

## Industry Overview

The broadcasting and telecommunications cluster includes companies that help deliver voice, data, and video to end users. This cluster includes landline and wireless telephone communications companies, radio and television communications services, and cable and Internet service providers.

Wireless and wired networks upgrades are enhancing speed, reliability, coverage, and performance for residents and businesses in the Denver South region<sup>1</sup>. Since 2011, AT&T has invested nearly \$550 million in wireless and wired networks across the state. Advancing its Project Velocity IP (VIP), an investment plan to expand and enhance its wireless and wired IP broadband networks, AT&T made 292 network upgrades in Colorado in 2013, including new cell sites, additional wireless network capacity, and new broadband network connections. Verizon Wireless launched faster mobile broadband technology in five Colorado cities and other nationwide markets. Denver, Colorado Springs, Fort Collins, Greeley, and Pueblo will have access to Verizon's XLTE network, which will deliver faster peak data speeds and a minimum of double the bandwidth to fourth-generation mobile broadband, long-term evolution network, or 4G LTE customers in high-traffic areas. Sprint launched its enhanced LTE network in Denver, with improved in-building signal, expanded coverage, and intelligence offered by the enhanced network capability. The LTE network offers customers wireless speeds of 6 to 15 megabits per second (Mbps), with peaks of 50 to 60 Mbps.

Governments and local communities in the Denver South region use digital technologies to enhance services, maximize efficiency, and expand information technology networks to better service their population and streamline operations. Douglas County ranked fifth in the 250,000 to 499,999 population category of the "2014 Digital Counties Survey." The survey, compiled by e.Republic's Center for Digital Government and Digital Communities, recognized counties that provided exemplary digital service to their residents and highlighted the areas' best practices.

As part of the nine-county Metro Denver and Northern Colorado region<sup>2</sup>, the Denver South region is the center of broadcasting and telecommunications industry activities. The region is home to a significant concentration of broadcasting and telecommunications companies and two of the nation's largest satellite television providers have a major presence in the region. The broadcasting and telecommunications industry is one of the region's largest clusters, with nearly 18,100 employees working in more than 380 companies. Notably, employment in the Denver South region's broadcasting and telecommunications cluster accounted for roughly 42 percent of all broadcasting and telecommunications employment in the nine-county region.

## 2014 Industry Highlights

### Expanded Broadband and Network Improvements

The Denver South region's broadcasting and telecommunications companies offered expanded broadband and increased network speeds in 2014.

- CenturyLink, Inc. expanded its Internet television service in the region to Douglas County, unincorporated Jefferson County, Denver, Centennial, and Castle Rock. CenturyLink, Inc.'s television service Prism™ was first offered to residents in Highlands Ranch and is delivered through the company's fiber-optic network.
- CenturyLink began offering Internet speeds of 1 gigabit per second to its Metro Denver customers. The upgraded speed will allow users to stream high-definition video, download movies, songs, and shows in seconds and is up to 100 times faster than the 10 Mbps or less that is the national average.

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<sup>1</sup> The Denver South region consists of zip codes 80111, 80112, 80124, 80126, 80129, 80130, 80134, and 80237.

<sup>2</sup> The nine-county Metro Denver and Northern Colorado region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties.

- Comcast Corp. and Douglas County-based Liberty Global PLC formed an agreement to offer the industry's first international WiFi roaming connectivity to their subscribers. The service will be offered beginning in 2015 and will allow subscribers to access each other's WiFi networks without consuming allotted data on their wireless plans.
- Comcast Corp. doubled its two most popular Internet speed plans in Colorado for no additional cost. The Blast! Plan increased download speeds from up to 25 Mbps to up to 50 Mbps, Extreme 50 increased download speeds from up to 50 Mbps to up to 105 Mbps, and the Performance plan increased speeds from 15 Mbps to up to 20 Mbps.
- Douglas County-based DISH Network signed an agreement with The Walt Disney Company to provide DISH customers with access to Disney's sports, news, and entertainment content across Internet devices. Under the agreement, DISH customers can access Disney's authenticated live and video-on-demand products.

### Key Company Announcements

The Denver South region is a key location for broadcasting and telecommunications companies to grow and expand. Notable company announcements in 2014 included:

- ViaWest opened their newest greenfield data center in a 200,000-plus-square-foot building in the Denver South region. The data center is located south of Centennial Airport near E-470 and Peoria. The \$208 million facility contains 140,000 square feet of raised floor dedicated to data servers and the company plans to invest \$316 million over the next seven years.
- Charter Communications Inc. broke ground on a \$25.5 million research and development facility at the Compark Business Campus in unincorporated Douglas County. The 85,000-square-foot industrial building will include 60,000 square feet of office space, conference rooms, and break areas, and the residual space will include a data center laboratory. The new facility will accommodate more than 200 technical staff and is slated for completion in 2015.
- According to *Forbes*, Dish Network was the only company with its headquarters in Colorado to make the most reputable companies list. Dish Network was ranked 146 out of 150 total companies across the country. The Reputation Institute conducted the ranking and each company on the list is a large, publically traded company.

### Merger and Acquisition Activity

Companies in the Denver South region announced several mergers and acquisitions in 2014.

- Douglas County-based tw telecom was purchased by Broomfield-based Level 3 Communications, Inc. The \$5.3 billion deal will add business and local fiber-optic rings in 76 U.S. metropolitan areas and improve data carrying capacity. The deal increased Level 3's international fiber-optic network to 212,000 miles, which carries Internet traffic, video, and business data for client companies. The combined companies have nearly 4,000 Colorado employees and 13,600 worldwide.
- Greenwood Village-based ViaWest Inc. was sold to Canadian cable multiple-system operator Shaw Communications Inc. The \$1.2 billion deal will expand Shaw's data service offerings and cloud capabilities business, while boosting ViaWest's company operations in North America. ViaWest's headquarters will remain in Greenwood Village.
- DirecTV, the nation's largest satellite-TV service provider, will be acquired by AT&T in a deal worth an estimated \$48.5 billion. The stock-and-cash transaction for \$95 per share gives DirecTV shareholders \$28.50 per share in cash and \$66.50 per share in AT&T stock.

### Broadcasting and Telecommunications Economic Profile

The broadcasting and telecommunications industry cluster consists of 16, six-digit North American Industry Classification System (NAICS) codes including radio and television communications equipment, telephone communications, and cable television services.

**Broadcasting and Telecommunications Employment and Company Profile, 2014**

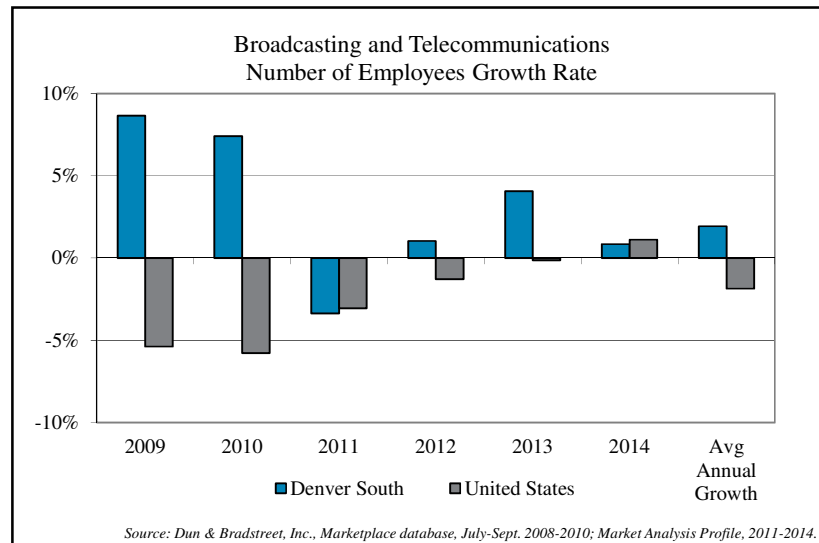
	<b>Denver South</b>	<b>United States</b>
Direct employment, 2014	18,100	1,223,200
Number of direct companies, 2014	380	142,160
One-year direct employment growth, 2013-2014	0.9%	1.1%
Five-year direct employment growth, 2009-2014	10.1%	-8.9%
Avg. annual direct employment growth, 2009-2014	1.9%	-1.9%
Direct employment concentration	7.8%	0.8%

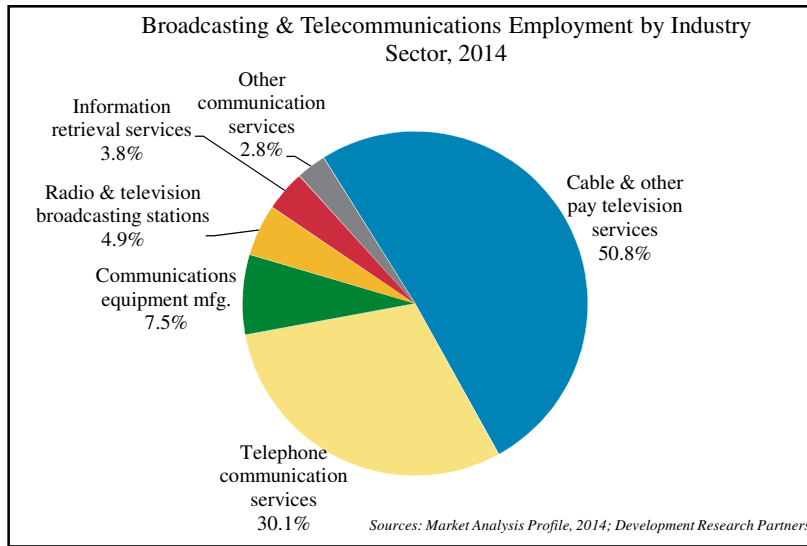
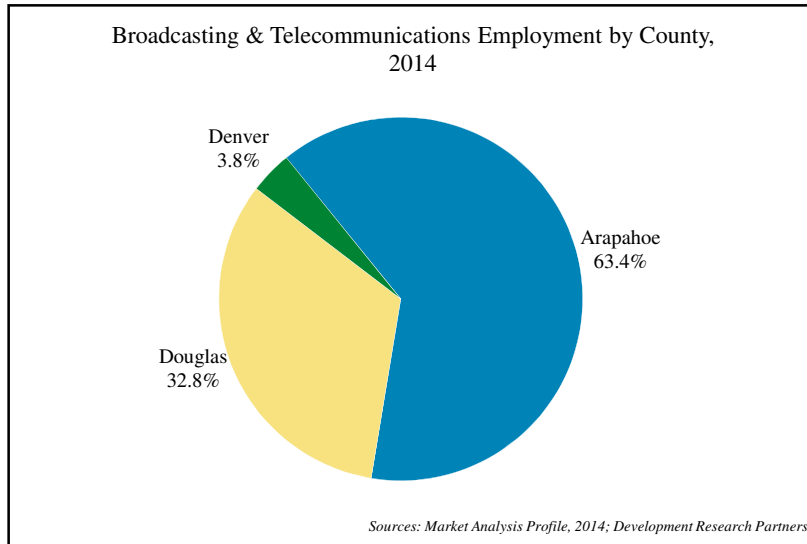
*Sources: Dun & Bradstreet, Inc. Marketplace database, July-Sept. 2008-2010; Market Analysis Profile, 2011-2014; Development Research Partners.*

**Broadcasting and Telecommunications Employment**

The Denver South region’s broadcasting and telecommunications employment (18,100 workers) rose 0.9 percent in 2014, compared with the previous year’s level, adding 150 new jobs over the same period. National employment levels increased 1.1 percent over-the-year. About 1.5 percent of the nation’s broadcasting and telecommunications employment is located in the region.

Approximately 380 broadcasting and telecommunications companies operated in the Denver South region in 2014. Sixty-seven percent of the region’s broadcasting and telecommunications companies employed fewer than 10 people, while 3.7 percent employed 250 or more.





**Major Broadcasting and Telecommunication Companies**

- Alcatel-Lucent  
[www.alcatel-lucent.com](http://www.alcatel-lucent.com)
- AT&T Inc.  
[www.att.com](http://www.att.com)
- Avaya Inc.  
[www.avaya.com](http://www.avaya.com)
- Birch Communications  
[www.birch.com](http://www.birch.com)
- Charter Communications Inc.  
[www.charter.com](http://www.charter.com)
- Comcast Corp.  
[www.comcast.com](http://www.comcast.com)
- DISH Network  
[www.dishnetwork.com](http://www.dishnetwork.com)
- iHeartMedia, Inc. (formerly Clear Channel Comm.)  
[www.iheartmedia.com](http://www.iheartmedia.com)
- Jones International, Ltd.  
[www.jones.com](http://www.jones.com)
- Level 3 Communications, Inc.  
[www.level3.com](http://www.level3.com)
- Liberty Media Corp.  
[www.libertymedia.com](http://www.libertymedia.com)
- Sprint Corp.  
[www.sprint.com](http://www.sprint.com)
- Starz  
[www.starz.com](http://www.starz.com)
- Verizon  
[www.verizon.com](http://www.verizon.com)

**Major Broadcasting and Telecommunication Companies Cont'd**

- DIRECTV, Inc.  
[www.directv.com](http://www.directv.com)
- EchoStar Corp.  
[www.echostar.com](http://www.echostar.com)
- WildBlue Communications, Inc.  
[www.wildblue.com](http://www.wildblue.com)

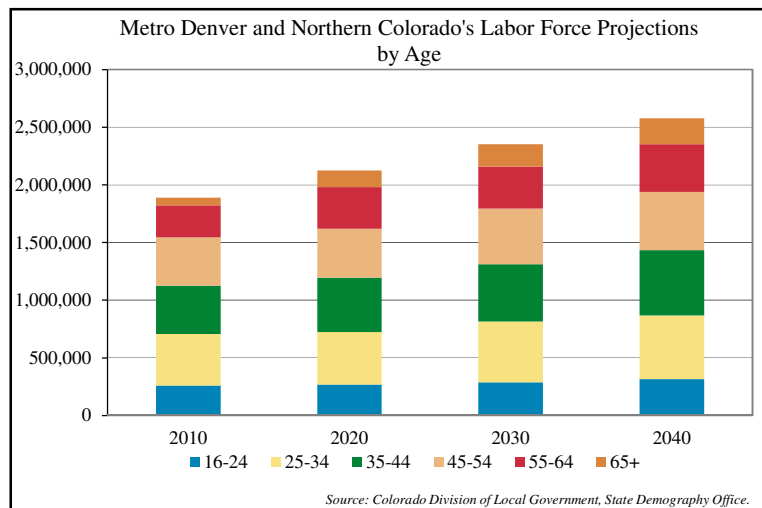
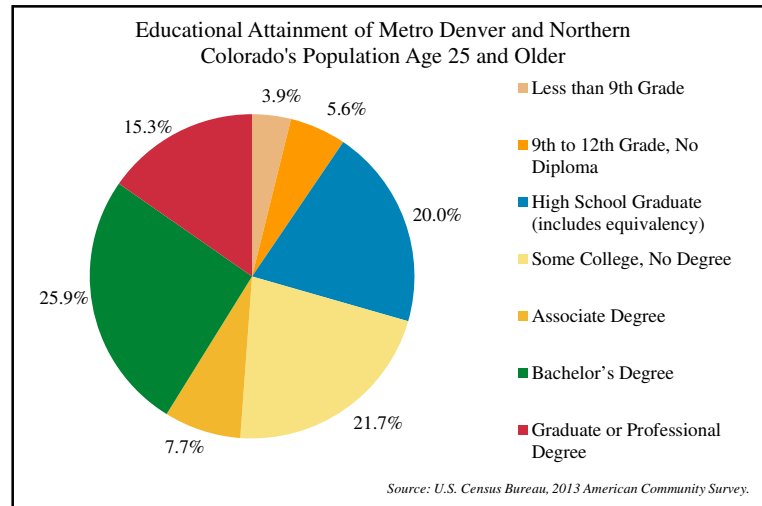
**Broadcasting and Telecommunications Workforce Profile**

Many companies choose locations because of the available workforce. With nearly half of the nine-county region's 3.6 million residents under the age of 35, employers can draw from a large, young, highly educated, and productive workforce. Of the region's adult population, 41.2 percent are college graduates and 90.5 percent have graduated from high school. The state has the nation's second-most highly educated workforce as measured by the percentage of residents with a bachelor's degree or higher.

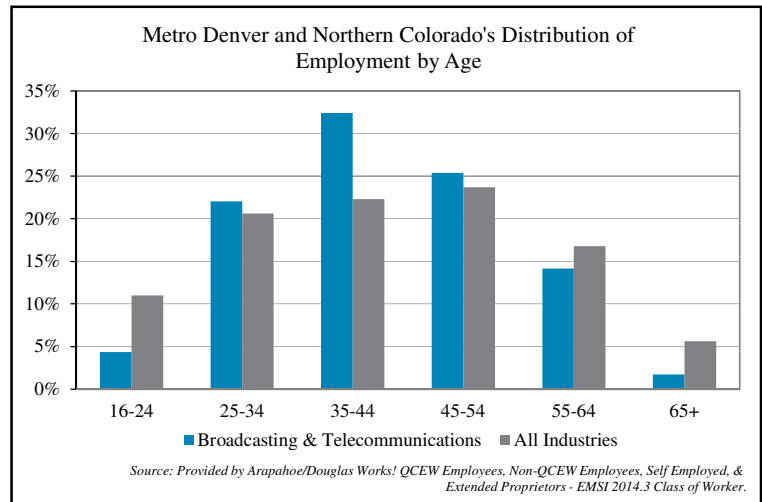
The attractiveness of the region draws new residents through migration. The region's population is expected to grow 53.3 percent from 2010 to 2040, driving a 36.3 percent increase in the region's labor force over the same period. It is important to note the changing composition of the workforce supply as the baby boomers begin to retire, which will pose implications for businesses whose employee pool includes significant numbers of these workers.

The Denver South region's broadcasting and telecommunications industry employs 18,100 people and includes a large pool of talented, well-educated, and highly skilled workers. Compared with the age distribution across all industries, the broadcasting and telecommunications cluster in the nine-county region has a larger share of employees that are between the ages of 25 and 54 years old.

The broadcasting and telecommunications workforce supply consists of four main components: those currently working in the industry; those doing a similar type of job in some other industry; the unemployed; and those



currently in the education pipeline. The Metro Denver and Northern Colorado Occupation & Salary Profile below includes the 10 largest broadcasting and telecommunications occupations in the region. For these 10 largest occupations, the chart details the total number of workers employed in that occupation across all industries, the number of available applicants that would like to be working in that occupation, the number of recent graduates that are qualified for that occupation, and the median and sample percentile annual salaries.



**Wages**

The 2013 average annual salary for broadcasting and telecommunications employees in the nine-county region was \$97,700, compared with \$80,110 nationwide. Total payroll for the broadcasting and telecommunications cluster in the region exceeded \$4.1 billion in 2013.

**Metro Denver and Northern Colorado Broadcasting and Telecommunications Occupation & Salary Profile, 2014**

10 Largest Broadcasting & Telecommunications Occupations in Metro Denver and Northern Colorado	Total Working Number of Across All Industries (2014)	Available Applicants (2014)	Number of Graduates (2013)	Median Salary	10th Percentile Salary	25th Percentile Salary	75th Percentile Salary	90th Percentile Salary
1. Customer service representatives	36,610	6,494	0	\$31,866	\$22,194	\$26,562	\$40,290	\$49,754
2. Telecommunications equipment installers & repairers, except line installers	3,731	201	9	\$63,523	\$39,166	\$53,082	\$69,742	\$73,653
3. Sales representatives, services, all other	17,631	1,286	77	\$50,877	\$24,960	\$34,674	\$75,546	\$110,864
4. Business operations specialists, all other	32,981	789	77	\$69,930	\$36,067	\$50,024	\$92,622	\$120,078
5. Electronics engineers, except computer	4,292	86	356	\$92,955	\$59,634	\$72,758	\$119,246	\$144,352
6. Network & computer systems administrators	8,567	523	696	\$78,312	\$50,835	\$62,816	\$95,389	\$113,214
7. Software developers, applications	19,382	340	585	\$91,021	\$56,056	\$71,718	\$111,696	\$134,472
8. Software developers, systems software	10,055	105	630	\$97,136	\$64,210	\$78,915	\$118,685	\$140,878
9. Computer network architects	3,091	95	1,552	\$96,720	\$49,442	\$72,821	\$115,440	\$138,674
10. Secretaries & administrative assistants, except legal, medical, & executive	49,635	654	71	\$36,026	\$23,587	\$29,037	\$43,992	\$51,979

Notes: The number of available applicants is a point-in-time measurement of the number of people who have registered in Colorado's workforce development system's statewide database, Connecting Colorado, as being able and available to work in a particular occupation. Results should be interpreted with caution since registration in Connecting Colorado is self-reported. In addition, the skills rubric may assign up to four occupation codes for each registrant. Therefore, the number of available applicants could be inflated. *Source: Provided by Arapahoe/Douglas Works!; QCEW Employees, Non-QCEW Employees, Self Employed, & Extended Proprietors - EMSI 2014.3 Class of Worker.*

**Education & Training**

Colorado's higher education system provides an excellent support system for businesses in the region. There are 28 public higher education institutions in Colorado, of which seven four-year and six two-year public institutions

offering comprehensive curricula are located in the nine-county region. In addition, there are more than 100 private and religious accredited institutions and nearly 340 private occupational and technical schools offering courses in dozens of program areas throughout the state. Although not exhaustive, a list of the major, accredited educational institutions with the greatest number of graduates for each of the 10 largest broadcasting and telecommunications occupations in the nine-county region are included below. A directory of all higher education institutions with corresponding websites may be accessed via <http://higherred.colorado.gov>.

- Colorado State University  
[www.colostate.edu](http://www.colostate.edu)
- Metropolitan State University of Denver  
[www.msudenver.edu](http://www.msudenver.edu)
- University of Denver  
[www.du.edu](http://www.du.edu)
- Colorado State University Global Campus  
[www.colostate.edu](http://www.colostate.edu)
- Regis University  
[www.regis.edu](http://www.regis.edu)
- University of Northern Colorado  
[www.unco.edu](http://www.unco.edu)
- DeVry University – Colorado  
[www.devry.edu](http://www.devry.edu)
- University of Colorado Boulder  
[www.colorado.edu](http://www.colorado.edu)
- Jones International University  
[www.jiu.edu](http://www.jiu.edu)
- University of Colorado Denver  
[www.ucdenver.edu](http://www.ucdenver.edu)

## **Key Reasons for Broadcasting and Telecommunications Companies to Locate in the Denver South Region and the Surrounding Nine-County Region**

### **1. A central location and easy global access**

- Metro Denver's unique geographic location in the Mountain time zone makes it the largest region in the U.S. to offer one-bounce satellite uplinks. This capability provides companies with real-time connections to six of seven continents in one business day. (Metro Denver Economic Development Corporation)
- Denver South boasts a close proximity to Denver International Airport (DIA) and Centennial Airport, the premier business and general aviation airport in the Rocky Mountain Region.
  - DIA was the fifth-busiest airport in the nation and 15th-busiest worldwide in terms of passenger traffic in 2013. (U.S. Bureau of Transportation Statistics, 2014; Airports Council International 2014; and Denver International Airport, 2014)
  - Located near the Denver Tech Center and 23 other business parks, Centennial Airport is the major local reliever airport for DIA and generates more than \$1.3 billion for the region annually, the highest among the state's general aviation airports. (Centennial Airport, 2014; Colorado Department of Transportation, Division of Aeronautics, 2014)
- Located on the 105th meridian, the nine-county region's central location at the exact midpoint between Tokyo and Frankfurt positions the region favorably to serve growing world markets. The region is an excellent location for doing business with the entire nation and is within four hours flying time of every North American city with a population of 1 million or more. (Metro Denver Economic Development Corporation)
- Advancements in communication and infrastructure have resulted in a more mobile workforce in the Denver South region. Approximately 8.6 percent of Denver South's workers telecommute, compared with 6.7 percent in the Metro Denver and Northern Colorado region and a smaller 4.3 percent in the United States. (U.S. Census Bureau, 2013 American Community Survey 5-Year Estimate)
- Denver ranked among the top-five safest cities for natural disasters in 2014. (HomeownersInsurance.com, 2014)



**2. A large concentration of high-quality technology workers and entrepreneurial talent**

- Of Colorado's adult population, nearly 38 percent has completed a bachelor's or higher-level degree, making Colorado the second-most highly educated state in the nation behind Massachusetts. (U.S. Census Bureau, 2013 American Community Survey)
- Colorado had the third-highest tech-worker concentration in 2014, with 9.2 percent of the state's private-sector workforce employed in technology firms. Colorado also had the nation's ninth-largest employment base in telecommunications and ranked ninth for average high-tech wage, 11th for internet services employment, and 13th for the number of technology patents granted. Colorado tech workers earn 100 percent more than the average private sector worker. (TechAmerica Foundation, *Cyberstates 2015: The Definitive State-by-State Analysis of the U.S. Tech Industry*, 2015)
- Colorado ranked as the fifth-most entrepreneurial state in the 2013 *Kauffman Index of Entrepreneurial Activity*, with 380 new business owners per 100,000 adults. (Ewing Marion Kauffman Foundation, 2014)
- Two of the 10 best places in Colorado for job seekers were in Denver South—Centennial and Parker. The study examined the cost of living, the unemployment rate, and the growth in the number of working-age people in each city. (NerdWallet, 2013)
- Denver ranked as the second-best city to launch a startup business out of the 50 most populated cities. (*Forbes*, 2014)
- Technology workers in the Denver-Boulder area had the third-highest salaries in the U.S. in 2014. Adjusted for cost of living, the average annual salary for the Denver-Boulder area's technology workforce was \$98,000. (TriNet, 2014)
- Denver ranked as the ninth-best city for college graduates and received accolades for its highly educated population, moderate cost of living, and higher-than-average wages. (NerdWallet, 2014)
- Denver ranked as the seventh-best city for millennials (ages 25-34) out of 25 major cities with a population over 1 million in 2014. (Niche.com, 2014)

**3. Low to moderate costs of doing business**

- *Forbes* ranked Colorado fifth on its 2014 "Best States for Business and Careers" list. The state received its highest rankings for labor supply (first overall), growth prospects (fourth overall), economic climate (eighth overall), and quality of life (ninth overall). (*Forbes*, 2014)
- Metro Denver ranked fourth among *Forbes* 2014 "Best Places for Business and Careers" list. Four other Colorado metropolitan areas were included on the list. The Fort Collins metro area ranked fifth overall, Greeley ranked 20th, Boulder ranked 23rd, and Colorado Springs ranked 29th. (*Forbes*, 2014)
- Denver South's office rental rates averaged \$23.40 per square foot in the first quarter of 2015, making the region's office market highly competitive with other major markets in the U.S. Denver South has more than 41 million square feet of office space and roughly 5,000 acres of ready-to-be-developed land. (CoStar Realty Information, Q1 2015)

**4. A pro-business environment and competitive tax structure**

- Colorado's simplified corporate income tax structure based on single-factor apportionment allows companies to pay taxes based solely on their sales in the state. Along with few regulatory burdens, Colorado's corporate income tax rate of 4.63 percent is one of the lowest and most competitive tax structures in the nation. (State of Colorado; The Tax Foundation)
- Colorado has the nation's ninth-best tax climate for entrepreneurship and small business. (Small Business & Entrepreneurship Council, 2014)
- Colorado ranked second in innovation and entrepreneurship and was among the top 10 states for infrastructure, business climate, and talent pipeline. (National Chamber Foundation, 2014)
- Colorado ranked as the No. 8 small-business-friendly state in the nation. Fort Collins (24th) and Denver (28th) ranked among 84 cities in the country. (Thumbtack.com, 2014; Ewing Marion Kauffman Foundation, 2014)



**5. An overall better quality of life**

- Centennial ranked among the top 15 in *MONEY Magazine*'s 2014 list of the "Best Places to Live." Castle Rock (fourth) and Boulder (23rd) were also named to the list's top 50. (*MONEY Magazine*, 2014)
- NerdWallet named Highlands Ranch, Lone Tree, and Parker among the top 10 "Best Towns in Colorado for Young Families." The cities were touted for their quality education, recreational opportunities, creative and innovative energy, and affordable housing. (NerdWallet, 2014)
- The Denver South region boasts a variety and quality of housing options from expansive apartment complexes to single-family homes surrounded by open spaces. One of the largest and most comprehensive master planned communities in the nation—RidgeGate—is located conveniently along I-25 and Lincoln Avenue in Lone Tree and offers 3,500 acres of mixed-use density including retail, dining, healthcare, recreation, and mass transit. (Denver South Economic Development Partnership, 2014)
- Denver South is home to a wide array of transportation options. The Southeast Corridor Light Rail Line runs along the west side of I-25 from Broadway in Denver to Lincoln Avenue in Douglas County, and in the median of I-225 from I-25 to Parker Road in Aurora, connecting the two largest employment centers in the Metro Denver region. The Denver South region also offers bus services to the southeast corridor from all corners of the Metro Denver region, including express buses and regional buses operating during the peak commute hours. (Denver South Economic Development Partnership, 2014)
- Metro Denver ranked as the fourth-fittest metro area in the nation in 2014. Denver's high percentage of residents participating in physical activity and low obesity and cardiovascular disease rates contributed to its high rank. (American College of Sports Medicine, 2014)
- Nearly 30 public and private golf courses are located in the South Metro Corridor and world-class ski resorts are located within 100 miles of the Corridor. (Denver South Economic Development Partnership)

*For additional information, contact us:*



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