DENVER SOUTH
ECONOMIC DEVELOPMENT PARTNERSHIP

Industry Overview

The information technology (IT) software and electronics cluster supports business activities in all other sectors of the economy with a variety of products and services, ranging from virus protection and other security programs for computers to electronics products and components. Technology and electronics industries are high-knowledge, human capital-based industries that are expanding globally and are expected to continue growing. The IT-software and electronics cluster includes companies involved in off-the-shelf software products, custom computer programming, computer facilities management, computer systems design, and data processing services. Additionally, businesses engaged in design, manufacture, wholesale, and repair of electronic equipment including computer peripheral equipment, semiconductors, electronic components, audio and video recording equipment, and magnetic and optical recording media are included. Companies in the IT-software and electronics industry also provide network solutions, web-based applications, and operating systems, in addition to manufacturing optical instruments and lenses, and navigational, measuring, electromedical, and control instruments.

The Denver South region's[1] entrepreneurial ecosystem and talented workforce create a premier innovative hub for IT-software and electronics companies and industry activities. The Denver South region has a higher concentration of IT-software and electronics employees than the nine-county Metro Denver and Northern Colorado region[2], making it an attractive hotbed for new companies and ensuring existing businesses can grow and remain competitive. Indeed, 24 percent of all IT-software and electronics employment in the nine-county region is located in the Denver South region.

2014 Industry Highlights

The Denver South region's IT-software and electronics companies expanded their presence in 2014.

- OneNeck IT Solutions, an Arizona-based IT firm, broke ground on a $20 million, 35,000-square-foot data center in unincorporated Douglas County. The Tier 3+ data center will include state-of-the-art features such as three-factor security authentication, including iris scanners for personnel identification, multiple levels of redundancy and backup, and an energy-saving cooling design. The facility is slated to open in early 2015.
- Agilent Technologies Inc. completed its separation into two publicly traded companies through a spin-off of its electronic measurement business, renamed Keysight Technologies Inc. The company has a significant employment base in the Denver South region and the split will allow both Agilent and Keysight to maximize growth.
- Arapahoe County-based Arrow Electronics, the Colorado-based electronics distribution and services company, was recognized by *Fortune* as one of the world's most admired companies for the 15th consecutive year in 2015. Arrow Electronics supplies about 40 percent of the electronic components and services globally, and is Colorado's largest revenue generating company.
- Arrow Electronics relocated its headquarters from the north end of the Inverness office park to a 128,000-square-foot building near Interstate 25 and Dry Creek Road in Centennial. The company will relocate 500 employees there from existing buildings.
- Arapahoe County-based Ciber was awarded a multi-year managed services contract to support and maintain the information system used by Colorado, Utah, and Wyoming's Women, Infants and Children (WIC) agencies. The company's State Agency Model system will be the first of its kind to support both online and offline smartcard technology for Electronic Benefits Transfer (EBT), which will help WIC programs comply with the Healthy, Hunger-Free Kids Act of 2010, which mandates that states provide EBT to clients by October 1, 2020.

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[1] The Denver South region consists of zip codes 80111, 80112, 80124, 80126, 80129, 80130, 80134, and 80237.
[2] The nine-county Metro Denver and Northern Colorado region consists of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson, Larimer, and Weld Counties.

- Arapahoe County-based IQNavigator launched IQN Labs, a virtual innovation lab that helps companies find and manage the best talent available in a cost-effective manner. IQN Labs will develop and refine scientific approaches to help enterprises make more informed decisions to better manage and optimize contingent labor and statement-of-work engagements. IQN Labs offers a data-driven approach in a collaborative environment resulting in predictive and other advanced analytics that uncover new ways to exploit IQNavigator's vast data reserves.

Cross-Cluster Convergence

The Denver South region is characterized by its network of collaboration, innovation centers, and unique assets that lead to cross-cluster convergence. The IT-software and electronics industry combines these regional assets to strengthen partnerships and enhance growth opportunities across industries such as digital health and healthcare and life sciences.

- The Denver South region offers an emerging digital health community. Founded in July 2012 by the Denver South Economic Development Partnership and Innovation Pavilion, PrIME Health Collaborative is a growing statewide community of 800+ health care executives, physicians, technologists, academics, entrepreneurs, and investors dedicated to improving health and lowering healthcare costs through the commercialization of digital health technologies. PrIME Health is a resource ecosystem for digital health—the convergence of the digital and genetics revolutions with bioscience, healthcare and wellness, and information technology-software. In 2014, PrIME Health held a number of important events showcasing the Digital Health Corridor, including a first-of-its kind $150,000 Digital Health Challenge. More information is available at www.primehealthco.com.
- Highlands Ranch-based Zen Planner will help fitness and dance studios manage their business using cloud-based infrastructure. Zen Planner focuses on scheduling, booking, and business management software.
- Centennial-based Thinklabs designed a new digital stethoscope, which is compatible with iPhone and iPad technology. The Thinklabs One stethoscope is Bluetooth compatible for wireless transmission, has an earphone jack that is compatible with different headphone models, and has volume control to enhance the sound up to 100 times louder than the traditional model.

Industry Infrastructure Support

The Denver South region's organizations and professional associations foster growth and opportunity for the IT-software and electronics industry.

- Innovation Pavilion is a business incubator focused on technology launched in Centennial, which is home to entrepreneurs, business startups, academic and government organizations, and established businesses. The 80,000-square-foot Plug and Play project offers work space and WiFi to entrepreneurs. The project is modeled after one of Silicon Valley's most successful Plug and Play Technology Centers, featuring more than 300 startups.
- Innovation Pavilion launched "STEM Learning Center at Innovation Pavilion" for area high school students in partnership with the HOPE Online Learning Academy Co-Op. Students who graduate from this Learning Center will receive a high school diploma and the curriculum is common core accredited with a blended model of self-paced online classes and supplemental project and problem-based learning.

Merger and Acquisition Activity

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

- Douglas County-based TriZetto Corp. sold to New Jersey-based Cognizant Technology Solutions Corp. The $2.7 billion deal will expand both companies' offerings and will integrate information technology

services such as consulting and IT infrastructure, and existing delivery models. TriZetto's 980 area employees will combine with the 450 Cognizant workers in Colorado.
- Denver-based Rivet Software Inc. was purchased by Calif.-based Equity Administration Solutions Inc. Rivet helps public companies comply with financial reporting requirements. More than 300 public companies use Rivet's software and Equity Administration Solutions has more than 900 customers.
- Greenwood Village-based Highstreet IT Solution purchased New York City, N.Y.-based Computer Network Solutions LLC (CNS). CNS is a company that provides telecommunications and engineering services and offers technology to manage data center and IT infrastructure services. The purchase will make Highstreet IT 50 percent larger by revenue.
- Oracle Corp. purchased Lafayette-based Front Porch Digital Inc. Front Porch Digital helps its clients store and manage digital content, managing near 750 petabytes of digital content. Oracle plans to retain Front Porch Digital's current employees and executives.

IT-Software and Electronics Economic Profile

The IT-software and electronics cluster consists of 27, six-digit North American Industry Classification System (NAICS) codes including software reproduction, software publishers, custom computer programming, data processing and hosting, computer facilities management services, computer systems design services, design, manufacture, wholesale, and repair of electronic equipment such as computer peripheral equipment, semiconductors, electronic components, and magnetic and optical recording media manufacturing. Electronics repair shops and electronics stores are also included.

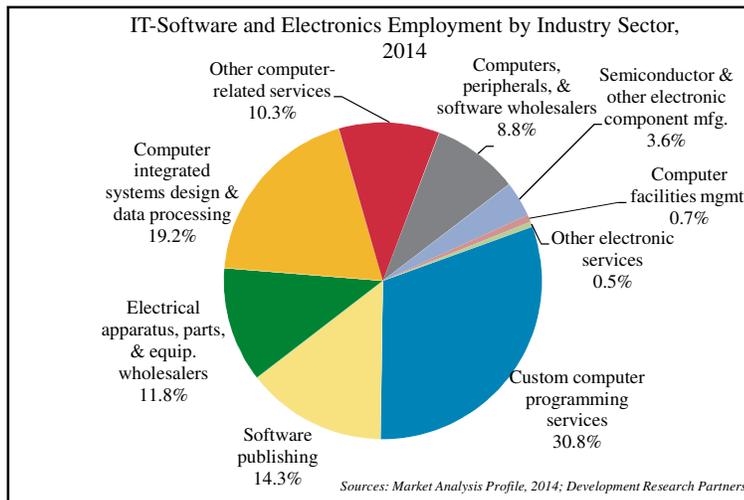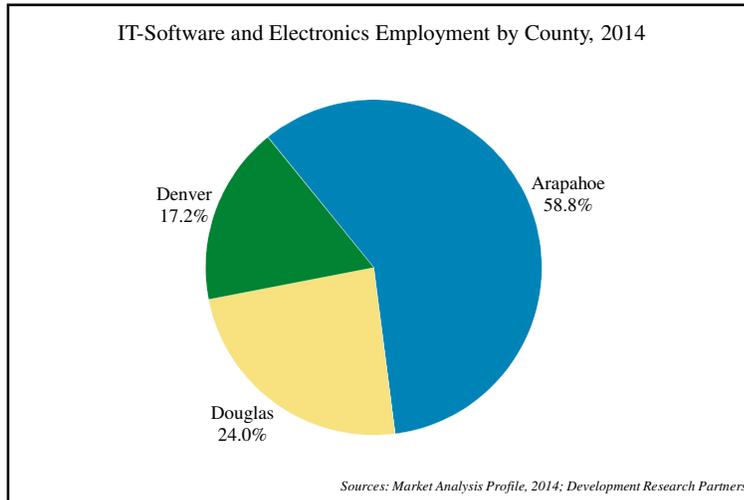### IT-Software and Electronics Employment and Company Profile, 2014

	Denver South	United States
Direct employment, 2014	15,600	4,209,430
Number of direct companies, 2014	860	290,860
One-year direct employment growth, 2013-2014	2.7%	3.1%
Five-year direct employment growth, 2009-2014	10.6%	15.2%
Avg. annual direct employment growth, 2009-2014	2.0%	2.9%
Direct employment concentration	6.7%	2.9%

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

IT-Software and Electronics Employment

The Denver South region's IT-software and electronics employment (15,600 workers) rose 2.7 percent in 2014, compared with the previous year's level, adding about 410 new jobs over the same period. National employment levels increased 3.1 percent over-the-year. IT-software and electronics companies employed 6.7 percent of the region's total employment base, compared with a 2.9 percent employment concentration nationwide.

Approximately 860 IT-software and electronics companies operated in the Denver South region in 2014. Sixty-nine percent of the region's IT-software and electronics companies employed fewer than 10 people, while 1.2 percent employed 250 or more.

IT-Software & Electronics Number of Employees Growth Rate

Source: Dun & Bradstreet, Inc., Marketplace database, July-Sept. 2007-2010; Market Analysis Profile, 2011-2014.

IT-Software and Electronics Employment by County, 2014

Arapahoe 58.8%
Denver 17.2%
Douglas 24.0%

Sources: Market Analysis Profile, 2014; Development Research Partners.

IT-Software and Electronics Employment by Industry Sector, 2014

Other computer-related services 10.3%
Computer integrated systems design & data processing 19.2%
Electrical apparatus, parts, & equip. wholesalers 11.8%
Software publishing 14.3%
Computers, peripherals, & software wholesalers 8.8%
Semiconductor & other electronic component mfg. 3.6%
Computer facilities mgmt. 0.7%
Other electronic services 0.5%
Custom computer programming services 30.8%

Sources: Market Analysis Profile, 2014; Development Research Partners.
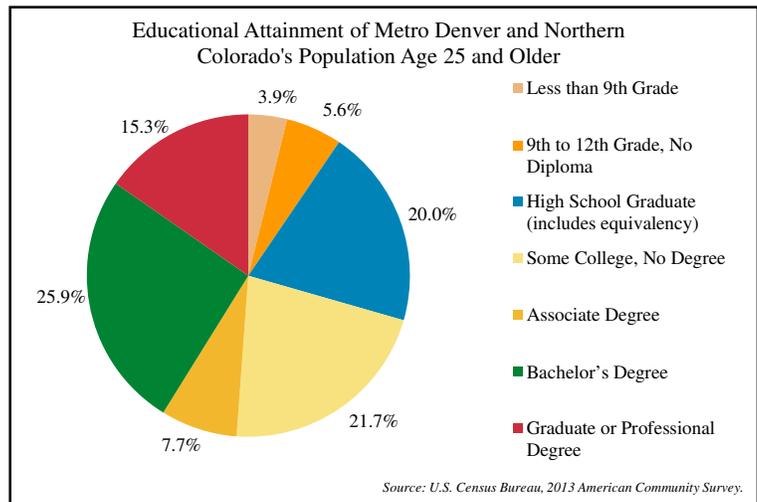
Major IT-Software and Electronics Companies

- Arrow Electronics
  www.arrow.com
- CIBER, Inc.
  www.ciber.com
- Cisco Systems, Inc.
  www.cisco.com
- CSG International
  www.csgi.com
- EMC Corporation
  www.emc.com
- IBM Corp.
  www.ibm.com
- IHS Inc.
  www.ihs.com
- Intermap Technologies, Inc.
  www.intermap.com
- IQNavigator
  http://iqnavigator.com
- Keysight Technologies Inc.
  www.keysight.com
- Latisys
  www.latisys.com
- McAfee, Inc.
  www.mcafee.com

- Microsoft Corp.
  www.microsoft.com
- Oracle Corporation
  www.oracle.com
- QC Data
  www.qcdata.com
- Rivet Software
  www.rivetsoftware.com
- SofTec Solutions
  www.softecinc.com
- SourceCorp
  www.sourcecorp.com
- Statêra, Inc.
  www.statera.com
- Sybase, Inc.
  www.sybase.com
- Travelport
  www.travelport.com
- TriZetto Corporation
  www.trizetto.com
- Trulia Inc.
  www.trulia.com

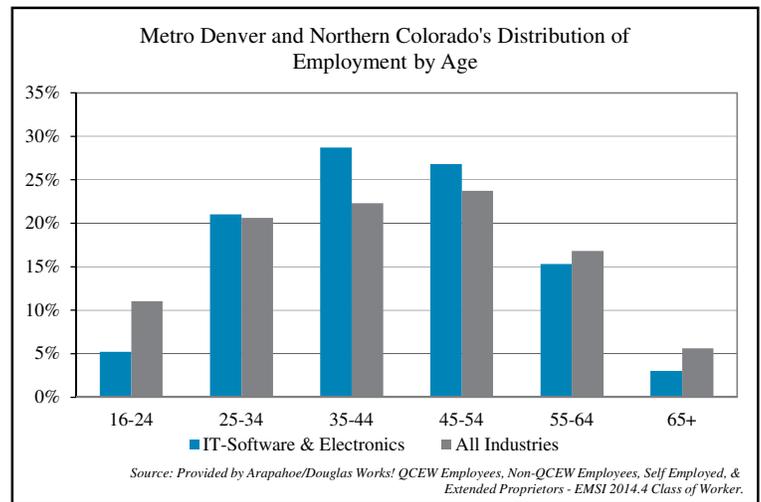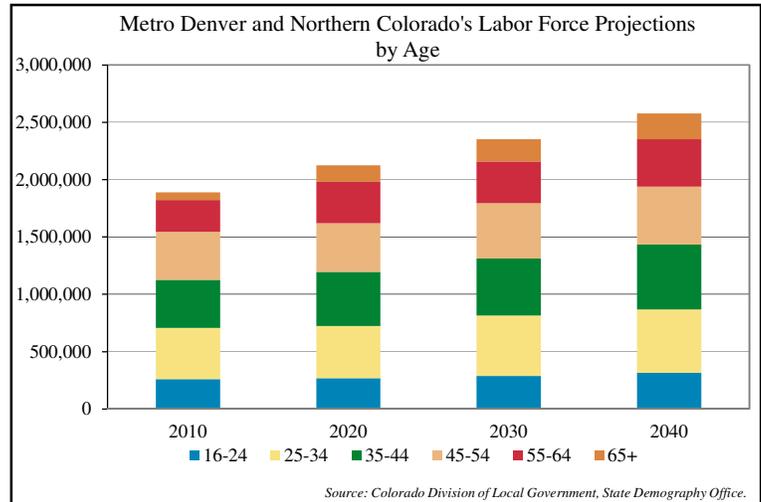## IT-Software and Electronics Workforce Profile

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.

Educational Attainment of Metro Denver and Northern Colorado's Population Age 25 and Older

- Less than 9th Grade — 3.9%
- 9th to 12th Grade, No Diploma — 5.6%
- High School Graduate (includes equivalency) — 20.0%
- Some College, No Degree — 21.7%
- Associate Degree — 7.7%
- Bachelor's Degree — 25.9%
- Graduate or Professional Degree — 15.3%

Source: U.S. Census Bureau, 2013 American Community Survey.

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 IT-software and electronics industry employs nearly 15,600 people and includes a large pool of talented, well-educated, and highly skilled workers. Compared with the age distribution across all industries, the IT-software and electronics cluster in the nine-county region has a larger share of employees that are between the ages of 25 and 54 years old, with the strongest concentration of workers between the ages of 35 and 44 years old.

The IT-software and electronics 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 IT-software and electronics 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.

Metro Denver and Northern Colorado's Labor Force Projections by Age

Legend: 16-24, 25-34, 35-44, 45-54, 55-64, 65+

Source: Colorado Division of Local Government, State Demography Office.

Metro Denver and Northern Colorado's Distribution of Employment by Age

Legend: IT-Software & Electronics, All Industries

Source: Provided by Arapahoe/Douglas Works! QCEW Employees, Non-QCEW Employees, Self Employed, & Extended Proprietors - EMSI 2014.4 Class of Worker.

Wages

The 2013 average annual salary for an IT-software and electronics worker in the nine-county region was $94,800, compared with the national average of $94,380. Total payroll for the IT-software and electronics cluster in the nine-county region exceeded $5.6 billion in 2013.

Metro Denver and Northern Colorado IT-Software and Electronics Occupation & Salary Profile, 2014

10 Largest IT-Software and Electronics Occupations in Metro Denver and Northern Colorado	Total Working Across All Industries (2014)	Number of Available Applicants (2014)	Number of Graduates (2013)	Median Salary	10th Percentile Salary	25th Percentile Salary	75th Percentile Salary	90th Percentile Salary
1. Software developers, applications	19,382	340	585	$91,021	$56,056	$71,718	$111,696	$134,472
2. Sales representatives, wholesale & mfg., except technical & scientific products	27,587	707	141	$58,594	$31,512	$41,059	$86,882	$125,819
3. Software developers, systems software	10,055	105	630	$97,136	$64,210	$78,915	$118,685	$140,878
4. Computer systems analysts	10,348	367	1052	$77,771	$53,102	$63,731	$99,715	$136,115
5. Computer user support specialists	11,626	855	549	$51,126	$33,675	$41,018	$65,083	$79,373
6. Computer programmers	4,895	359	480	$74,360	$47,507	$57,762	$98,654	$131,102
7. Customer service representatives	36,610	6,494	0	$31,866	$22,194	$26,562	$40,290	$49,754
8. Sales representatives, wholesale & mfg., technical & scientific products	6,041	652	116	$82,014	$39,042	$57,013	$109,866	$168,917
9. Web developers	4,507	151	1,552	$50,024	$32,677	$41,059	$61,152	$71,989
10. Network & computer systems administrators	8,567	523	696	$78,312	$50,835	$62,816	$95,389	$113,214

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 2014.4 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 IT-software and electronics occupations in the nine-county region are included below. A directory of all higher education institutions with corresponding websites may be accessed via http://highered.colorado.gov.

- Colorado State University
  www.colostate.edu

- Colorado State University Global Campus
  www.colostate.edu

- Jones International University
  www.jiu.edu

- Metropolitan State University of Denver
  www.msudenver.edu

- Regis University
  www.regis.edu

- The Art Institute of Colorado
  http://artinstitutes.edu

- University of Colorado Boulder
  www.colorado.edu

- University of Colorado Denver
  www.ucdenver.edu

- University of Denver
  www.du.edu

- University of Northern Colorado
  www.unco.edu

Key Reasons for IT-Software and Electronics Companies to Locate in the Denver South Region and the Surrounding Nine-County Region

1. **The ability to attract and retain high-quality IT and electronics professionals and technical 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 nation's seventh-largest employment base in the software publishing and the computer and peripheral equipment manufacturing industry, the 11th-largest base in measuring and control instruments manufacturing, and the 13th-largest in semiconductor manufacturing. Further, Colorado had the ninth-highest paid tech workers, earning an average wage of $101,800, which was 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 ninth in the number of science and engineering graduate students per 1,000 individuals ages 25 to 34 years old in 2011. (National Science Foundation, 2014)
   - Colorado ranked among the top five most innovative states in the nation in the 2014 *State Innovation Index*. (U.S. Department of Commerce, 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)
   - Metro Denver ranked as the ninth-best metro area for science, technology, engineering, and mathematics (STEM) graduates in 2014. STEM jobs in Metro Denver represented 8.2 percent of all occupations and the area's annual mean wage for STEM jobs was $84,380. (NerdWallet, 2014)

2. **Direct access to a large and growing customer base**
   - Colorado ranked fifth in the nation for funds raised per worker from the Small Business Innovation Research (SBIR) grant program. The state received $25.82 SBIR grants per worker compared with the U.S. average of $11.15. (U.S. Small Business Administration, 2014; U.S. Bureau of Labor Statistics, 2014)
   - Colorado companies in the IT-software and electronics industry attracted 480 deals totaling nearly $2.4 billion in venture capital over the past 10 years. This high level of investment signals abundant opportunities for growth, innovation, and job creation in the Denver South region. (PricewaterhouseCoopers, *MoneyTree Report*, 2015)
   - Colorado's leading exports are computers and electronic products, which accounted for nearly one-quarter of all Colorado exports in 2014, compared with 13 percent of U.S. exports. (U.S. Department of Commerce, International Trade Administration, 2015)
   - Colorado ranked seventh in new company formation per 1,000 employees in 2013 and fourth in initial public offerings, strong measures of entrepreneurial energy. (U.S. Bureau of Labor Statistics, 2014 ; Information Technology and Innovation Foundation and Ewing Marion Kauffman Foundation, 2014)
   - 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)

3. **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.

- o 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)
  - o 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)

4. **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)
   - Denver ranked among the top-five safest cities for natural disasters in 2014. (HomeownersInsurance.com, 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)
   - Douglas County ranked among the "10 Best Counties in America" in 2014. The County recorded the lowest poverty rate (2 percent of families) on the list with the highest high school graduation rate (97.2 percent). (Movoto Real Estate, 2014)
   - Douglas County ranked sixth in the nation on a list of counties with the highest median income as a result of high wage jobs in the area. Douglas County had a median income of $99,770 in 2013, compared with the national median income of $52,300. (Sentier Research, 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 Interstate 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)

- The Regional Transportation District (RTD) offers two corporate pass programs for companies in the Denver South region. The EcoPass is an annual transit pass purchased by a company for all of its employees, providing unlimited usage of RTD services. FlexPass is an annual pass program that can be customized to meet the needs of the employer and employees. The program's flexible nature enables employees to choose their service level, vary passes from month-to-month, and enter or leave the program at any time. Both passes are tax deductible to the employer and provided tax-free to employees. (Regional Transportation District, 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)

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