions and educational needs before relocating the offender to another facility."

2012- Legislative session HB 12-1223 was passed and signed. HB 12-1223 addressed Earned Time for DOC offenders. A key provision of this bill established "Achievement Earned Time" (AET) for any offender "who successfully completes a milestone or phase of an educational, career technical, therapeutic, or re-entry program." Another significant aspect of the bill directed any savings generated from the passage of the act be appropriated to: the education subprogram for Academic-GED and Career Technical Education programs; and the parole subprogram for parole wrap-around services. The department's education division has utilized this funding to develop exciting and innovative advancements in the field of offender education. With AET funds available the education program was able to make significant progress in providing additional opportunities in Career and Technical Education (CTE) programs.

Road to Work Program

The Road to Work program began as a partnership between DOC and CDLE. This program utilized the strengths of the public workforce system and wrap-around supportive services to provide employment opportunities and job retention activities to assist parolees in obtaining and retaining gainful employment. The program also reduced recidivism by assisting participants in achieving self-sufficiency and stability as they reintegrate into our communities. Participating local areas in the pilot program included Pikes Peak Workforce Center and Arapahoe/Douglas WORKS!

During this 30-month initiative, 236 parolees participated, resulting in the placement of 143 individuals in subsidized and/or unsubsidized employment with an average starting wage of \$11.61. In addition to the emphasis on work-based learning through placement into subsidized work experiences, 31 participants received vocational training to obtain occupational certifications to support advancement along career pathways. Workforce centers provided supportive services to assist in stabilizing the transition from incarceration to employment, including transportation assistance, shelter, work tools, interview preparation, and work clothing; along with soft skills training and a variety of workshops designed to help individuals obtain and retain employment.

The Road to Work initiative resulted in significant savings to taxpayers. The average cost per participant of \$2,780 reflects a savings of more than 90 percent of the average cost per individual per year for incarceration. The program continued in 2018 through a direct partnership between DOC and local workforce centers.

SPOTLIGHT

Road to Work Impact Story

Michael E. is a 55-year-old male who was referred to the Arapahoe/Douglas WORKS! Road to Work program by his parole officer in August of 2016 after initially accessing the program through his Disabled Veterans Outreach Program counselor. Michael became engaged in the program as he arrived at the DOC offices on the day of his release. He received housing assistance almost immediately and began researching his options in his desired field of Culinary Arts.

Michael secured culinary training through a Road to Work scholarship to the Emily Griffith Technical College. His case manager was able to meet with Michael, assist with monthly transportation, and provide clothing assistance as well as hygiene items. The head chef for Michael's culinary program has stated he is the top of his class, always eager to lead and learn. He has passed all of his exams with a 90 percent or higher. Michael has completed his program, obtained an associate degree in culinary arts, and now works as a kitchen manager in a local hotel.

Individuals with Disabilities

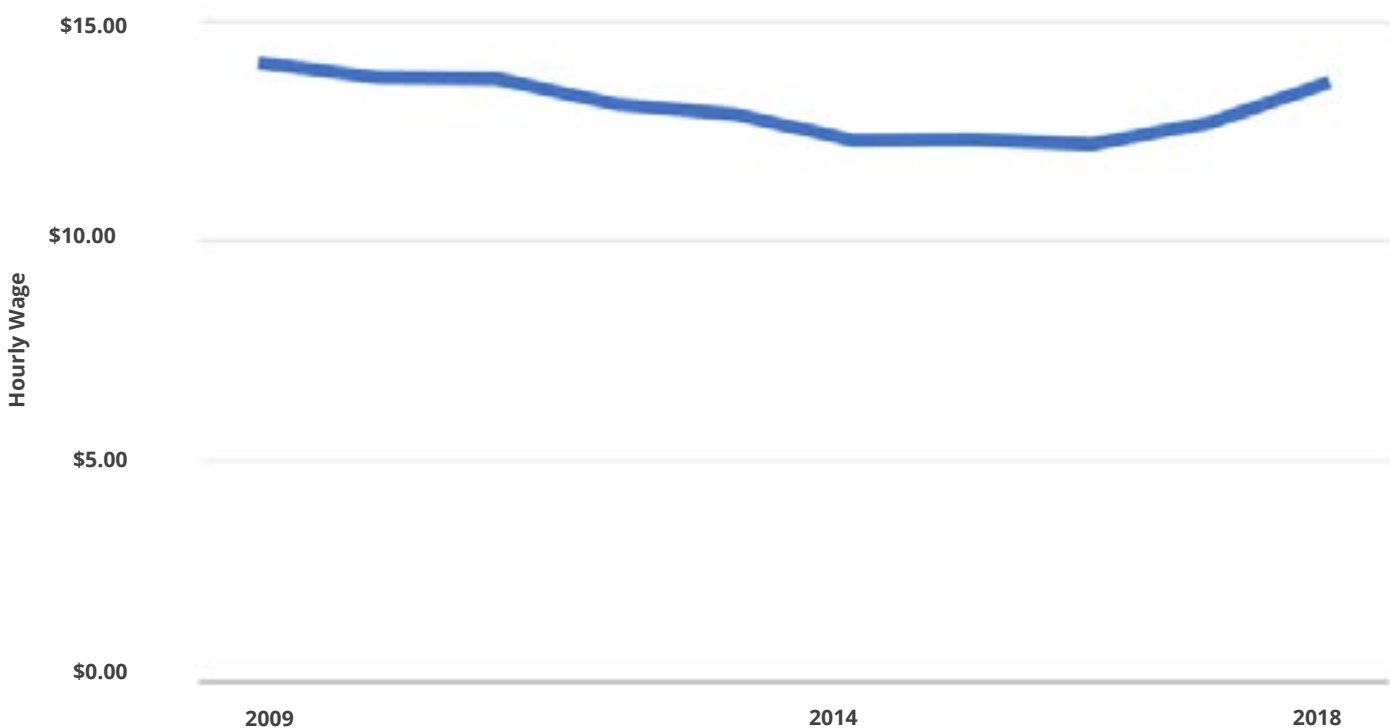
The Division of Vocational Rehabilitation (DVR) works to ensure that all eligible Coloradans with disabilities have access to services that can help them gain or maintain employment. One strategy utilized by DVR is to assist clients in identifying their skills. By helping individuals to find ways to highlight their skills, DVR also equips their clients with the language to be successful job candidates. To fulfill its mission, DVR relies on a mixture of federal and local funding sources. Federal funding is allocated to DVR through the Workforce Innovation and Opportunity Act, and an approximate 20 percent match is required to receive federal funds. Meaning for every local dollar invested in DVR the division receives \$4 from the federal government. Of the local funds, only 55 percent is from state appropriations. This situation requires DVR to look for alternative local funding sources, which places the organization in a highly vulnerable position. The formation of the [Employment First Advisory Partnership in 2017 has led to concrete strategies](#) for serving more Coloradans with disabilities, and the implementation of those concepts will open new doors of opportunity.

DVR has observed increased returns for their clients and growing business engagement. Across Colorado, DVR employs nine business outreach specialists. These individuals build relationships with private companies, and as a result businesses are seeing the value all Coloradans bring to the workforce. Both DVR and CDLE recognize that part of this work requires highlighting best practices for hiring individuals with disabilities.

The Colorado Department of Labor and Employment is dedicated to modeling skills-based hiring, and they plan to do this by shifting norms around hiring individuals with all levels of ability. To fully scale skill-based hiring, it is imperative that continued and increased investment is made into programs that help all Coloradans find a career pathway.

Figure 22.

The Average Hourly Wage of DVR Closure Clients



Older Coloradans

In 2015, the Strategic Action Planning Group on Aging was created through HB15-1033. The group published an initial strategic plan in 2016, issued an updated version in 2018, and will again in 2020. The plan identifies a goal: in 2030, older adults will be able to stay engaged in the labor force and volunteer sector for as long as they want or need.

A key strategy to achieve this goal is the development of the descent side of the typical career path. Rather than working full-time until a specific point and then leaving the labor force entirely, a descent side of the career path would allow for structured steps downward in either responsibility, hours worked, or both, allowing individuals to continue working in their areas of greatest strength. Additionally, as a companion strategy, efforts are being focused on providing education, training, and support to ensure the workforce readiness or entrepreneurial activity of older adults. Workforce centers including Arapahoe/Douglas Works! and Workforce Boulder County are implementing specific strategies and curricula to support older workers in returning to work or shifting employment focus.

Veterans

Colorado Veterans' Service-To-Career Pilot Program - HB16-1267 & HB18-1343

Workforce Development Programs received \$600,000 in state funds to implement a pilot program serving veterans, spouses, and other eligible individuals through contracts with three local workforce centers. Program activities include supportive services, emergency housing, emergency supplies, skills training, and background checks, all designed to support and speed the reemployment of the 507 participants served by the Pilot Program. In the pilot program, 193 people found employment with an average wage of \$18.41 per hour. The Legislature moved to a full program in 2018 through HB18-1343, the Veterans' Service-to-Career Program, and appropriated \$1 million to support these veteran-focused activities.

Colorado Jobs for Veterans State Grant (JVSG)

Veterans who have significant barriers to employment and who, without the intensive one-on-one staff-assisted services, would have a difficult time succeeding in the civilian workforce, are served by the JVSG program. Veterans who have completed 181 days of active duty federal service and fall within one of the seven categories listed below are eligible to receive employment services from the JVSG case managers:

- Disabled veteran
- Homeless veteran
- Recently-separated service member who has been unemployed for 27 or more weeks in the previous 12 months
- A veteran lacking a high school diploma or equivalent certificate
- A low-income veteran as defined by WIOA Section 3 (36)
- A veteran who is between the ages of 18-24

During PY17, JVSG accomplishments included:

- 9,655 veterans registered for services
- 14,322 veterans received staff-assisted services
- 1,817 veterans with significant barriers to employment received staff-assisted services
- JVSG exceeded all negotiated performance goals

SPOTLIGHT

Justin C. is a disabled, homeless, and low-income veteran who was referred to veterans' employment services after completing the local veterans trauma court. The comprehensive assessment revealed that while Justin had previous experience as a heavy equipment operator, his background made it difficult for him to find employment. The veterans employment specialist provided assistance with job search, resume preparation, networking strategies, and job development in order to advocate on Justin's behalf. With the veterans employment specialist's help, Justin secured an interview with Stresscon. The hiring managers were so impressed with Justin's experience, skills, and attitude, they offered him not one, but two, different positions. Justin accepted a full-time heavy equipment operator position that starts at \$15.67 an hour, with full benefits, and offers opportunities for advancement.

Justin's story is just one example of the successes taking place around Colorado focused on recognizing the knowledge and skills veterans bring to the economy. More details on veteran programs and success stories can be found in [Appendix F](#).

CONCLUSION

State agencies, businesses, community-based organizations, education institutions, and local governments have worked diligently through public-private partnerships to implement policy that is positively influencing the talent pipeline in Colorado. The strategies outlined above are meeting the unique needs for specific populations while collectively moving the supply and demand equation closer to balance. As Colorado looks to 2019 and beyond, the programs that are demonstrating success need to continue and additional initiatives must be launched that can further drive progress. Strengthening the Colorado talent pipeline will ensure our state's economy has the talent it needs to thrive and will open doors of opportunity for all Coloradans to actively participate in, and benefit from, that economy.



Want more data throughout the year?

Education and Training Data: <https://www.coloradotalentdashboard.com/>

Labor Market Data: <https://www.colmigateway.com/>

Demographic Data: <https://demography.dola.colorado.gov/gis/map-gallery/>



2017 RECOMMENDATIONS: FOLLOW-UP ON PAST YEAR'S ACTIVITY

Over the past year, Colorado passed and implemented a number of new policies that are working to meet the needs of Colorado's economy. Listed below are the recommendations from the 2017 Talent Pipeline Report with successes noted.

2017 Recommendation #1:

Accelerate and deepen partnerships among education, business, and industry to develop Colorado talent. Colorado is building a strong foundation for collaboration among education and training providers, the workforce-development system, and local industry through initiatives such as sector strategies, career pathway development, and the expansion of industry-recognized credentials and WBL opportunities (e.g., internships and apprenticeships). These initiatives must continue to expand in scope and deepen in intensity so that the entire ecosystem of talent development is aligned and the quality of programs is more consistent across the state.

- The CWDC awarded more than \$450,000 to 10 grantees for Thriving Work-Based Learning Communities, which are collaborative efforts to advance localized programs bringing together businesses, education, and workforce development
- Two new regional sector partnerships were launched in the information technology industry and one new partnership was launched in early childhood education

2017 Recommendation #2:

Ensure that Coloradans have the skills they will need to succeed and grow the state economy in the future. The current education and training system in Colorado must be forward-thinking in terms of knowledge transfer, career exploration, and workforce preparation for youth as well as upskilling for adults as technology evolves and new skills come into demand.

- HB18-1266 Career Development Success Program Expansion was implemented, doubling the amount of money available to incentivize high schools to offer industry recognized credentials
- HB18-1316 Extend Colorado Department Of Labor And Employment Skilled Worker, Outreach, Recruitment, and Key Training Grant Program (WORK Act) provides more funding for marketing of training programs

2017 Recommendation #3:

Mobilize Colorado's untapped talent potential to close the skills gap and connect people to careers that lead to the middle class. For example, the CDHE and the Center for Education and Workforce at Georgetown University estimates that there are more than 400,000 Colorado adults with some postsecondary education, but no degree. Furthermore, attainment gaps between racial and ethnic minorities represent untapped potential: erasing these gaps would accelerate the pace of economic growth in the state. In addition, some populations, such as women, individuals with disabilities, youth, and ex-offenders have lower rates of labor force participation. Policies that make it easier for these populations to join the workforce will allow Colorado to better utilize all available talent.

- HB18-1226 Higher Education Review Degree Program Costs And Outcomes will provide better information to individuals regarding the benefits of beginning or completing postsecondary education programs
- SB18-145 Implement Employment First Recommendations enhances the ability of state agencies to prepare individuals with disabilities to consider employment as a viable option and to pursue career opportunities
- HB18-1334 Extend Transitional Jobs Program ensures that individuals receiving public assistance can access work by reducing the risks and costs to employers
- HB18-1343 Veterans' Service-to-Career Program provides targeted services to assist veterans and their spouses and family members in finding employment

2017 Recommendation #4:

Promote equitable growth and opportunity across the state. As there is no single Colorado economy, it is essential to support and leverage the existing efforts of the OEDIT and other partners to implement Colorado Blueprint 2.0 and the strategies to develop regional solutions. In the major metropolitan areas, unemployment is low and demand for postsecondary education is at a premium. In these areas, individuals without a postsecondary education are being left behind, especially as rising housing costs drive up the minimum salary needed to support a family. Strategies for supporting equity in metropolitan areas include ensuring access and affordability of higher education opportunities, especially for historically underrepresented populations. In rural areas of the state, the cost of living is lower but the overall economy is weaker, and there is an aging workforce as well as fewer jobs that offer possibilities for upward mobility. In these areas, the priority should be on growing good jobs and ensuring a pipeline of skilled workers is available to fill them.

- SB18-005 Rural Economic Advancement Of Colorado Towns provides the Department of Local Affairs with dedicated funding to support rural communities experiencing economic events that have a significant impact on jobs in that community
- SB18-042 Agricultural Workforce Development Program allows for students to engage in paid internships in the agriculture industry, which will benefit a variety of regions throughout the state



2018 COLORADO TALENT PIPELINE REPORT RECOMMENDATIONS

Since 2014, the Talent Pipeline Report has provided policy makers and others with data and information on the talent pipeline in the state. The recommendations listed here take into account and build on past recommendations and also recognize recent successes.

1. Further develop infrastructure that supports all pathways to a meaningful career

Recommendation 1-A:

Challenge: Work-based learning is gaining acceptance as an integral component of our K-12 and higher education landscape. Previous legislation called for the examination of state level barriers to implementation, and [resources have been developed that guide employers through topics regulated through CDLE](#), including youth labor laws, unemployment insurance, and workers compensation. State-level barriers within other agencies and local policies have not been fully analyzed.

Solution: Colorado has been a national leader in creating a policy infrastructure and promoting work-based learning, including apprenticeships, internships, and other training pathways. Colorado should analyze state and local barriers to equitable access to work-based learning and provide capacity for support to communities, higher education institutions, and school districts to promote policies to eliminate barriers.

Recommendation 1-B:

Challenge: Expanding work-based learning and skills-based hiring requires businesses to fully understand and adopt these practices at scale. Despite the positive return on investment and bottom line benefits these practices bring to businesses, many are not willing to take a first step towards implementation.

Solution: Implement pilot programs for business incentives to adopt work-based learning, such as reductions or waivers in unemployment insurance and workers' compensation premiums, employer tax credits, preferences in state contracting, or economic development packages. Programs can be piloted with specific populations and evaluated to determine if successful outcomes can be achieved at scale.

Recommendation 1-C:

Challenge: Effective work-based learning programs require partnerships between business, education, and intermediaries that can assist with identifying opportunities and connecting people to companies. Currently, there are no statewide tools that support matching for all types of opportunities. Further, while successful public-private partnerships are addressing these needs, they are not established statewide.

Solution: Enhance the ability of public-private partnerships to create and strengthen work-based learning communities by developing statewide tools and investing in ongoing infrastructure, such as the CWDC's Work-Based Learning Lab.

2. Eliminate attainment gaps along the education and career pipeline

Recommendation 2-A:

Challenge: Despite being the second-highest educated state in the nation, Colorado has attainment gaps along the entire education and career pipeline. We have ethnic attainment gaps, geographic attainment gaps, and economic attainment gaps. For Colorado to provide the skills that employers need and that our economy demands, significant progress on eliminating equity gaps is necessary.

Solution: As stated in the 2018 ELC Report, Colorado should incorporate culturally and socially responsive and inclusive curricula and co-curricular opportunities to address equity in education, and implement a funding mechanism to scale those best practices across the state so that they serve more Coloradans.

Recommendation 2-B:

Challenge: Colorado's attainment gaps are intensified by a lack of access for underserved populations to financial and other resources. Mechanisms do not currently exist to prioritize utilizing and maximizing federal resources prior to using state and local funds. As an example, Colorado leaves more than \$200 million in federal financial aid on the table each year because the Free Application for Federal Student Aid (FAFSA) is not completed.

Solution: Federal dollars should be utilized to support credential attainment to benefit the long-term stability of Colorado's economy and reduce reliance on public assistance. Mechanisms can be put in place to improve how agencies work with education and training providers to help their participants access the federal and state resources available to help them succeed.

3. Strengthen collaboration and alignment at the state and local implementation levels to improve efficiency

Recommendation 3-A:

Challenge: The effectiveness and value of credentials and training programs is not fully understood because data on program outcomes is isolated or nonexistent.

Solution: Colorado should invest in expanding current efforts to understand workforce pathways by implementing a cross-agency infrastructure that allows internal and external stakeholders to access the information they need for policy decisions, while ensuring data privacy. Such an investment will improve capacity to use data to inform policy: This year Colorado will be able to communicate the value that higher education brings to students from high school who go on to enroll in college, as shown in the Higher Education ROI Report. This effort will equip families and policy makers with the information they need to make decisions.

Recommendation 3-B:

Challenge: Since 2013, Colorado has implemented more than 26 industry-led, regional sector partnerships. Our state leads the nation in adopting this approach and [it has provided positive outcomes for more than 750 businesses](#). However, the model has been concentrated in urban areas and parts of rural Colorado have not been able to access the economic benefits.

Solution: Invest in the capacity necessary for the CWDC and agency partners to provide technical assistance on sector partnerships effectively statewide, specifically as a component of rural economic development efforts in partnership with DOLA and OEDIT.

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5. <https://www.cde.state.co.us/schoolreadiness/ksrdataareport>
6. <https://www.cde.state.co.us/schoolreadiness/ksrdataareport>
7. AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016
8. Licensed capacity is the point-in-time maximum number of children a facility can legally care for and is a proxy for the number of children served by early childhood education providers (the State does not have enrollment data because early childhood education is largely provided through private businesses). However, the actual number of children served by a facility may be higher or lower than their licensed capacity. It may be higher when facilities serve different families at different times (e.g., Child A on Tuesday and Thursdays and Child B on Mondays and Wednesdays) and may be lower either due to decisions made by the provider, a lack of demand or a lack of qualified staff to reach full capacity.

These limitations are replicated when attempting to estimate the size of the early childhood workforce. Licensed providers engaged with Colorado Shines, the State's Quality Rating and Improvement System (QRIS) interface with the States Professional Development Information System (PDIS). However, this engagement is voluntary, and as a result, the State does not have data on the totality of the early-childcare
9. AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016
10. AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016
11. AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016
12. AMERICAN COMMUNITY SURVEY, 5-YEAR ESTIMATES 2011-2016
13. Current Population Survey, 2017
14. Current Population Survey, 2017
15. https://higherred.colorado.gov/Publications/Reports/Legislative/TED/201712_TED_toGGA.pdf
16. https://higherred.colorado.gov/Publications/Reports/Legislative/TED/201712_TED_toGGA.pdf
17. <http://www.collegeaccess.org/WhyInvestFAFSA>
18. To compute this number, the state took the number of high school seniors who did not complete a FAFSA and multiplied it by the average FAFSA award. Because of this methodology, \$47 million is a conservative estimate but fails to account for the dollars left on the table by Colorado adults.

APPENDICES

Appendix A - [2018 Colorado Top Jobs](#)

Appendix B - [2018 Colorado Top Jobs by Region](#)

Appendix C - [Talent Pipeline Policy Success](#)

Appendix D - [Cyber and Business Operations Career Pathways - HB 15-1274](#)

Appendix E - [2018 Sector Strategies Update](#)

Appendix F - [PY17 WIOA Annual Report](#)

Appendix G - [WORK Act Annual Report](#)

Appendix H - [Postsecondary and Workforce Readiness Coordinator Update - HB 15-1170](#)

Appendix I - [Industry Infrastructure Grant Report - HB 16-1288 - CRS 24-46.3-103](#)

Appendix J - [Career Success Development Program - List of Approved Industry-recognized Credentials - HB 16-1289](#)

Appendix K - [Innovative Industries Internship Program - HB 15-1230](#)

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