

APPENDIX

The 2017 *Index* tracks a selection of 22 indicators that MassTech and its *Index* Advisory Committee (page 71) view as being the most comprehensive set of data for benchmarking the Innovation Economy. Indicators can change from year-to-year as new data sources become available and best-practices in tracking economic data are updated. MassTech and the *Index* Advisory Committee review the selection of indicators each year to determine whether to add or remove any and whether or not better sources of data are available.

DATA SOURCES FOR INDICATORS AND SELECTION OF LEADING TECHNOLOGY STATES (LTS)

I. Note on Data Availability

Indicators are calculated with data from proprietary and other existing secondary sources. In most cases, data from these sources were organized and processed for use in the *Index*. Since these data are derived from a wide range of sources, content of the data sources and timeframes are not identical and cannot be compared without adjustments. This appendix provides information on the data sources for each indicator.

The *Index* always displays the most recent year of data available for each indicator at the time of writing.

II. Note on Price Adjustment

The *Index* uses inflation-adjusted figures for most indicators. Dollar figures represented in this report, where indicated, are 'chained' (adjusted for inflation) to the latest year of data unless otherwise indicated. Price adjustments are according to the Consumer Price Index for all Urban Consumers, U.S. City Average, All Items, Not Seasonally Adjusted. Bureau of Labor Statistics, U.S. Department of Labor (www.bls.gov/data).

III. Note on Per-Capita Comparisons

The *Index* makes frequent use of per-capita metrics in order to make meaningful comparisons between states of vastly different sizes since the Leading Technology States range from roughly 1 million people to nearly 40 million. Per-capita or "as a % of" metrics allow the *Index* to make comparisons on density in certain measures, which MassTech views as crucial to cluster formation and growth. Where performance is less tied to a state's population, the *Index* includes absolute figures as well.

IV. Note on Selection of Leading Technology States (LTS) for Benchmarking Massachusetts' Performance

The *Index* benchmarks Massachusetts' performance against other leading states and nations to provide the basis for comparison. The LTS for this year's *Index* includes the 10 states used every year since 2012; California, Connecticut, Illinois, Massachusetts, Minnesota, New Jersey, New York, Ohio, Pennsylvania, and Texas. This edition of the *Index* also includes five new states: Florida, New Hampshire, North Carolina, Rhode Island, and Wisconsin. In 2017, the LTS were chosen using three criteria: (i.) by the number of select key industry sectors with a high concentration (10% above average) of employment, (ii.) the percent of employment in these sectors, and (iii.) the size of each state's innovation economy (measured by number of employees). The sectors used to represent the Innovation Economy include: Advanced Materials, Biopharma & Medical Devices, Business Services, Computer & Communication Hardware, Defense Manufacturing & Instrumentation, Diversified Industrial Manufacturing, Financial Services, Healthcare Delivery, Postsecondary Education, Scientific, Technical, & Management Services, and Software & Communications Services. The sector employment concentration for each state measures sector employment as a percent of total employment to the same measure for the U.S. as a whole. This ratio, called the 'location quotient' (LQ), is above average if greater than one. The three criteria are assessed simultaneously and with equal weighting. The score assigned to each state for each criterion is between 0 and 1, with 1 going to the leading state and 0 going to the bottom state. The scores for the rest of the states are determined by their relative position within the spread of data. The criteria scores are added together to get an overall score. The states with the 15 highest overall scores are then chosen for the LTS.

The Innovation Economy (IE) Score is used only to select the LTS as described above, it does not reflect performance on all 22 indicators used in the *Index*.

2017 Leading Technology States (LTS)	
State	LTS Selection Score
Massachusetts	2.27
California	2.15
Pennsylvania	2.00
New York	1.71
Illinois	1.66
Ohio	1.63
Connecticut	1.56
Minnesota	1.54
North Carolina	1.40
Texas	1.40
New Jersey	1.39
New Hampshire	1.39
Rhode Island	1.35
Florida	1.33
Wisconsin	1.32

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Sources for the LTS Initiatives from pages 17-22:

1. <https://www.masstech.org/innovation-institute/projects-and-initiatives/collaborative-research-matching-grant-program>
2. <http://www.masslifesciences.com/>
3. <http://boston.masschallenge.org/>
4. <https://biotechconnection-losangeles.org/about>
5. <http://www.sfmade.org/services/about-us/>
6. <http://www.connect.org/>
7. <http://www.catalystconnection.org/about/>
8. <http://www.sep.benfranklin.org/>
9. <https://www.sciencecenter.org/>
10. <https://tech.cornell.edu/about>
11. <http://www.sunycnse.com/Home.aspx>
12. <https://esd.ny.gov/nystar/centersforadvtechnology.asp>
13. <http://innovation.uconn.edu/tech-park/>
14. <http://ctnext.com/>
15. <http://ct.org/signature-event/connecticut-skills-challenge/>
16. <http://researchpark.illinois.edu/>
17. <http://www.illinoisinnovation.com/>
18. http://www.illinoistreasurer.gov/Businesses/Technology_Development_Accounts
19. <https://www.bioenterprise.com/>
20. <https://ewi.org/>
21. <http://www.competitiveworkforce.com/>
22. <https://mndrive.umn.edu/>
23. <http://www.enterpriseminnesota.org/>
24. <http://minnesota.uli.org/advisory-services/prospect-north-partnership/>
25. <http://www.rtp.org/>
26. http://www.ncbioimpact.org/about_us.html
27. <http://www.ncidea.org/content/about/945>
28. <http://gov.texas.gov/ecodev/guri/home>
29. <https://texaswideopenforbusiness.com/services/texas-enterprise-fund>
30. <http://biohouston.org/about/>
31. <http://njii.com/>
32. http://www.njeda.com/real_estate/properties/tcnj
33. <http://centers.njit.edu/njiac/students/challenge/index.php>
34. <http://www.nhirc.unh.edu/>
35. <https://gameassembly.org/>
36. <http://www.futuretechwomen.org/>
37. <http://www.underseatech.org/>
38. <http://commerceri.com/finance-business/taxes-incentives/innovation-vouchers/>
39. <http://stac.ri.gov/innovate-ri-fund/>
40. <http://fl-ate.org/programs/high-school-technology-initiative/>
41. <https://www.innovationflorida.co/>
42. <http://www.scripps.edu/>
43. <http://inwisconsin.com/entrepreneurs/assistance/qualified-new-business-venture/>
44. <http://thewatercouncil.com/>
45. <http://uwmrealestatefoundation.org/innovationcampus/overview/vision.aspx>

V. Note on Selection of Comparison Nations

For all the indicators that include international comparisons, countries displayed on the graph are the top performers for that measure. Some countries were excluded from comparison due to a lack of data reported for required years.

VI. Note on Data Timeframes

The *Index* uses multiple time intervals when looking at data within the indicators, but generally shows five years or ten years of change from a base year (i.e. 2010-2015 or 2005-2015). Depending upon space and data availability, sometimes all data collected by MassTech from a series are displayed.

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INDICATOR 1: INDUSTRY SECTOR EMPLOYMENT AND WAGES

Data on sector wages are from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (www.bls.gov/cew). This survey derives employment and wage data from workers covered by state unemployment insurance laws and federal workers covered by the Unemployment Compensation for Federal Employees program. Wage data denote total compensation paid during the four calendar quarters regardless of when the services were performed. Wage data include pay for vacation and other paid leave, bonuses, stock options, tips, the cash value of meals and lodging, and contributions to deferred compensation plans.

INDICATOR 2: OCCUPATIONS AND WAGES

The U.S. Bureau of Labor Statistics, Occupational Employment Estimates (OES) (www.bls.gov/oes/oes_dl.htm) program estimates the number of people employed in certain occupations and wages paid to them. The OES data include all full-time and part-time wage and salary workers in non-farm industries. Self-employed persons are not included in the estimates. The OES uses the Standard Occupational Classification (SOC) system to classify workers. MassTech aggregated the 22 major occupational categories of the OES into 10 occupational categories for analysis.

The occupational categories in the *Index* are:

- Arts & Media: Arts, design, entertainment, sports and media occupations.
- Construction & Maintenance: Construction and extraction occupations; Installation, maintenance and repair occupations.
- Education: Education, training and library occupations.
- Healthcare: Healthcare practitioner and technical occupations; Healthcare support occupations.
- Computer and Mathematical: Computer and mathematical occupations.
- Science, Architecture and Engineering Occupations: Architectural and engineering occupations; life, physical and social science occupations.
- Business, Financial and Legal Occupations: Management occupations; Business and financial operations occupations; and Legal occupations.
- Production: Production occupations.
- Sales & Office: Sales and related occupations; Office and administrative support occupations.
- Community and Social Service: Community and social service occupations.
- Other Services: Protective service occupations; Food preparation and serving related occupations; Building and grounds cleaning and maintenance occupations; Personal care and service occupations; Transportation and material moving occupations; Farming, fishing and forestry occupations.

INDICATOR 3: HOUSEHOLD INCOME

Median Household Income

Median household income data are from the U.S. Census Bureau, American Community Survey.

Income Distribution

Data for Distribution of Income are from the American Community Survey from the U.S. Census Bureau. Income is the sum of the amounts reported separately for the following eight types of income: wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income from estates and trusts; Social Security or railroad retirement income; Supplemental Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income.

INDICATOR 4: OUTPUT

Output

Industry output data are obtained from the Moody's economy.com Data Buffet. Moody's estimates are based on industry output data for 2 and 3 digit NAICS produced by the Bureau of Economic Analysis.

INDICATOR 5: EXPORTS

Exports data are from the U.S. Census Bureau, Foreign Trade Division. Currency data from xe.com.

INDICATOR 6: RESEARCH AND DEVELOPMENT

Research and Development (R&D) Performed

Data are from the National Science Foundation (NSF), "Table: U.S. Research and Development Expenditures, by State, Performing Sector and Source of Funding". Data used are the totals for all R&D, Federal, FFRDCs, Business, U&C and Other Nonprofit.

Industry Performed Research and Development (R&D) As a Percent of Industry Output

Data on Industry Performed R&D are from the NSF Science & Engineering Indicators, "Table 8-45: Business-Performed R&D as a Percentage of Private-Industry Output, by State."

Research and Development (R&D) as a Percent of Gross Domestic Product (GDP)

Data for Massachusetts' R&D as a percent of GDP are from the NSF, "Table: U.S. Research and Development Expenditures, by State, Performing Sector, and Source of Funding" and the Bureau of Economic Analysis (bea.gov).

Data for the LTS are from the NSF National Patterns of R&D Resources, "Table - Research and Development Expenditures, by State, Performing Sector, and Source of Funds". Data used are the totals for all R&D, Federal, FFRDCs, Business, U&C and Other Nonprofit. www.nsf.gov/statistics.

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INDICATOR 7: ACADEMIC ARTICLE OUTPUT

LTS data are from the NSF "Table 8-49 - Academic Science and Engineering Article Output per \$1 million of Academic S&E R&D, by State and Table 8-48- Academic S&E Articles per 1,000 S&E Doctorate Holders in Academia by state". International data is from the NSF. "Table 5-27 - S&E Articles in All Fields, by Region/Country/Economy". The NSF obtained its information on science and engineering articles from the Thomson Scientific ISI database. LTS population data are from the U.S. Census Bureau (www.census.gov/popest/data/index.html).

INDICATOR 8: PATENTS

United States Patent and Trademark Office (USPTO) Patents Granted

The count of patents granted by state are from the U.S. Patent and Trademark Office (USPTO). Patents granted are a count of Utility Patents only. The number of patents per year are based on the date patents were granted (www.uspto.gov). Population estimates are from the U.S. Census Bureau, Population Estimates Branch (www.census.gov/popest/data/index.html).

INDICATOR 9: TECHNOLOGY PATENTS

The count of patents granted by state and patent class are from the U.S. Patent and Trademark Office (www.uspto.gov), Patenting By Geographic Region, Breakout by Technology Class. State population data come from the U.S. Census Bureau, Population Estimates Branch (www.census.gov/popest/data/index.html). The number of patents per year is based on the date the patents were granted. Patents in "computer and communications" and "drugs and medical" are based on categories developed in Hall, B. H., A. B. Jaffe, and M. Tratjenberg (2001), "The NBER Patent Citation Data File: Lessons, Insights and Methodological Tools." NBER Working Paper 8498. Patents in "advanced materials" and "analytical instruments and research methods" are based on categories developed by the Innovation Institute at MassTech. The "business methods" category has its own USPTO patent class.

INDICATOR 10: TECHNOLOGY LICENSING

Data on licensing agreements are from the Association of University Technology Managers website (AUTM) (www.autm.net). Institutions participating in the survey are AUTM members.

INDICATOR 11: SMALL BUSINESS INNOVATION RESEARCH (SBIR) AND TECHNOLOGY TRANSFER (STTR) AWARDS

This indicator includes SBIR award and STTR award data. SBIR/STTR award data are from U.S. Small Business Administration (www.sbir.gov/sbirsearch/technology), state population data come from the U.S. Census Bureau, Population Estimates Branch (www.census.gov/popest/data/index.html) and GDP Data is from U.S. Bureau of Economic Analysis (www.bea.gov).

INDICATOR 12: BUSINESS FORMATION

Business Establishment Openings

Data are from the Business Employment Dynamics database of the Bureau of Labor Statistics' (BLS) Business Employment Dynamics (www.bls.gov/bdm).

Start-up Companies

Data on spinout "start-up" companies are from the Association of University Technology Managers (AUTM). Institutions participating in the survey are all AUTM members (www.autm.net).

INDICATOR 13: INITIAL PUBLIC OFFERINGS AND MERGERS AND ACQUISITIONS

Initial Public Offerings (IPOs)

The number and distribution by industry sector of filed IPOs from 2015 on by state and for the U.S. are from IPO Monitor (<https://www.ipomonitor.com/pages/ipo-filings.html>). Data previous to 2015 are from Renaissance Capital's, IPOs Near You (www.renaissancecapital.com/IPOHome/Press/MediaRoom.aspx#). Data on venture-backed IPOs for 2012 are from the National Venture Capital Association (NVCA) (www.nvca.org).

Mergers & Acquisitions (M&As)

Data on total number of M&As are from Factset Mergerstat, deals include acquired company by location. Data on Innovation Economy M&A's are from crunchbase.com

INDICATOR 14: FEDERAL FUNDING FOR ACADEMIC AND HEALTH R&D

Federal Expenditures For Academic And Nonprofit Research And Development (R&D)

Data are from the NSF, "Federal obligations for research and development for selected agencies, by state and other locations and performer" (www.nsf.gov/statistics). Data used are the entries for federal funding for universities and nonprofits, excluding university and nonprofit federally funded research and development centers (FFRDCs).

National Institutes of Health (NIH) Funding per Capita, per GDP and Average Annual Growth Rate

Data on federal health R&D are from the NIH (<http://report.nih.gov/award/>). The NIH annually computes data on funding provided by NIH grants, cooperative agreements and contracts to universities, hospitals and other institutions. The figures do not reflect institutional reorganizations, changes of institutions, or changes to award levels made after the data are compiled. Population data are from U.S. Census Bureau (<http://www.census.gov/popest/data/index.html>). GDP data are from Bureau of Economic Analysis (bea.gov), U.S. Department of Commerce.

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INDICATOR 15: INDUSTRY FUNDING OF ACADEMIC RESEARCH

Data are from the NSF Survey of Research and Development Expenditures at Universities and Colleges and Survey of Research and Development Expenditures at Universities and Colleges, Business Financed Higher Education R&D Expenditures for S&E (<http://www.nsf.gov/statistics/srvyrdexpenditures/>). Since FY 1998, respondents have included all eligible institutions. Population data are from U.S. Census Bureau (<http://www.census.gov/popest/data/index.html>).

INDICATOR 16: VENTURE CAPITAL (VC)

Data for total VC investments, VC investments by industry activity, and distribution by stage of financing are provided by PricewaterhouseCoopers (PwC) in the MoneyTree Report (<https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=historical>). Industry category designations are determined by PwC. Definitions for the industry classifications and stages of development used in the MoneyTree Survey can be found at the PwC website (<http://www.pwcmoneytree.com/moneytree/nav.jsp?page=definitions>). GDP data are from Bureau of Economic Analysis (bea.gov), U.S. Department of Commerce.

PWC Stage Definitions: <https://www.pwcmoneytree.com/MTPublic/ns/nav.jsp?page=definitions#stage>

INDICATOR 17: EDUCATIONAL ATTAINMENT

For this indicator, the workforce is defined as the population ages 25-65. Data on educational attainment of this population are from the U.S. Census Bureau (<http://www.census.gov/cps/data/cpstablecreator.html>), Current Population Survey, Annual Social and Economic Supplement. Figures are three-year rolling averages. Data on employment rate by educational attainment are based on the full-time employment rate of the workforce.

High School Attainment by the Population Ages 19-24

Data on high school attainment are from the US Census Bureau, Current Population Survey (<http://www.census.gov/cps/data/cpstablecreator.html>), Annual Social and Economic Supplement. Figures are three year rolling averages.

College Degrees Conferred

Data for the U.S. states comes from the National Center for Education Statistics using the sum of all degrees conferred at the bachelor's level or higher.

INDICATOR 18: PUBLIC INVESTMENT EDUCATION

Per Pupil Spending in K-12

Public elementary & secondary school finance data are from the U.S. Census Bureau, Table 19, "Per Pupil (PPCS) Amounts and One-Year Percentage Changes for Current Spending of Public Elementary-Secondary School Systems by State". Figures are presented in current dollars. Data exclude payments to other school systems and non K-12 programs.

State Higher Education Appropriations per Full-Time Equivalent (FTE)

Data on public higher education appropriations per full-time equivalent (FTE) student is provided by the State Higher Education Executive Office (<http://www.sheeo.org/finance/shef-home.htm>). The data consider only educational appropriations—state and local funds available for public higher education operating expenses, excluding spending for research, agriculture, and medical education and support to independent institutions and students. The State Higher Education Finance Report employs three adjustments for purposes of analysis: Cost of Living Adjustment (COLA) to account for differences among the states', Enrollment Mix Index (EMI) to adjust for the different mix of enrollments and cost among types of institutions across the states' and the Higher Education Cost Adjustment (HECA) to adjust for inflation over time. More detailed information about each of these adjustments can be found on the State Higher Education Executive Officers (SHEEO) website.

INDICATOR 19: SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM) CAREER CHOICES AND DEGREES

STEM Degrees

Data about degrees conferred by field of study are from National Center for Education Statistics (NCES), Integrated Postsecondary Education Data System (IPEDS) Completions Survey using the NSF population of institutions. Data were accessed through the NSF WebCASPAR (<http://caspar.nsf.gov>). Fields are defined by 2-digit Classification of Instructional Program (CIP), listed below.

- Biological & Biomedical Sciences
- Physical Sciences
- Computer & Information Science & Support Services
- Engineering
- Mathematics & Statistics

Science & Engineering Talent by Categories

Data for Science & Engineering (S&E) Talent are provided by the U.S. Census Bureau, Decennial Census and American Community Survey Public Use Microdata Samples (PUMS). A list of S&E occupations was divided into six categories: Computer, Physical Engineers, Design, Biological, Mathematics and Aerospace Engineers & Scientists. Design includes Designers and Artists & Related Workers. Both were added to the S&E occupations to try to capture the employment in Graphic Designers and Multi-Media Artists & Animators. According to BLS Occupation Employment Statistics (May 2009), both occupations represent almost 60 percent of employment in both Designers and Artists & Related Workers.

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Science & Engineering Doctorates

Data for S&E doctorates come from the Science and Engineering Doctorates report, table 9, published by the NSF.

INDICATOR 20: TALENT FLOW AND ATTRACTION

Relocations to LTS by College Educated Adults

Data on population mobility come from the U.S. Census Bureau, American Community Survey; Table B07009-Geographic Mobility in the Past Year by Educational Attainment, 1-year estimate. This is the number of people moving in and includes no information about the number moving out. It can be used as a measure of the ability to attract talent.

Net Migration

Net Migration figures are derived from the U.S. Census Bureau's population estimates program using annual data.

INDICATOR 21: HOUSING AFFORDABILITY

Housing Price Index

Housing price data are from the Federal Housing Finance Agency's Housing Price Index (HPI) (<http://www.fhfa.gov/>). Figures are four-quarter percent changes in the seasonally adjusted index. The HPI is a broad measure of the movement of single-family house prices. The HPI is a weighted, repeat-sales index that is based on repeat mortgage transactions on single-family properties whose mortgages have been purchased or securitized by Fannie Mae or Freddie Mac since January 1975.

Housing Affordability

Housing affordability figures are from the U.S. Census Bureau, American Community Survey, R2513: "Percent of Mortgaged Owners Spending 30 Percent or More of Household Income on Selected Monthly Owner Costs" and R2515: "Percent of Renter-Occupied Units Spending 30 Percent or More of Household Income on Rent and Utilities".

Median Household Income

Median household income data are from U.S. Census Bureau, American Community Survey, B19013: "Median Household Income in the Past 12 Months", 3-year estimate.

INDICATOR 22: INFRASTRUCTURE

Broadband Speed

Data are taken from Akamai Technologies State of the Internet Q1, 2017 report.

Industrial Electricity Rates

Data are taken from the U.S. Energy Information Administration, Average Retail Price of Electricity Annual Survey.

Median Commute Time

Data are taken from the U.S. Census Bureau American Community Survey County Level Statistics. Metro area median commutes were determined using the median commute time of each component county and its proportion of total metro area commuters. Only "Large Metro Areas", defined as having more than 250,000 commuters are included.

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The *Index* makes use of 4, 5 and 6 digit North American Industry Classification System (NAICS) codes to define key industry sectors of the Massachusetts Innovation Economy. The *Index's* key industry sector definitions capture traded-sectors that are known to be individually significant in the Massachusetts economy. Consistent with the innovation ecosystem framework, these sector definitions are broader than 'high-tech'. Strictly speaking, clusters are overlapping networks of firms and institutions which would include portions of many sectors, such as Postsecondary Education and Business Services. For data analysis purposes the *Index* has developed NAICS-based sector definitions that are mutually exclusive.

Modification to Sector Definitions

The 11 key industry sectors as defined by the *Index* reflect the changes in employment concentration in the Massachusetts Innovation Economy over time. For the purposes of accuracy, several sector definitions were modified for the 2007 edition. The former "Healthcare Technology" sector was reorganized into two new sectors: "Biopharmaceuticals, Medical Devices and Hardware" and "Healthcare Delivery." The former "Textiles & Apparel" sector was removed and replaced with the "Advanced Materials" sector. While "Advanced Materials" does not conform to established criteria, it is included in an attempt to quantify and assess innovative and high-growing business activities from the former "Textiles & Apparel" sector.

With the exception of Advanced Materials, sectors are assembled from those interrelated NAICS code industries that have shown to be individually significant according to the above measures. In the instance of the Business Services sector, it is included because it represents activity that supplies critical support to other key sectors. In the 2009 *Index*, the definition of Business Services was expanded to include 5511-Management of Companies and Enterprises. According to analysis by the Bureau of Labor Statistics, this category has at least twice the all-industry average intensity of technology-oriented workers. All time-series comparisons use the current sector definition for all years, and, as such, may differ from figures printed in prior editions of the *Index*. The slight name change in 2009 of the Biopharma and Medical Devices sector does not reflect any changes in the components that define the sector.

Advanced Materials

- 3133 Textile and Fabric Finishing and Fabric Coating Mills
- 3222 Converted Paper Product Manufacturing
- 3251 Basic Chemical Manufacturing
- 3252 Resin, Synthetic Rubber and Artificial and Synthetic Fibers and Filaments Manufacturing
- 3255 Paint, Coating and Adhesive Manufacturing
- 3259 Other Chemical Product and Preparation Manufacturing
- 3261 Plastics Product Manufacturing
- 3262 Rubber Product Manufacturing
- 3312 Steel Product Manufacturing from Purchased steel
- 3313 Alumina and Aluminum Production and Processing
- 3314 Nonferrous Metal (except Aluminum) Production and Processing

Biopharmaceuticals, Medical Devices & Hardware

- 3254 Pharmaceutical and Medicine Manufacturing
- 3391 Medical Equipment and Supplies Manufacturing
- 6215 Medical and Diagnostic Laboratories
- 42345 Medical Equipment and Merchant Wholesalers
- 42346 Ophthalmic Goods Merchant Wholesale

- 541711 R&D in Biotechnology
- 334510 Electro Medical Apparatus Manufacturing
- 334517 Irradiation Apparatus Manufacturing

Business Services

- 5411 Legal Services
- 5413 Architectural, Engineering and Related Services
- 5418 Advertising and Related Services
- 5511 Management of Companies
- 5614 Business Support Services

Computer & Communications Hardware

- 3341 Computer and Peripheral Equipment Manufacturing
- 3342 Communications Equipment Manufacturing
- 3343 Audio and Video Equipment Manufacturing
- 3344 Semiconductor and Other Electronic Component Manufacturing
- 3346 Manufacturing and Reproducing Magnetic and Optical Media
- 3359 Other Electrical Equipment and Component Manufacturing

Defense Manufacturing & Instrumentation

- 3329 Other Fabricated Metal Product Manufacturing
- 3336 Engine, Turbine and Power Transmission Equipment Manufacturing
- 334511 Search, Detection, Navigation, Guidance, Aeronautical and Nautical System and Instrument Manufacturing
- 334512 Automatic Environmental Control Manufacturing for Residential, Commercial and Appliance Use
- 334513 Instruments and Related Products Manufacturing for Measuring, Displaying and Controlling Industrial Process Variables
- 334514 Totalizing Fluid Meter and Counting Device Manufacturing
- 334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
- 334516 Analytical Laboratory Instrument Manufacturing
- 334518 Watch, Clock and Part Manufacturing
- 334519 Other Measuring and Controlling Device Manufacturing
- 3364 Aerospace Product and Parts Manufacturing

Diversified Industrial Manufacturing

- 3279 Other Nonmetallic Mineral Product Manufacturing
- 3321 Forging and Stamping
- 3322 Cutlery and Handtool Manufacturing
- 3326 Spring and Wire Product Manufacturing
- 3328 Coating, Engraving, Heat Treating and Allied Activities
- 3332 Industrial Machinery Manufacturing
- 3333 Commercial & Service Industry Machinery Manufacturing
- 3335 Metalworking Machinery Manufacturing
- 3339 Other General Purpose Machinery Manufacturing
- 3351 Electric Lighting Equipment Manufacturing
- 3353 Electrical Equipment Manufacturing
- 3399 Other Miscellaneous Manufacturing

Financial Services

- 5211 Monetary Authorities - Central Bank
- 5221 Depository Credit Intermediation
- 5231 Securities and Commodity Contracts Intermediation and Brokerage
- 5239 Other Financial Investment Activities
- 5241 Insurance Carriers

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5242 Agencies, Brokerages and Other Insurance Related Activities

5251 Insurance and Employee Benefit Funds

5259 Other Investment Pools and Funds

Healthcare Delivery

6211 Offices of Physicians

6212 Offices of Dentists

6213 Offices of Other Health Practitioners

6214 Outpatient Care Centers

6216 Home Health Care Services

6219 Other Ambulatory Health Care Services

622 Hospitals

Postsecondary Education

6112 Junior Colleges

6113 Colleges, Universities and Professional Schools

6114 Business Schools and Computer and Management Training

6115 Technical and Trade Schools

6116 Other Schools and Instruction

6117 Educational Support Services

Scientific, Technical & Management Services

5416 Management, Scientific and Technical Consulting Services

5417 Scientific Research and Development Services*

*Minus the portion apportioned to the Bio sector

5419 Other Professional, Scientific and Technical Services

Software & Communications Services

5111 Newspaper, Periodical, Book and Directory Publishers

5112 Software Publishers

5171 Wired Telecommunications Carriers

5172 Wireless Telecommunications Carriers (except Satellite)

5174 Satellite Telecommunications

5179 Other Telecommunications

5182 Data Processing, Hosting and Related Services

5415 Computer Systems Design and Related Services

8112 Electronic and Precision Equipment Repair and Maintenance

51913 Internet Publishing and Broadcasting and Web Search Portal