2022

Aerospace & Aviation

INDUSTRY PROFILE

for Arapahoe & Douglas Counties
Colorado WIOA Central Planning Region

Colorado Central Planning Region

Arapahoe/Douglas
WORKFORCE BOARD
COLORADO

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GEOGRAPHICAL AREA

The geographic area for this industry profile includes the 13 counties that make up Colorado's Urban Front Range.

The geographic region includes the following metropolitan areas:
- Boulder
- Colorado Springs
- Denver-Aurora-Lakewood
- Fort Collins
- Greeley

In 2021, this thirteen-county region employed nearly 2.6 million people across all industries, and made up over 85% of Colorado's total employment.

In 2020, the gross regional product (GRP) for Colorado's Urban Front Range was $312.76 billion, which made up around 1.7% of the national GRP. GRP is the total market value of all goods and services produced in the region.
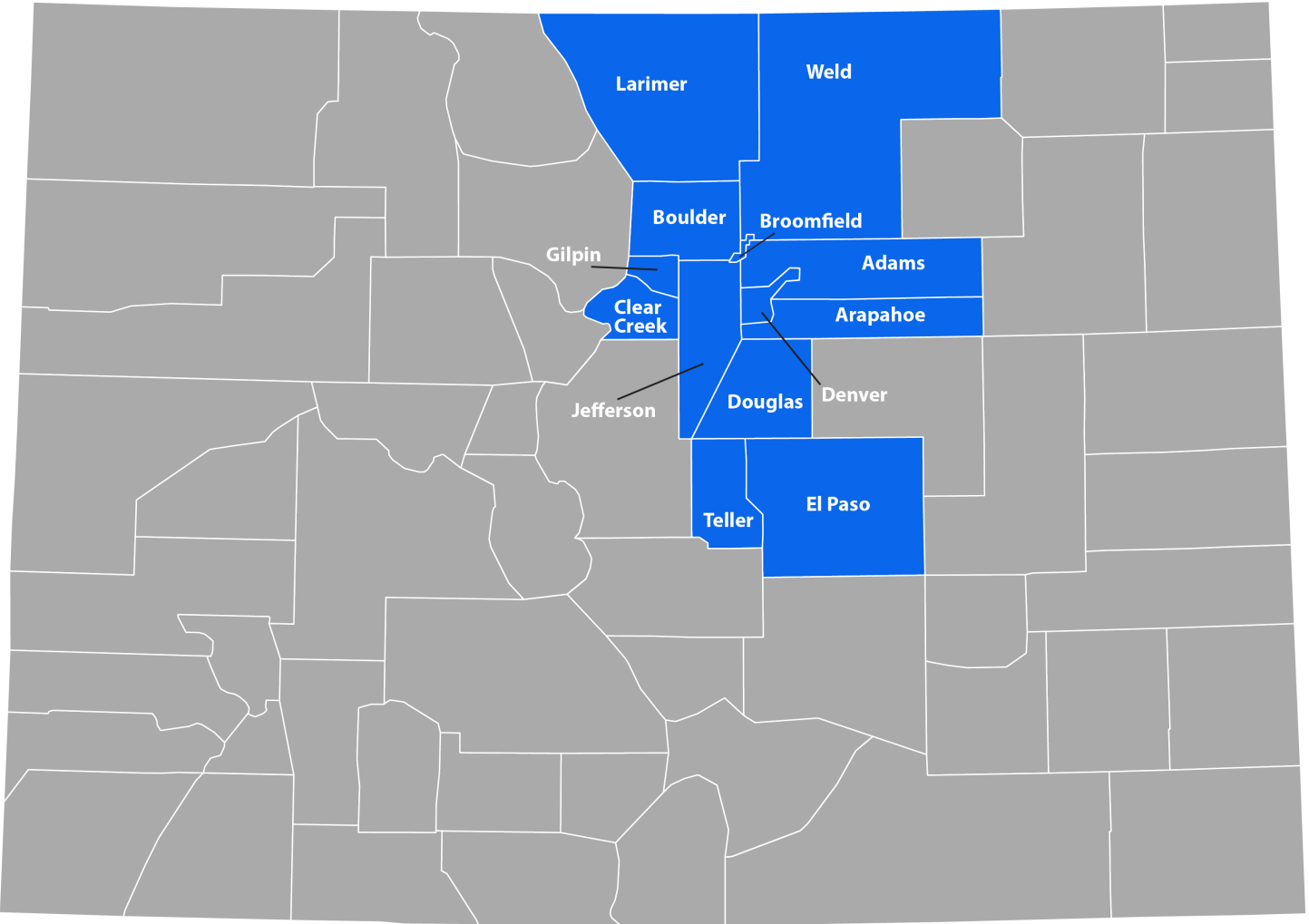
INDUSTRIES MAKING UP THE SECTOR
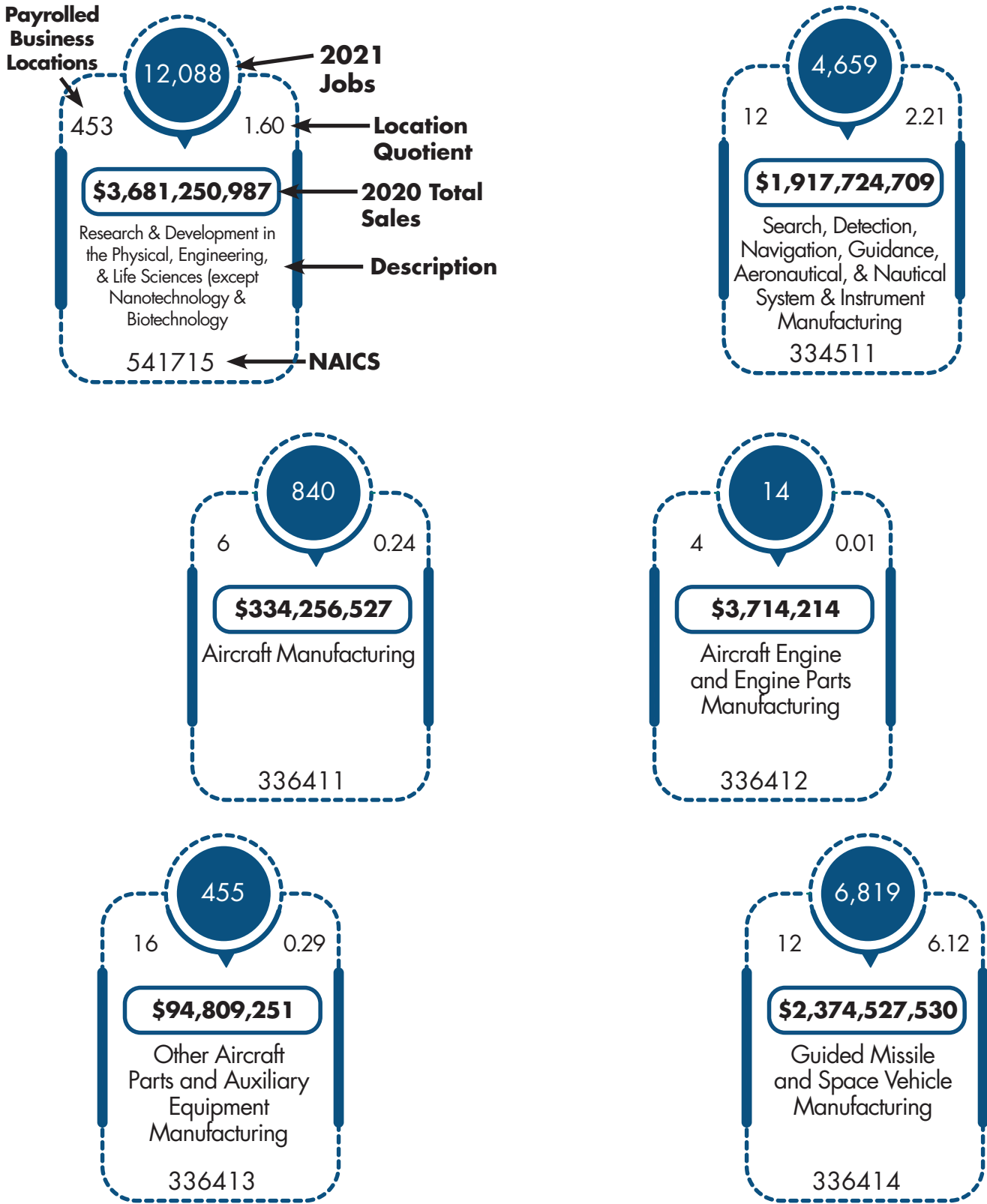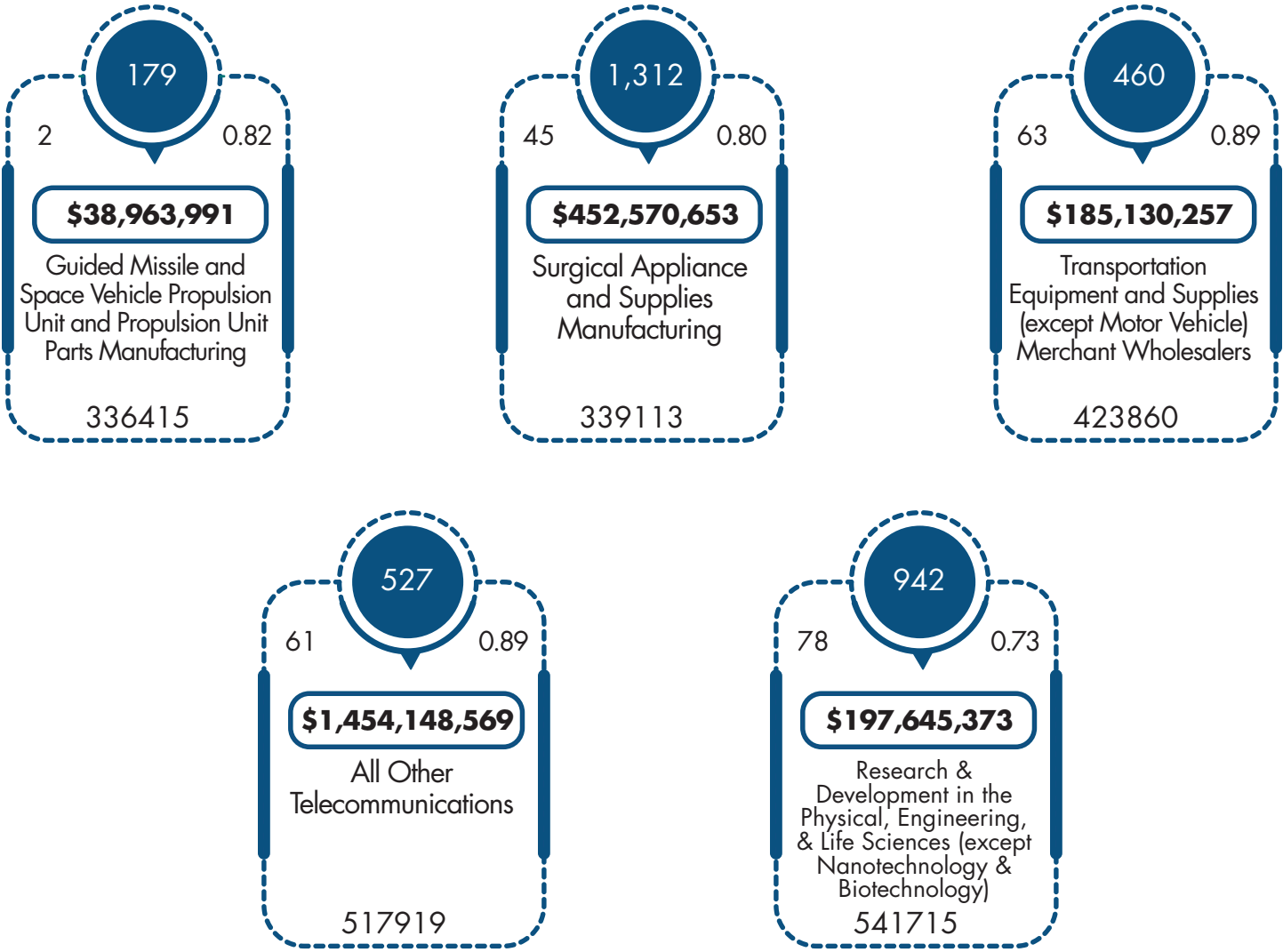
The Aerospace & Aviation Sector employs 27,081 people in 700 payrolled business locations along Colorado's Urban Front Range. In 2020, the sector had $10.6 billion in sales, and contributed $6.5 billion to the region's Gross Regional Product. The region's geographic location and extensive infrastructure ensures a strong global supply chain, and a diversified business climate. In addition, ready access to highly skilled workers and world-class research institutions offers employers in the Sector many advantages in a global economy.

Note:
Location Quotient is a measure of the employment concentration in any given industry relative to the national average.

Payrolled Business Locations

12,088 — **2021 Jobs**

453 — 1.60 — **Location Quotient**

$3,681,250,987 — **2020 Total Sales**

Research & Development in the Physical, Engineering, & Life Sciences (except Nanotechnology & Biotechnology) — **Description**

541715 — **NAICS**

4,659

12 — 2.21

$1,917,724,709

Search, Detection, Navigation, Guidance, Aeronautical, & Nautical System & Instrument Manufacturing

334511

840

6 — 0.24

$334,256,527

Aircraft Manufacturing

336411

14

4 — 0.01

$3,714,214

Aircraft Engine and Engine Parts Manufacturing

336412

455

16 — 0.29

$94,809,251

Other Aircraft Parts and Auxiliary Equipment Manufacturing

336413

6,819

12 — 6.12

$2,374,527,530

Guided Missile and Space Vehicle Manufacturing

336414

INDUSTRIES MAKING UP THE SECTOR

179

2 — 0.82

$38,963,991

Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing

336415

1,312

45 — 0.80

$452,570,653

Surgical Appliance and Supplies Manufacturing

339113

460

63 — 0.89

$185,130,257

Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers

423860

527

61 — 0.89

$1,454,148,569

All Other Telecommunications

517919

942

78 — 0.73

$197,645,373

Research & Development in the Physical, Engineering, & Life Sciences (except Nanotechnology & Biotechnology)
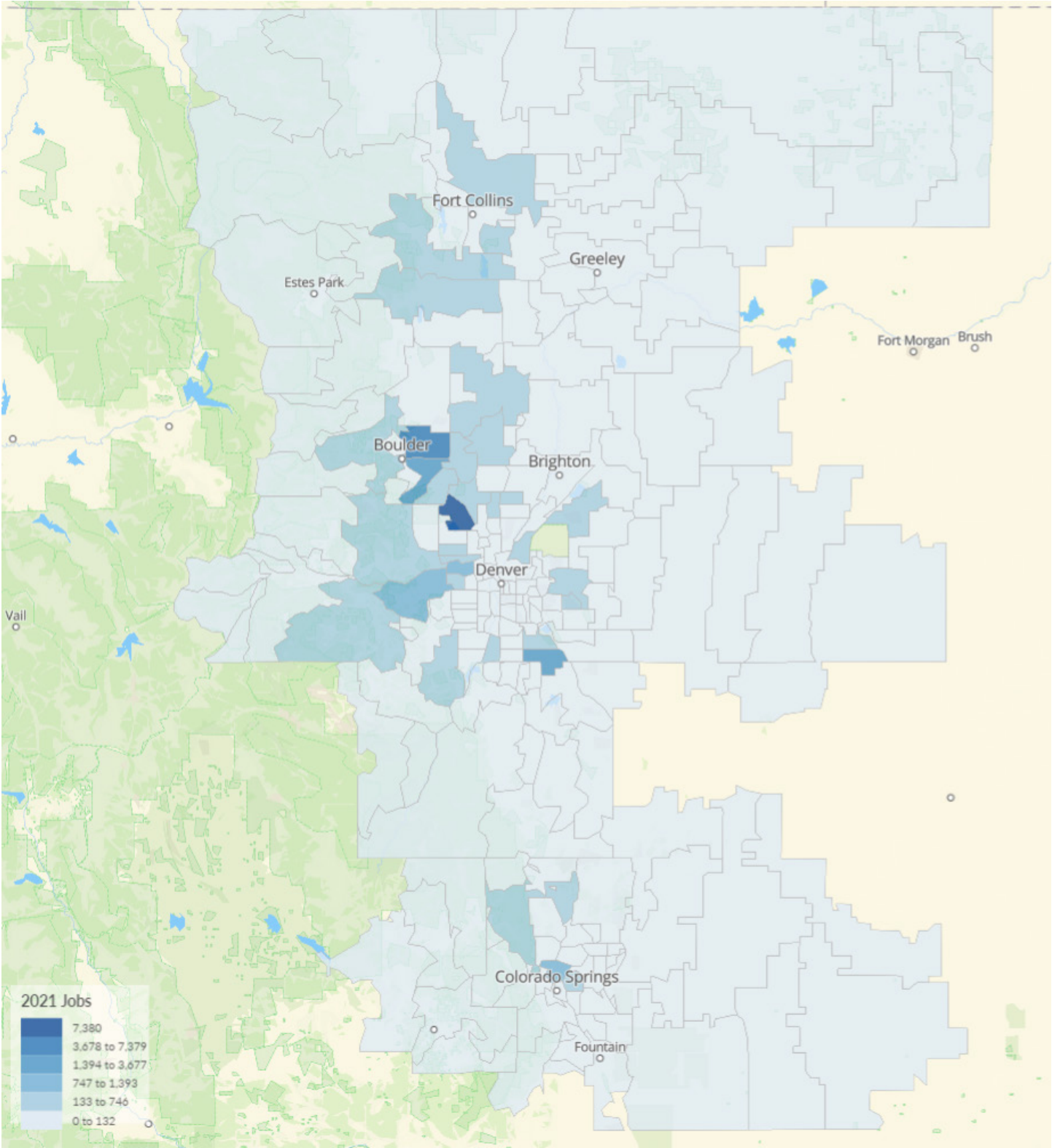
541715

TOTALS
2021 Jobs - 27,081
Payrolled Business Locations - 700
Location Quotient - 2.69
Total Sales - $10,559,670,226

EMPLOYMENT CONCENTRATION MAP

2021 Jobs
- 7,380
- 3,678 to 7,379
- 1,394 to 3,677
- 747 to 1,393
- 133 to 746
- 0 to 132

Source: EMSI Burning Glass

EMPLOYMENT CONCENTRATION

Overall, employment in the sector is more concentrated at 2.69 times the national average. With the highest concentration of private aerospace workers in the nation, the Aerospace Cluster is a critical driver of Colorado's economic growth. - Source: Metro Denver Economic Development Corporation

Note: A supplement is any kind of employer paid benefit beyond wage or salary.

Jobs and Average Earnings by County

| County	2021 Jobs	Average Wage & Salaries	Average Cost of Supplements
Jefferson	10,704	$148,764	$31,537
Boulder	7,703	$126,694	$19,583
Arapahoe	2,504	$104,298	$20,915
El Paso	2,281	$113,251	$22,987
Larimer	1,437	$117,102	$17,471
Adams	692	$103,467	$18,594
Denver	616	$129,437	$20,592
Broomfield	464	$354,630	$60,686
Douglas	413	$144,363	$24,661
Weld	247	$85,696	$19,214
Teller	17	$113,254	$15,269
Clear Creek	<10	Insf. Data	Insf. Data
Gilpin	0	0	0
TOTALS	**27,077**	**$134,966**	**$25,380**

Source: EMSI Burning Glass

WHERE CORE WORKFORCE LIVES

Every industry sector has a group of occupations that it needs to produce its good or render its service. This is called a staffing pattern, and these staffing patterns include management, business and financial occupations, administrative and support occupations, and core occupations.

Core occupations in the Sector include some installation, maintenance and repair occupations, and production occupations. This map shows where the core workers in the industry live (orange) and where they work (blue).

For this industry, the core occupations are defined as follows:
- Management
- Business & Financial Operations
- Computer & Mathematical
- Architecture & Engineering
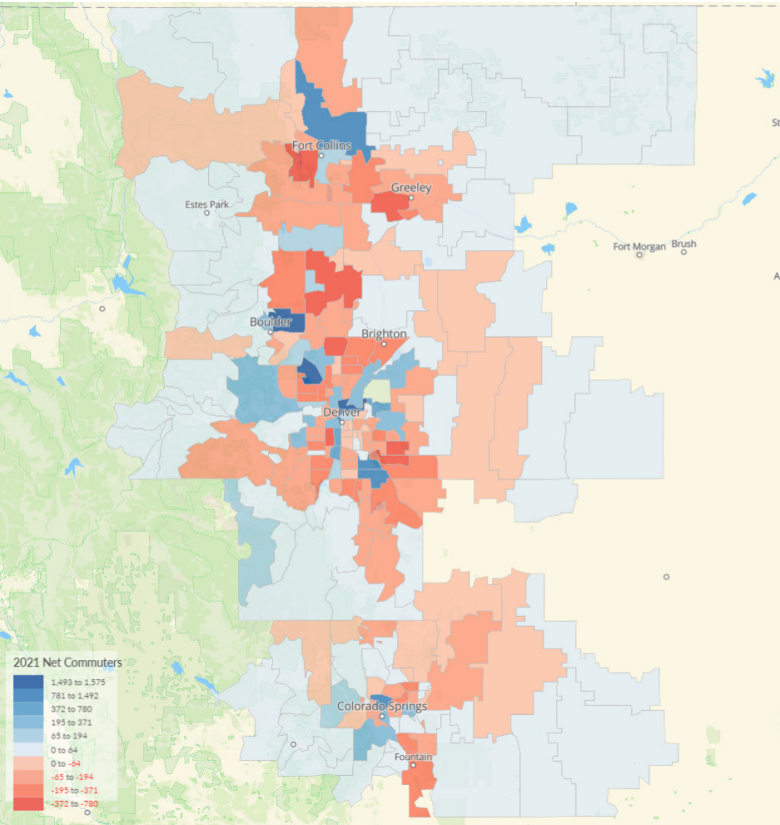
| County	Net Commuters	Resident Workers	Jobs
Denver	2,671	5,746	8,417
Boulder	1,428	4,526	5,954
Arapahoe	421	5,129	5,549
Clear Creek	(3)	39	36
Jefferson	(72)	7,114	7,041
Larimer	(99)	4,631	4,531
Teller	(112)	203	90
Broomfield	(179)	1,330	1,151
El Paso	(301)	6,371	6,070
Adams	(1,012)	5,780	4,768
Douglas	(1,343)	2,829	1,486
Weld	(1,436)	5,284	3,848
Gilpin	Insf. Data	39	<10

Source: EMSI Burning Glass

HISTORICAL TRENDS & GROWTH

- Over the last decade, employment in the Aerospace and Aviation Sector grew by 3,827 jobs, an annual growth rate of 1.72%.
- The number of establishments grew annually by 2.7% over the same time period, moving from 523 in 2011 to 667 in 2020.
- Average worker earnings in the sector, which includes wages, salaries, and compensation, grew from $124,390 in 2011 to $162,687 in 2020, an annual growth rate of 2.5%.

Historical Trends
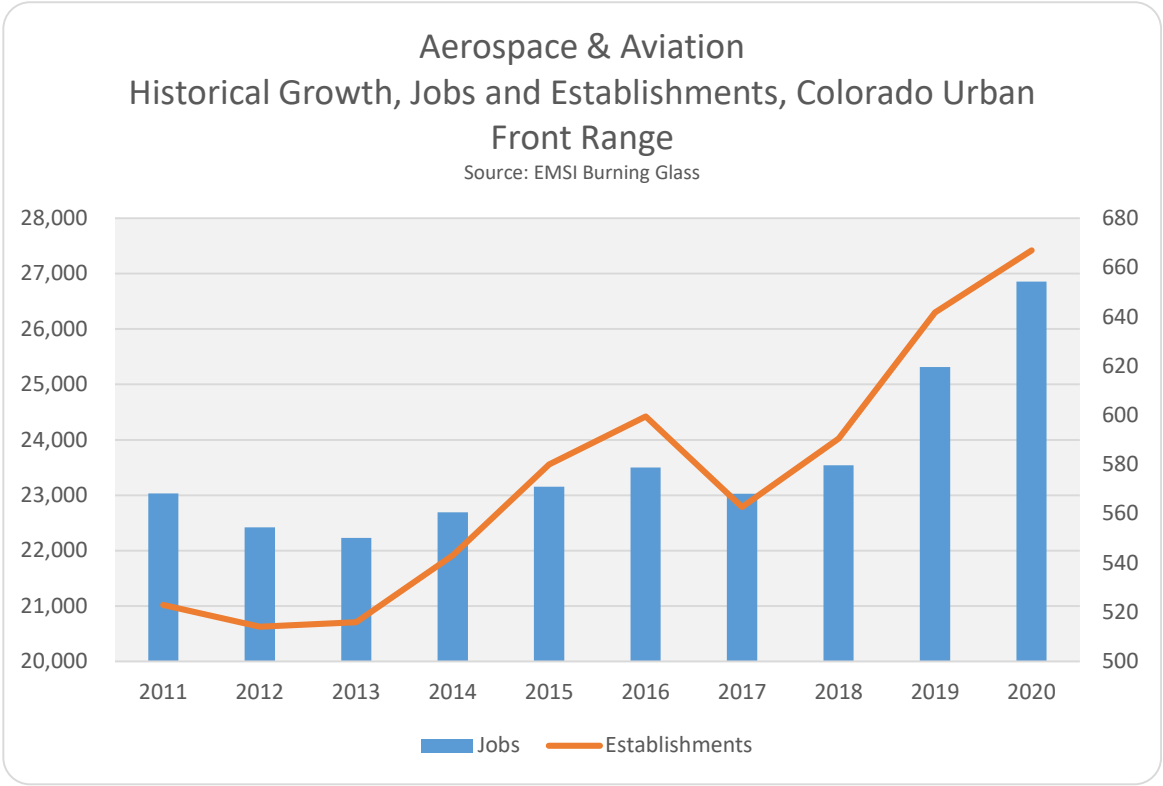
Historical Growth
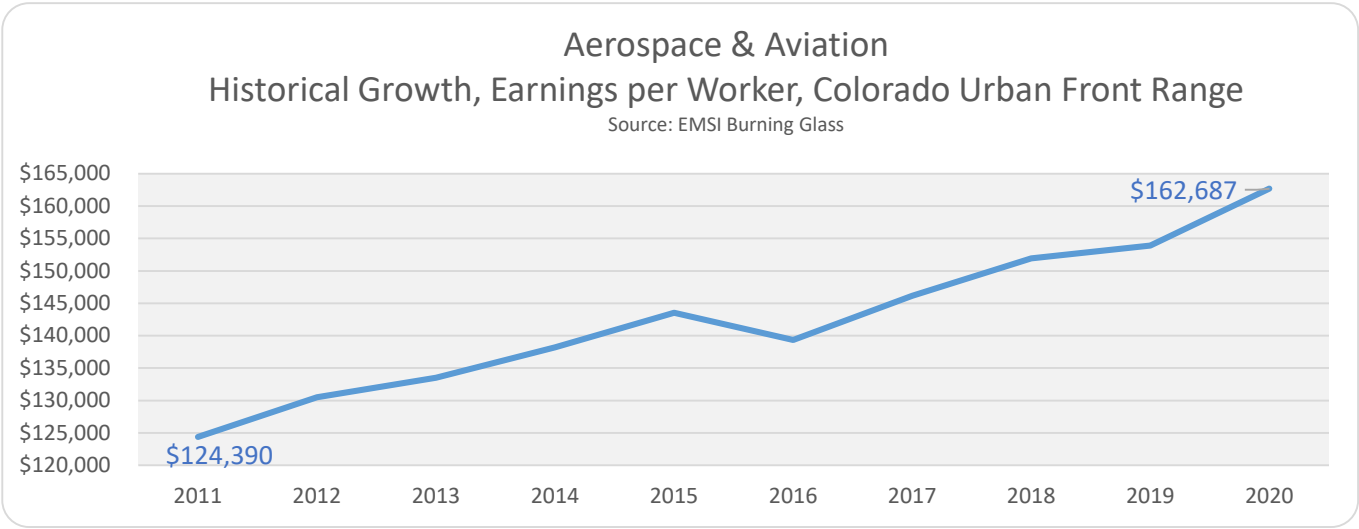
PROJECTED GROWTH

The Aerospace & Aviation Sector is expected to grow at an annual rate of 2.2%, with the number of jobs increasing to 29,526 by 2025. The Urban Front Range continues to be a national hub in several sector industries with employment concentration in the sector as a whole at 269% (location quotient converted to %) of the national average.

Note:
Location Quotient is a measure of the employment concentration in any given industry relative to the national average.

Source: EMSI Burning Glass

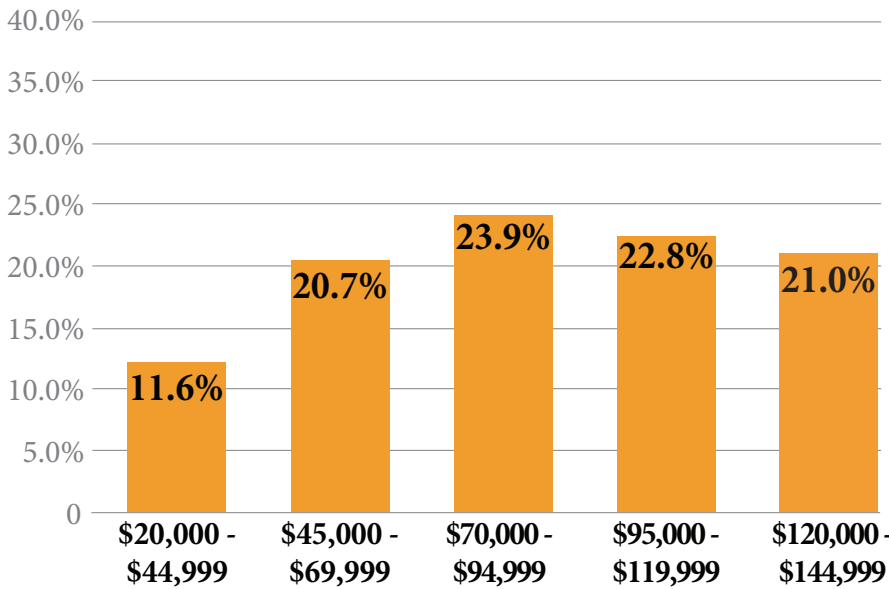| NAICS	Description	2021 Jobs	2025 Jobs	2021-2025 Change	Location Quotient	2020 Payrolled Business Locations
334511	Search, Detection, Navigation, Guidance, Aeronautical, & Nautical System & Instrument Manufacturing	4,659	5,616	957	2.21	12
336411	Aircraft Manufacturing	840	921	81	0.24	6
336412	Aircraft Engine & Engine Parts Manufacturing	14	13	(1)	0.01	4
336413	Other Aircraft Parts & Auxiliary Equipment Manufacturing	455	563	108	0.29	16
336414	Guided Missile & Space Vehicle Manufacturing	6,819	7,721	902	6.12	12
336415	Guided Missile & Space Vehicle Propulsion Unit & Propulsion Unit Parts Manufacturing	179	262	83	0.82	2
339113	Surgical Appliance & Supplies Manufacturing	1,312	1,324	12	0.80	45
423860	Transportation Equipment & Supplies (except Motor Vehicle) Merchant Wholesalers	460	477	17	0.89	63
517919	All Other Telecommunications	527	489	(38)	0.89	61
541715	Research & Development in the Physical, Engineering, & Life Sciences (except Nanotechnology & Biotechnology)	11,816	12,139	323	1.55	481
	TOTALS	**27,081**	**29,526**	**2,445**	**2.69**	**700**

WAGE TRENDS

The bar graph and the line graph below are from EMSI Burning Glass, and reflect wage trends in job postings for the industry. The bar graph shows the posting wage curve for 2021 to date, with the median posted annual wage $108,416. The line graph below shows the median wage from job postings by month over a three-year period.

Salary Range of Unique Job Postings

Range	Percentage
$20,000 - $44,999	11.6%
$45,000 - $69,999	20.7%
$70,000 - $94,999	23.9%
$95,000 - $119,999	22.8%
$120,000 - $144,999	21.0%

Advertised Wage Trends

Jan-20: $41,600
Dec-21: $96,640
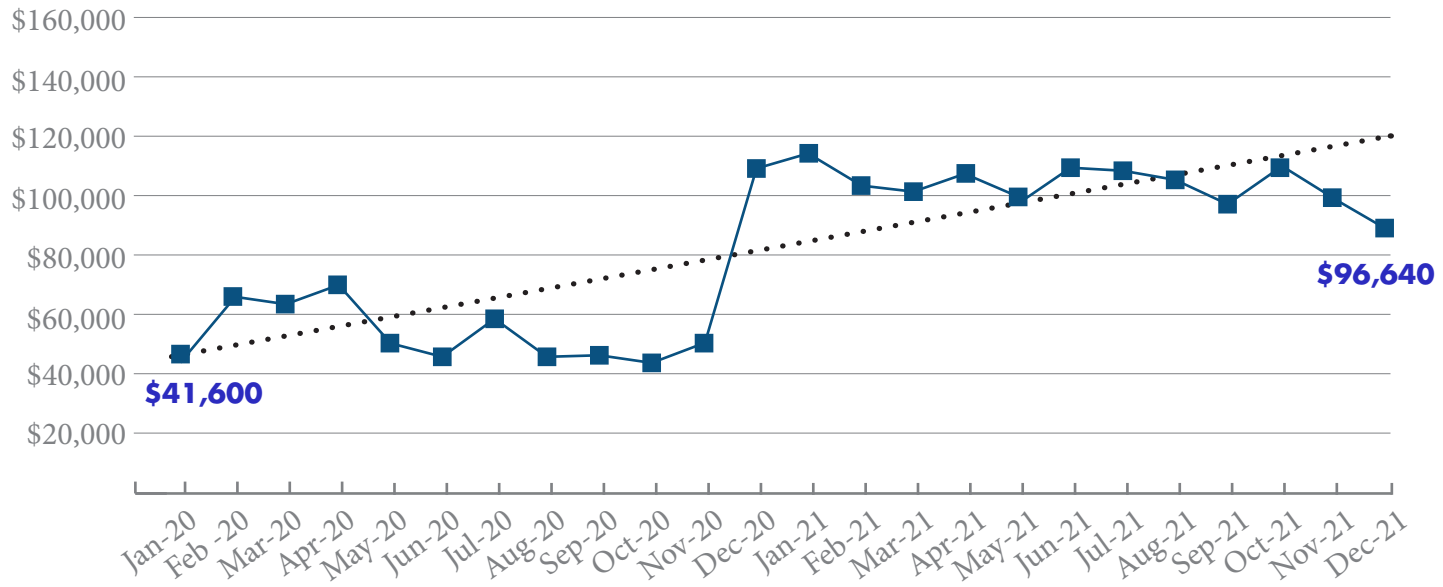
COMPETITIVE WAGE ANALYSIS

This table shows employment within the Colorado Urban Front Range in the top 20 occupations in the sector. Regional wage ranges and the median wage are shown.

Due to the timeframes in which wage data is collected and collated, Colorado's 2022 minimum wage of $12.56 per hour may not be accurately reflected in some of the wages listed in the table. House Bill 1210, passed in late 2019, has allowed local governments to set higher wages. These municipal minimum wages will also not be accurately reflected in some of the wages listed in the table.

SOC Code	Description	# Jobs in Industry	% of Total Employment in Industry	# Jobs across Industries	Average Annual Openings	Average Wage	10th Percentile Wage	25th Percentile Wage	Median Wage	75th Percentile Wage	90th Percentile Wage
11-1021	General & Operations Managers	380	1.4%	32,731	3,590	$71.32	$26.57	$39.11	$60.37	$93.63	$132.71
11-9041	Architectural & Engineering Managers	349	1.3%	3,288	306	$85.52	$58.28	$68.06	$80.31	$97.34	$141.23
11-9121	Natural Sciences Managers	388	1.4%	1,324	122	$74.38	$46.44	$54.66	$66.49	$84.34	$114.7
13-1028	Buyers & Purchasing Agents	462	1.7%	9,085	936	$35.23	$19.17	$24.42	$33.21	$43.84	$54.71
13-1198	Project Management Specialists & Business Operations Specialists, All Other	1,270	4.7%	51,871	4,714	$43.94	$22.65	$29.41	$40.16	$54.02	$69.13
13-2011	Accountants & Auditors	350	1.3%	35,865	3,885	$41.50	$22.67	$28.06	$37.08	$50.48	$65.31
15-1256	Software Developers & Software Quality Assurance Analysts & Testers	1,903	7.0%	50,056	5,808	$54.39	$32.71	$40.77	$53.14	$66.32	$79.67
17-2011	Aerospace Engineers	722	2.7%	2,126	175	$60.89	$34.27	$43.44	$59.31	$77.09	$92.32
17-2061	Computer Hardware Engineers	462	1.7%	4,306	317	$57.19	$33.93	$43.00	$55.62	$69.96	$85.21
17-2071	Electrical Engineers	418	1.5%	3,491	323	$49.64	$29.10	$37.04	$47.24	$60.31	$74.33
17-2072	Electronics Engineers, Except Computer	708	2.6%	6,213	485	$57.16	$35.41	$43.32	$55.43	$70.31	$82.60
17-2112	Industrial Engineers	789	2.9%	4,216	398	$48.37	$31.36	$36.99	$46.27	$58.11	$70.09
17-2141	Mechanical Engineers	699	2.6%	5,434	435	$50.03	$29.12	$35.15	$45.24	$58.06	$78.02
17-2199	Engineers, All Other	392	1.4%	3,028	258	$57.13	$28.90	$41.12	$54.73	$69.95	$85.67
19-1021	Biochemists & Biophysicists	468	1.7%	991	102	$45.73	$24.52	$30.89	$39.75	$54.53	$70.86
19-1042	Medical Scientists, Except Epidemiologists	510	1.9%	1,746	191	$46.43	$20.52	$24.21	$31.97	$53.25	$92.47
19-4021	Biological Technicians	929	3.4%	2,996	433	$21.82	$12.48	$16.48	$19.86	$26.57	$33.93
51-2028	Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	914	3.4%	5,538	666	$18.50	$12.90	$14.80	$17.48	$20.99	$25.75
51-4041	Machinists	368	1.4%	3,898	462	$22.59	$15.16	$17.73	$22.04	$26.96	$31.22
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	373	1.4%	5,283	675	$24.92	$14.61	$17.33	$22.01	$29.74	$38.53

Source: EMSI Burning Glass
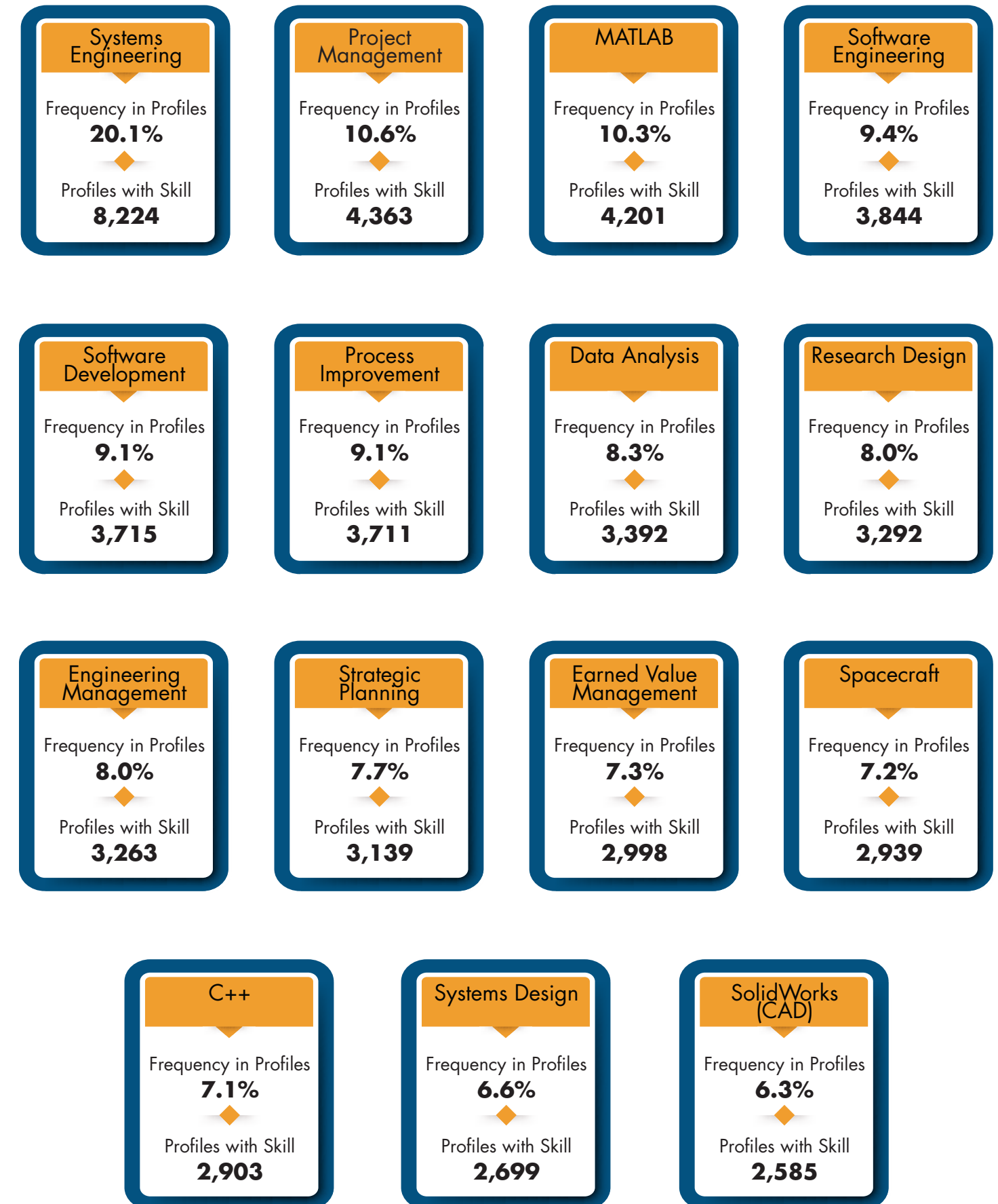
TOP ONLINE PROFILES & REGIONAL BENCH STRENGTH

EMSI Burning Glass has access to over 102 million online resumes throughout the United States, and offers analytical data on those profiles. This table shows online profiles of people working in the Sector that have been updated at some time in calendar 2021. While not all of these people may be presently looking for work, the fact they have recently updated their online resumes suggests they may be open to new opportunities.

Occupation	Profiles	Percent
Software Developers & Software Quality Assurance Analysts & Testers	4,889	11.9%
Engineers, All Other	2,057	5.0%
Mechanical Engineers	1,604	3.9%
Postsecondary Teachers	1,572	3.8%
Personal Service Managers, All Other; Entertainment & Recreation Managers, Except Gambling	1,535	3.7%
Computer Occupations, All Other	1,145	2.8%
Network & Computer Systems Administrators	1,095	2.7%
Architectural & Engineering Managers	1,082	2.6%
Industrial Engineers	1,059	2.6%
Electronics Engineers, Except Computer	891	2.2%
Electrical Engineers	869	2.1%
Computer Systems Analysts	791	1.9%
Computer & Information Systems Managers	772	1.9%
Marketing Managers	675	1.6%
Computer User Support Specialists	670	1.6%
General & Operations Managers	629	1.5%
Life, Physical, & Social Science Technicians, All Other	613	1.5%
Aerospace Engineers	594	1.4%
Information Security Analysts	549	1.3%
Sales Managers	524	1.3%

TOP HARD SKILLS IN ONLINE PROFILES

The figures on this page show the top hard skills listed in online profiles of people working in the Sector that have been updated at some time in calendar 2021.
Source: EMSI Burning Glass

Skill	Frequency in Profiles	Profiles with Skill
Systems Engineering	20.1%	8,224
Project Management	10.6%	4,363
MATLAB	10.3%	4,201
Software Engineering	9.4%	3,844
Software Development	9.1%	3,715
Process Improvement	9.1%	3,711
Data Analysis	8.3%	3,392
Research Design	8.0%	3,292
Engineering Management	8.0%	3,263
Strategic Planning	7.7%	3,139
Earned Value Management	7.3%	2,998
Spacecraft	7.2%	2,939
C++	7.1%	2,903
Systems Design	6.6%	2,699
SolidWorks (CAD)	6.3%	2,585

TOP QUALIFICATIONS IN ONLINE PROFILES

The figures on this page show the top qualifications listed in online profiles of people working in the Sector that have been updated at some time in calendar 2021.

Qualification
Security Clearance
Profiles with Qualification
3,702

Qualification
TS/SCI Clearance
Profiles with Qualification
934

Qualification
CompTIA Security+
Profiles with Qualification
809

Qualification
Project Management Professional Certification
Profiles with Qualification
613

Qualification
CompTIA Certification
Profiles with Qualification
600

Qualification
Six Sigma Green Belt Certification
Profiles with Qualification
346

Qualification
CISSP
Profiles with Qualification
326

Qualification
Secret Clearance
Profiles with Qualification
299

Qualification
ITIL Certifications
Profiles with Qualification
204

Qualification
Certified Scrum Master
Profiles with Qualification
184

Source: EMSI Burning Glass

STRATEGIES FOR MAINTAINING PRODUCTIVITY & OUTPUT

This section explores various options and resources that can be used to leverage scarce labor. The table immediately below shows hires, separations and turnover rate for the top 20 occupations in the sector (2020).

There are generally five strategies an employer can use to attract workers:
1. Offer more money and/or signing bonus (this gets new hires in, but does not necessarily keep them there),
2. Hire remote workers for those functions that can be filled using virtual technology.
3. Invest capital in automation to leverage current labor productivity.
4. Work with local K-12 and postsecondary educators to expose students to career pathways in the sector.
5. Work with the local workforce system and its partners to seek out and train hidden talent through internships and apprenticeships.
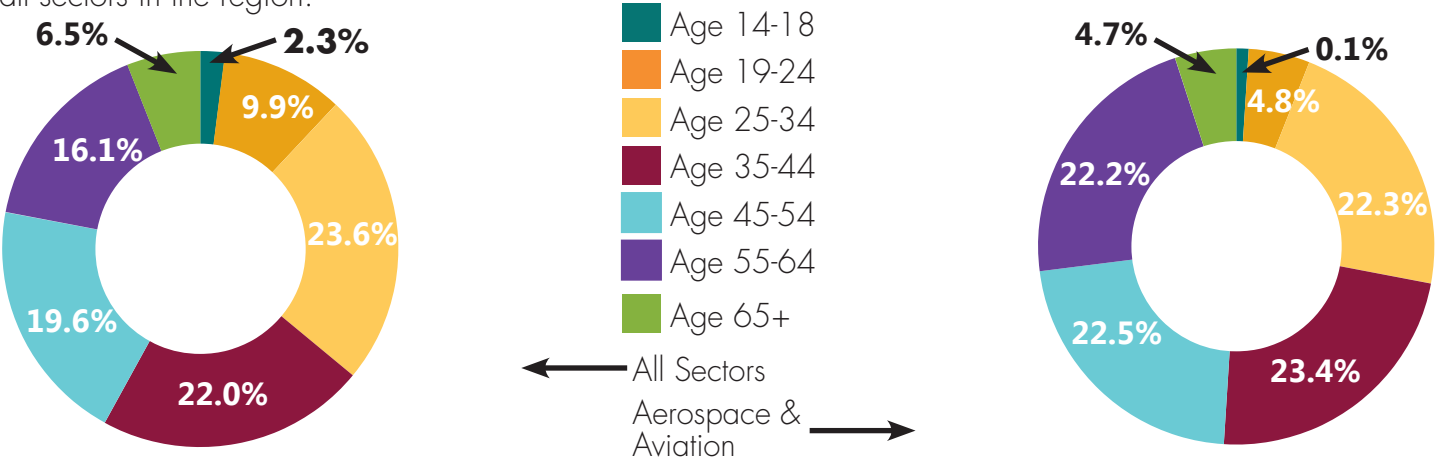
Source: EMSI Burning Glass

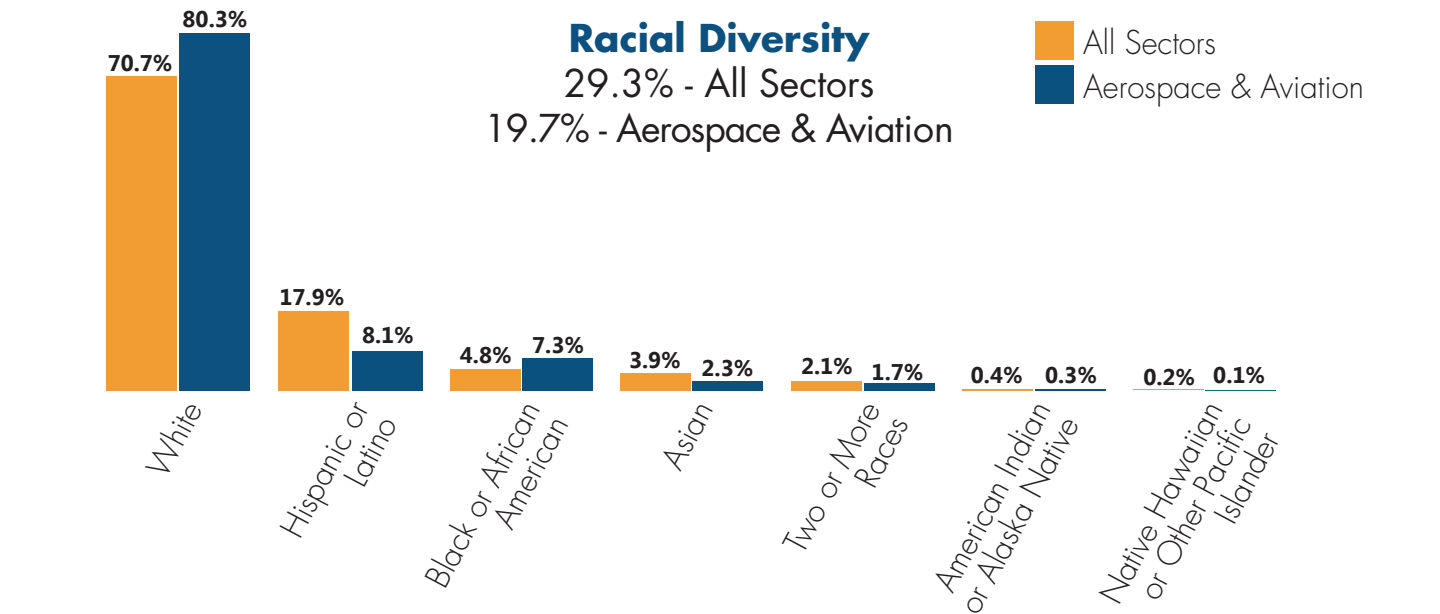| SOC Code	Description	Hires	Separations	Turnover Rate
11-1021	General & Operations Managers	18,471	17,435	53.3%
11-9041	Architectural & Engineering Managers	1,041	956	29.1%
11-9121	Natural Sciences Managers	440	451	34.1%
13-1028	Buyers & Purchasing Agents	4,454	5,037	55.4%
13-1198	Project Management Specialists & Business Operations Specialists, All Other	21,235	22,836	44.0%
13-2011	Accountants & Auditors	18,909	19,505	54.4%
15-1256	Software Developers & Software Quality Assurance Analysts & Testers	21,359	17,224	34.4%
17-2011	Aerospace Engineers	551	511	24.0%
17-2061	Computer Hardware Engineers	1,316	1,545	35.9%
17-2071	Electrical Engineers	1,034	889	25.5%
17-2072	Electronics Engineers, Except Computer	1,714	1,744	28.1%
17-2112	Industrial Engineers	1,408	1,212	28.7%
17-2141	Mechanical Engineers	1,580	1,461	26.9%
17-2199	Engineers, All Other	829	801	26.5%
19-1021	Biochemists & Biophysicists	418	452	45.6%
19-1042	Medical Scientists, Except Epidemiologists	670	582	33.3%
19-4021	Biological Technicians	1,807	1,904	63.5%
51-2028	Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	2,512	2,451	44.3%
51-4041	Machinists	2,198	2,167	55.6%
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	3,928	4,326	81.9%

DEMOGRAPHICS

Comparative Retirement Risk

The Sector has lower retirement risk, with 4.7% of its labor force aged 65 or older, compared with 6.5% for all sectors in the region.

All Sectors (left chart):
- Age 14-18: 2.3%
- Age 19-24: 9.9%
- Age 25-34: 23.6%
- Age 35-44: 22.0%
- Age 45-54: 19.6%
- Age 55-64: 16.1%
- Age 65+: 6.5%

Aerospace & Aviation (right chart):
- Age 14-18: 0.1%
- Age 19-24: 4.8%
- Age 25-34: 22.3%
- Age 35-44: 23.4%
- Age 45-54: 22.5%
- Age 55-64: 22.2%
- Age 65+: 4.7%

Legend:
- Age 14-18
- Age 19-24
- Age 25-34
- Age 35-44
- Age 45-54
- Age 55-64
- Age 65+

Comparative Racial & Ethnic Diversity

The bar graph below shows the racial and ethnic diversity in the Sector compared to all sectors in the region.

Racial Diversity
29.3% - All Sectors
19.7% - Aerospace & Aviation

Legend: All Sectors | Aerospace & Aviation

Category	All Sectors	Aerospace & Aviation
White	70.7%	80.3%
Hispanic or Latino	17.9%	8.1%
Black or African American	4.8%	7.3%
Asian	3.9%	2.3%
Two or More Races	2.1%	1.7%
American Indian or Alaska Native	0.4%	0.3%
Native Hawaiian or Other Pacific Islander	0.2%	0.1%

Comparative Gender

The figures below show the gender diversity in the Sector compared to all sectors in the region.

All Sectors: Female 46.9% | Male 53.1%
Aerospace & Aviation: Female 31.5% | Male 68.5%

Legend: Female | Male

AEROSPACE & AVIATION

REMOTE WORK POTENTIAL

This table is customized to the sector using its entire staffing pattern along Colorado's Urban Front Range. It uses data from EMSI Burning Glass to determine the percent of unique job postings during 2021 that specified the new hire could work remotely, at least part of the time.

Data on remote working capabilities can be combined with capital investment in virtual technologies to create hybrid work models that can leverage scarce local labor while at the same time ensuring sector demand can be met. Hybrid models are generally popular with job seekers, and have the virtue of allowing employers to recruit further afield, and even internationally for selected business functions.

SOC Code	Description	Employed in Industry	Estimated Remote Capability	Percent of Occupation Family Posted Remotely
11	Management	2,444	277	11.3%
13	Business & Financial Operations	3,582	671	18.7%
15	Computer & Mathematical	3,623	778	21.5%
17	Architecture & Engineering	5,478	500	9.1%
19	Life, Physical, & Social Science	3,755	430	11.5%
21	Community & Social Service	18	2	11.4%
23	Legal	107	17	16.4%
25	Educational Instruction & Library	26	2	7.2%
27	Arts, Design, Entertainment, Sports, & Media	248	31	12.4%
29	Healthcare Practitioners & Technical	254	9	3.5%
31	Healthcare Support	82	3	3.9%
33	Protective Service	55	2	3.6%
39	Personal Care & Service	24	1	2.8%
41	Sales & Related	747	83	11.1%
43	Office & Administrative Support	1,577	169	10.7%
45	Farming, Fishing, & Forestry	14	0	2.9%
47	Construction & Extraction	93	4	3.8%
49	Installation, Maintenance, & Repair	814	33	4.0%
51	Production	3,766	124	3.3%
53	Transportation & Material Moving	332	6	1.9%

Remote Work Capability for Sector
Employed in Industry - 27,079
Estimated Remote Capability - 3,143
Percent of Occupation Family Posted Remote - 11.6%

AEROSPACE & AVIATION

AUTOMATION INDEX

The automation index measures the potential to automate in order to leverage the productivity of scarce labor. It is presented on an index with a base of 100 – occupations with a score above 100 have a greater-than-average potential for automation, and occupations with a score below 100 have a lower-than-average potential to automate. Occupations where the automation index number is above 100 may present opportunity to think about capital investments that can partly solve labor shortage problems.

Automation seldom replaces workers 1:1. Generally, automation has the potential to leverage productivity, allowing a business to produce the same or more output with fewer people.

SOC	Description	Employed in Sector	Automation Index
35	Food Preparation & Serving Related	<10	**125.9**
47	Construction & Extraction	93	**123.1**
37	Building & Grounds Cleaning & Maintenance	38	**122.5**
51	Production	3,766	**113.8**
53	Transportation & Material Moving	332	**110.9**
45	Farming, Fishing, & Forestry	14	**110.0**
49	Installation, Maintenance, & Repair	814	**108.9**
33	Protective Service	55	**98.7**
43	Office & Administrative Support	1,577	**98.1**
39	Personal Care & Services	24	**96.1**
41	Sales & Related	747	**95.0**
31	Healthcare Support	82	**95.0**
27	Arts, Design, Entertainment, Sports, & Media	248	**89.7**
13	Business & Financial Operations	3,582	**89.5**
29	Healthcare Practitioners & Technical	254	**88.3**
17	Architecture & Engineering	5,478	**87.0**
11	Management	2,444	**85.1**
19	Life, Physical, & Social Science	3,755	**84.5**
23	Legal	107	**84.0**
15	Computer & Mathematical	3,623	**83.4**

APPRENTICEABLE OCCUPATIONS

Many occupations are apprenticeable, and businesses can work with the local workforce centers to create apprenticeship pathways that help to ensure a steady supply of workers with the skills the industry actually needs.

An apprenticeship is an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential. Find information and resources on the A/D Works! website.

SOC Code	Description	Employed in Industry	Percent of Total Jobs in Sector	Median Hourly Earnings	Currently Apprenticeable*
11-1021	General & Operations Managers	380	1.4%	$60.37	Yes
11-9041	Architectural & Engineering Managers	349	1.3%	$80.31	No
11-9121	Natural Sciences Managers	388	1.4%	$66.49	No
13-1028	Buyers & Purchasing Agents	462	1.7%	$33.21	Yes
13-1198	Project Management Specialists & Business Operations Specialists, All Other	1,270	4.7%	$40.16	No
13-2011	Accountants & Auditors	350	1.3%	$37.08	Yes
15-1256	Software Developers & Software Quality Assurance Analysts & Testers	1,903	7.0%	$53.14	Yes
17-2011	Aerospace Engineers	722	2.7%	$59.31	Yes
17-2061	Computer Hardware Engineers	462	1.7%	$55.62	No
17-2071	Electrical Engineers	418	1.5%	$47.24	No
17-2072	Electronics Engineers, Except Computer	708	2.6%	$55.43	No
17-2112	Industrial Engineers	789	2.9%	$46.27	Yes
17-2141	Mechanical Engineers	699	2.6%	$45.24	Yes
17-2199	Engineers, All Other	392	1.4%	$54.73	No
19-1021	Biochemists & Biophysicists	468	1.7%	$39.75	No
19-1042	Medical Scientists, Except Epidemiologists	510	1.9%	$31.97	No
19-4021	Biological Technicians	929	3.4%	$19.86	Yes
51-2028	Electrical, Electronic, & Electromechanical Assemblers, Except Coil Winders, Tapers, & Finishers	914	3.4%	$17.48	Yes
51-4041	Machinists	368	1.4%	$22.04	Yes
51-9061	Inspectors, Testers, Sorters, Samplers, & Weighers	373	1.4%	$22.01	Yes

Source: EMSI Burning Glass

TRAINING PIPELINE

A good way to assess the ongoing strength of the training pipeline in the region is to compare number of people who completed a training program in the occupation (regional completions) with the average number of annual openings in that occupation.

If there are more openings than there are completions, then there is a shortfall. Employers may wish to work with regional workforce development centers such as Arapahoe/Douglas Works! and area educators to address shortfalls in critical occupations using a variety of strategies.

SOC Code	Description	2021 Jobs	Average Annual Openings		Regional Completions	Surplus/ (Shortfall)	Typical On-the-Job Training	Typical Entry Level Education
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	50,056	5,808		3,626	(2,182)	None	Bachelor's Degree
13-1028	Buyers and Purchasing Agents	9,085	936		121	(815)	Moderate-term	Bachelor's Degree
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	5,283	675		60	(615)	Moderate-term	HS Diploma or Equivalent
51-2028	Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	5,538	666		99	(567)	Moderate-term	HS Diploma or Equivalent
17-2112	Industrial Engineers	4,216	398		214	(184)	None	Bachelor's Degree
51-4041	Machinists	3,898	462		291	(171)	Long-term	HS Diploma or Equivalent
17-2071	Electrical Engineers	3,491	323		836	513	None	Bachelor's Degree
17-2072	Electronics Engineers, Except Computer	6,213	485		1,204	719	None	Bachelor's Degree
19-4021	Biological Technicians	2,996	433		1,358	925	None	Bachelor's Degree
17-2061	Computer Hardware Engineers	4,306	317		1,593	1,276	None	Bachelor's Degree
17-2141	Mechanical Engineers	5,434	435		1,954	1,519	None	Bachelor's Degree
17-2011	Aerospace Engineers	2,126	175		2,452	2,277	None	Bachelor's Degree
19-1021	Biochemists and Biophysicists	991	102		2,795	2,693	None	Doctoral or Professional Degree
19-1042	Medical Scientists, Except Epidemiologists	1,746	191		3,033	2,842	None	Doctoral or Professional Degree
17-2199	Engineers, All Other	3,028	258		3,908	3,650	None	Bachelor's Degree
11-9121	Natural Sciences Managers	1,324	122		4,740	4,618	None	Bachelor's Degree
11-9041	Architectural and Engineering Managers	3,288	306		5,358	5,052	None	Bachelor's Degree
13-2011	Accountants and Auditors	35,865	3,885		12,063	8,178	None	Bachelor's Degree
11-1021	General and Operations Managers	32,731	3,590		18,053	14,463	None	Bachelor's Degree
13-1198	Project Management Specialists and Business Operations Specialists, All Other	51,871	4,714		19,354	14,640	None	Bachelor's Degree

Source: EMSI Burning Glass

TOP JOBS

Top 10 Occupations Currently Listed in the Colorado Central Planning Region

Click on the icon to learn more about the occupation
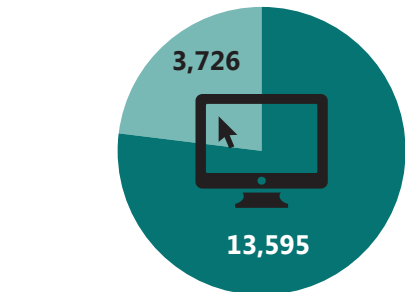
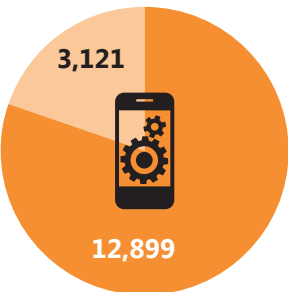**Total Job Postings (Jan 2021-Dec 2021)**

Darker Color

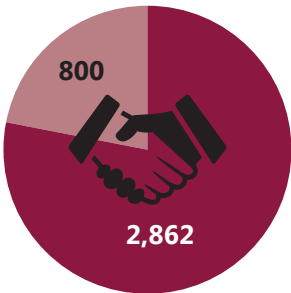**Unique Job Postings (Jan 2021-Dec 2021)**

Lighter Color

3,726 / **13,595**
Computer Occupations, All Other

3,121 / **12,899**
Software Developers & Software Quality Assurance Analyst

1,132 / **4,273**
Personal Service Managers, All Other; Entertainment & Recreation Managers, Except Gambling; & Managers, All Other
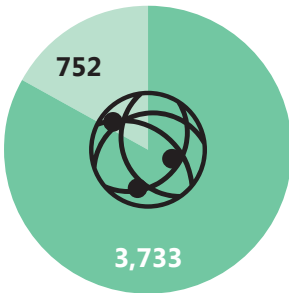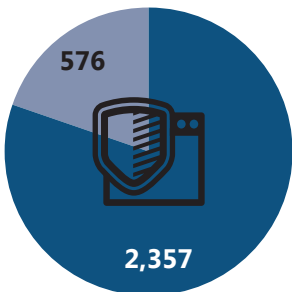
800 / **2,862**
Architectural & Engineering Managers

752 / **3,733**
Network & Computer Systems Administrators

747 / **2,385**
Engineers, All Other

631 / **2,271**
Electrical Engineers

576 / **2,357**
Information Security Analysts

452 / **1,524**
Mechanical Engineers
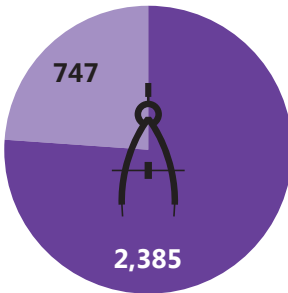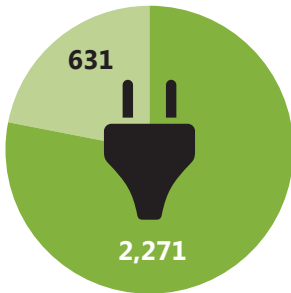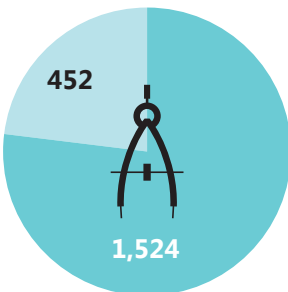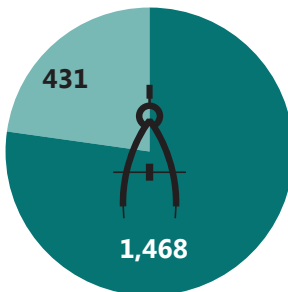
431 / **1,468**
Aerospace Engineers

Source: EMSI Burning Glass

JOB POSTING ANALYTICS

The top companies and certifications required by employers in this Sector are shown below. The job listings section shows the top websites where businesses in this sector list their open jobs. Job Families are groups of occupations based upon work performed, skills, education, training, and credentials. The top 5 job families, measured by percent of total employment in the Sector are shown at the bottom right.

Click on the company to go to their career page and see what openings they currently have.

Click on the certification name to learn more about it.

Companies

1. Lockheed Martin
2. Ball Aerospace
3. Raytheon Technologies
4. Northrop Grumman
5. Sierra Nevada Corporation

Certifications

1. Security Clearance
2. Top Secret-Sensitive Compartmented Information (TS/SCI Clearance)
3. CompTIA Security+
4. IAT Level II Certification
5. CISSP

Click on the job listing to go to the job search website and see what openings they currently have.

Click on the job family to see the groups of occupations and learn more about those occupations using O*Net OnLine.

JOB LISTINGS

1. Dejobs.org
2. Clearancejobs.com
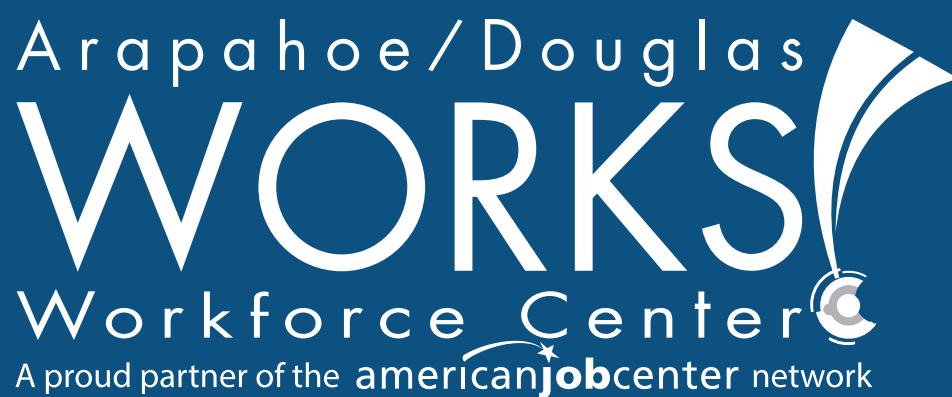3. Recruiternetworks.com
4. Indeed.com
5. Simplyhired.com

JOB FAMILY

1. Management
2. Business & Financial Operations
3. Computer & Mathematical
4. Architecture & Engineering
5. Life, Physical, & Social Science

Source: EMSI Burning Glass

TOP HARD SKILLS IN SECTOR

The table below lists the top 20 hard skills from EMSI Burning Glass demanded by employers in the Sector during the last calendar year. This is matched against the number of online profiles that have been updated sometime in the last year that also list those hard skills. This can give employers and job seekers thinking of entering the sector an idea of where the greatest opportunities exist in upskilling, next skilling and reskilling.

	Skills	Postings	% of Total Postings	Online Profiles	% of Total Online Postings
1	Systems Engineering	5,883	23.7%	8,237	20.1%
2	Agile Methodology	4,994	20.1%	1,818	4.4%
3	Equities	3,339	13.5%	0	0.0%
4	Software Development	3,298	13.3%	3,717	9.1%
5	Market Data	3,294	13.3%	0	0.0%
6	Software Engineering	2,993	12.1%	3,845	9.4%
7	Linux	2,976	12.0%	2,278	5.6%
8	Python	2,963	11.9%	2,314	5.6%
9	Business Strategies	2,769	11.5%	757	1.8%
10	Weather Forecasting	3,797	11.2%	0	0.0%
11	Strategic Business Unit	2,654	10.7%	833	2.0%
12	Computer Science	2,493	10.1%	307	0.7%
13	C++ (Programming Language)	2,398	9.7%	2,908	7.1%
14	Java (Programming Language)	2,292	9.2%	2,277	5.5%
15	Auditing	2,232	9.0%	1,706	4.2%
16	Integration Testing	2,058	8.3%	273	0.7%
17	Systems Integration	1,974	8.0%	1,797	4.4%
18	Automation	1,905	7.7%	1,369	3.3%
19	Supply Chain	1,885	7.6%	906	2.2%
20	Physics	1,879	7.6%	999	2.4%

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