

## Boulder, CO

Advanced industries employ

**38,130**

full-time workers. (2015)

These direct jobs supports an additional

**30,500**

indirect jobs in other industries in the region.

Advanced industries produce

**\$7.4**

billion dollars in output in the region.  
(2015, 2009 Chained)

Advanced industries pay, on average

**\$106,288**

dollars per year (2015).

Advanced industries directly account for

**20.9%**

of all jobs in the region.

This employment share is

**#5**

among all small metros.

This accounts for

**35.7%**

of all output in the region (2015).

This compares to average pay of

**\$61,648**

for all industries (2015).

Advanced industry annual average growth, 2013-2015

**OUTPUT**

**JOBS**

RANK:  
#119

2.70%

RANK:  
#161

2.46%

2.66%

1.15%

Boulder, CO

U.S.

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U.S.

### What are Advanced Industries?

The Metropolitan Policy Program at Brookings defines advanced industries as those that: 1) Spend at least \$450 per worker per year on R&D and 2) employ at least 20 percent of their workforce in STEM-intensive occupations. The definition identifies 50 4-digit NAICS industries across the manufacturing, energy, and services sectors that together constitute the advanced industries super-sector.

### Why do Advanced Industries Matter?

Advanced industries encompass the nation's "tech" sector at its broadest and most consequential. They represent a sizable economic anchor for the U.S. economy and have led the post-recession employment recovery. Their competitiveness and growth are prerequisites for any future broadly shared prosperity. As such, the sector encompasses the country's best shot at supporting innovative, inclusive, and sustainable growth. Advanced industries are present in nearly every U.S. region, but the sector's geography is uneven.

### For More Information

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#### DATA NOTES

All figures reflect Brookings analysis of data from Moody's Analytics.

# Boulder, CO

## Twenty-Five Largest Advanced Industries (2015)

There are 17 advanced industries in Boulder, CO with LQs over 1.5. LQs over 1.5 indicate specialization †

| Industry<br>4-Digit<br>NAICS<br>Code | Industry Title                             | Industry<br>Employment<br>(2015) | Industry<br>Location<br>Quotient<br>(LQ) †<br>2015 | Industry Share<br>of Total<br>Advanced<br>Industries<br>Employment<br>(2015) | Industry<br>Employment Annual<br>Growth |               | Industry Share<br>of Total<br>Advanced<br>Industries<br>Output (2015) | Industry Output<br>Annual Growth |               |
|--------------------------------------|--|----------------------------------|--|--|---|---------------|---|----------------------------------|---------------|
|                                      |  |                                  |  |  | 2010-<br>2013                           | 2013-<br>2015 |   | 2010-<br>2013                    | 2013-<br>2015 |
| 5415                                 | Computer Systems Design                    | 8,210                            | 3.47   | 21.5%  | 7.8%                                    | 6.5%          | 15.0%   | 9.5%                             | 7.6%          |
| 5417                                 | R&D Services                               | 5,700                            | 6.94   | 14.9%  | 1.2%                                    | 3.2%          | 12.3%   | -0.3%                            | 2.4%          |
| 3345                                 | Precision Instruments                      | 5,500                            | 11.09  | 14.4%  | 5.6%                                    | -0.4%         | 17.0%   | 7.2%                             | 4.4%          |
| 5413                                 | Engineering                                | 4,010                            | 2.29   | 10.5%  | 5.1%                                    | 0.0%          | 6.4%  | 2.0%                             | 0.1%          |
| 5112                                 | Software Products                          | 3,710                            | 8.98   | 9.7%   | -7.0%                                   | -4.9%         | 15.6%   | -1.7%                            | -4.8%         |
| 5416                                 | Management Consulting                      | 2,700                            | 1.70   | 7.1%   | 10.2%                                   | 5.8%          | 4.4%  | 5.6%                             | 3.7%          |
| 3344                                 | Semiconductors                             | 1,130                            | 2.46   | 3.0%   | 11.0%                                   | 1.7%          | 4.0%  | 14.2%                            | 8.3%          |
| 3254                                 | Pharmaceuticals                            | 1,070                            | 3.08   | 2.8%   | -5.9%                                   | -9.5%         | 4.6%  | -18.4%                           | -4.4%         |
| 3341                                 | Computer Equipment                         | 860                              | 4.27   | 2.3%   | 3.2%                                    | 5.8%          | 5.3%  | 6.5%                             | 12.5%         |
| 5182                                 | Data Processing & Hosting                  | 730                              | 1.98   | 1.9%   | 6.8%                                    | -9.5%         | 1.6%  | 3.3%                             | -3.8%         |
| 3399                                 | Misc. Manufacturing                        | 660                              | 1.87   | 1.7%   | 14.7%                                   | 6.2%          | 1.3%  | 5.7%                             | 13.8%         |
| 3342                                 | Communications Equipment                   | 540                              | 4.95   | 1.4%   | 4.3%                                    | -1.2%         | 1.9%  | 7.2%                             | 12.7%         |
| 3333                                 | Commercial & Service Machinery             | 470                              | 4.25   | 1.2%   | -1.8%                                   | 2.4%          | 0.6%  | 0.4%                             | -6.1%         |
| 5191                                 | Web Search Portals and Internet Publishing | 450                              | 1.50   | 1.2%   | 10.5%                                   | 13.0%         | 0.9%  | 6.8%                             | 14.6%         |
| 3391                                 | Medical Equipment & Supplies               | 310                              | 0.82   | 0.8%   | -5.8%                                   | -6.2%         | 0.8%  | -13.5%                           | -1.0%         |
| 3359                                 | Misc. Electrical Equipment                 | 260                              | 1.58   | 0.7%   | 22.4%                                   | -5.6%         | 0.5%  | 20.2%                            | -7.4%         |
| 3353                                 | Electrical Equipment                       | 240                              | 1.33   | 0.6%   | 40.1%                                   | -8.5%         | 0.5%  | 40.8%                            | -9.7%         |
| 2211                                 | Power Generation & Supply                  | 210                              | 0.43   | 0.6%   | -6.7%                                   | 4.2%          | 1.3%  | -1.7%                            | 0.1%          |
| 3336                                 | Engine & Power Equipment                   | 160                              | 1.27   | 0.4%   | 1.8%                                    | 3.3%          | 0.3%  | -11.1%                           | 12.8%         |
| 3346                                 | Magnetic & Optical Media                   | 150                              | 7.13   | 0.4%   | -17.3%                                  | 6.3%          | 0.5%  | -5.6%                            | 7.4%          |
| 5152                                 | Cable and Other Subscription Programming   | 120                              | 1.58   | 0.3%   | -2.4%                                   | 2.1%          | 0.5%  | 2.2%                             | -3.5%         |
| 6215                                 | Medical and Diagnostic Laboratories        | 110                              | 0.34   | 0.3%   | 17.4%                                   | 10.2%         | 0.1%  | 17.9%                            | 2.6%          |
| 5179                                 | Other telecommunications                   | 100                              | 0.98   | 0.3%   | -6.2%                                   | -8.4%         | 1.1%  | -2.0%                            | -6.5%         |
| 3363                                 | Motor Vehicle Parts                        | 100                              | 0.14   | 0.3%   | 10.8%                                   | 35.3%         | 0.1%  | 2.3%                             | -2.6%         |
| 3332                                 | Industrial Machinery                       | 90                               | 0.67   | 0.2%   | 8.4%                                    | 0.5%          | 0.1%  | -6.5%                            | 0.8%          |
| IFG                                  | Advanced industries manufacturing          | 11,990                           | 1.73   | 31.4%  | 4.3%                                    | -0.7%         | 38.6%   | 0.9%                             | 4.5%          |
|                                      | Advanced industries energy                 | 270                              | 0.35   | 0.7%   | -2.2%                                   | 8.0%          | 2.1%  | 5.1%                             | 8.7%          |
|                                      | Advanced industries services               | 25,870                           | 3.12   | 67.8%  | 3.1%                                    | 2.0%          | 59.4%   | 2.4%                             | 1.3%          |
| <b>ADVANCED INDUSTRIES TOTAL</b>     |  | <b>38,130</b>                    | <b>2.39</b>  | <b>100.0%</b>  | <b>3.4%</b>                             | <b>1.1%</b>   | <b>100.0%</b>   | <b>1.9%</b>                      | <b>2.7%</b>   |

† Location quotients are a measure of specialization for an industry using employment. A LQ of over 1 indicates that an industry employs more workers, as a share of total employment, than the nation as a whole.