

# *New Jersey's* **TECHNOLOGY Industry Cluster**

Prepared by:  
New Jersey Department of Labor & Workforce Development  
Office of Research & Information  
**Bureau of Labor Market Information**  
Spring 2017



STATE OF NEW JERSEY  
DEPARTMENT OF LABOR AND  
WORKFORCE DEVELOPMENT



NEW JERSEY DEPARTMENT OF  
**LWD**  
LABOR AND WORKFORCE DEVELOPMENT  
nj.gov/labor

# THE GOAL OF THIS REPORT IS TO GET AN “IDEA” OF WHAT TECHNOLOGY MEANS TO NEW JERSEY

**Identify** the types of industries and establishments that make up the technology industry cluster based on a standard industry classification system

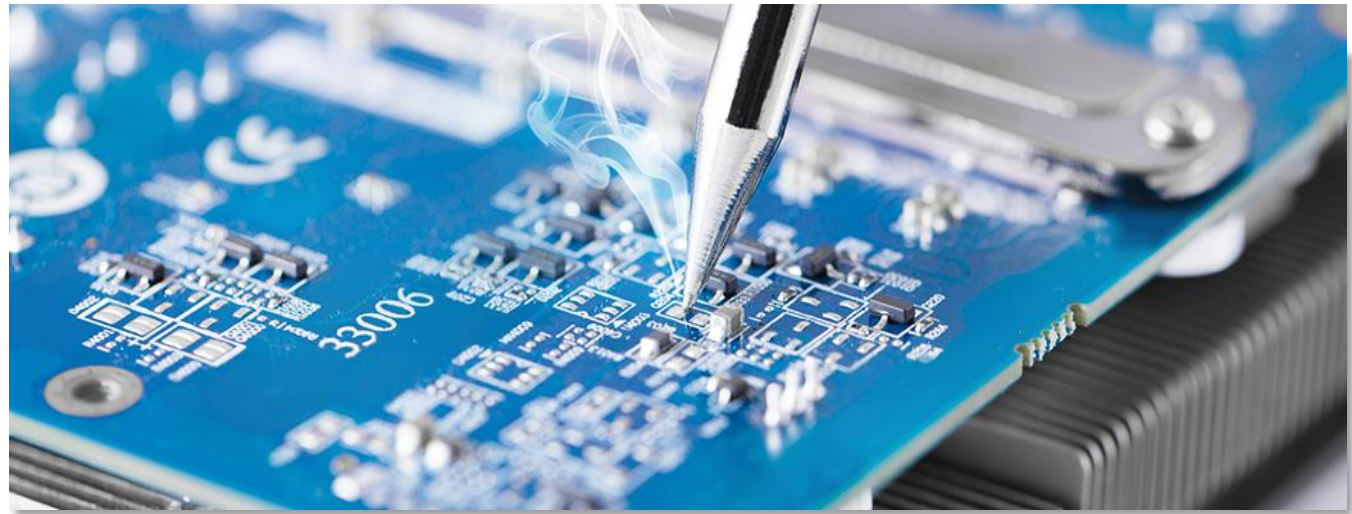
**Describe** any similarities and differences among its components with regard to such variables as employment, wage, occupation type, education, and demographic characteristics

**Examine** any present distinctions within the cluster and its components that give New Jersey a competitive advantage compared to neighboring states, regions or the nation, or show areas where New Jersey could improve to add to the state’s economy

**Analyze** the current state of the technology industry cluster and provide an outlook for employment into the future



# **TECHNOLOGY INDUSTRY CLUSTER: OVERVIEW**



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS)

## NAICS and Industry Description

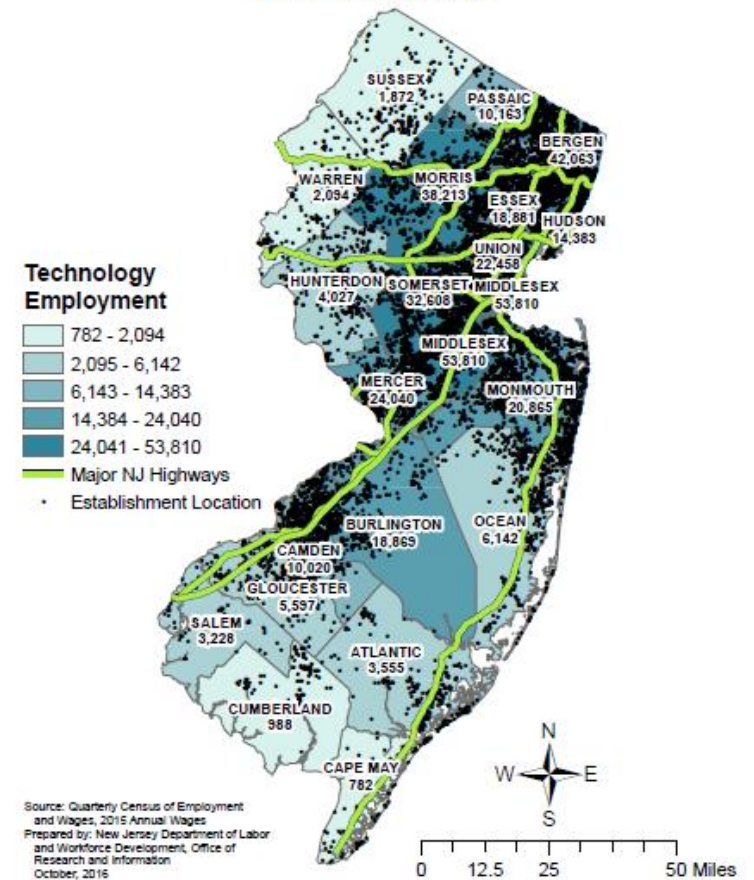
2111	Oil and gas extraction	3364	Aerospace product and parts manufacturing
2211	Power generation and supply	4234	Commercial equip. merchant wholesalers
3241	Petroleum and coal products manufacturing	4236	Electric goods merchant wholesalers
3251	Basic chemical manufacturing	4242	Druggists' goods merchant wholesalers
3252	Resin, rubber, and artificial fibers mfg.	4861	Pipeline transportation of crude oil (NA, QCEW)
3254	Pharmaceutical and medicine manufacturing	5112	Software publishers
3332	Industrial machinery manufacturing	5171	Wired telecommunications carriers
3333	Commercial and service industry machinery	5172	Wireless telecommunications carriers
3336	Turbine and power transmission equipment mfg.	5174	Satellite telecommunications
3341	Computer and peripheral equipment mfg.	5179	Other telecommunications
3342	Communications equipment manufacturing	5182	Data processing and related services
3343	Audio and video equipment manufacturing	5191	Other information services
3344	Semiconductor and electronic component mfg.	5211	Monetary authorities - central bank
3345	Electronic instrument manufacturing	5413	Architectural and engineering services
3346	Magnetic media manufacturing and reproducing	5415	Computer systems design and related services
3353	Electrical equipment manufacturing	5416	Management and technical consulting services
		5417	Scientific research and development services

The technology cluster was expanded to reflect the new U.S. Bureau of Labor Statistics definition of technology industries (2013). BLS designated NAICS industries as technology based on concentration levels of Science, Technology, Engineering & Math (STEM) occupations within the industries

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER EMPLOYMENT OVERVIEW

- In 2015, New Jersey's technology cluster accounted for 362,730 jobs or 10.9 percent of all private sector employment statewide. Nationally the cluster was responsible for 9.6 percent of all private sector employment.
- Annual average wage for the technology cluster was \$118,430 in 2015 or 191.1 percent of the statewide average (\$61,980) for all industries. Employers in the industry paid nearly \$43 billion in wages, or 20.9 percent of the total wages paid in all industries.
- Employment within the technology cluster can primarily be found within: professional, scientific and technical services (50.1%), manufacturing (17.5%), wholesale trade (16.3%), and information (13.9%).
- From 2005 to 2015 employment in the cluster peaked in 2007 at 392,970 jobs.

*Technology Employment and Establishment Locations  
New Jersey, 2015*

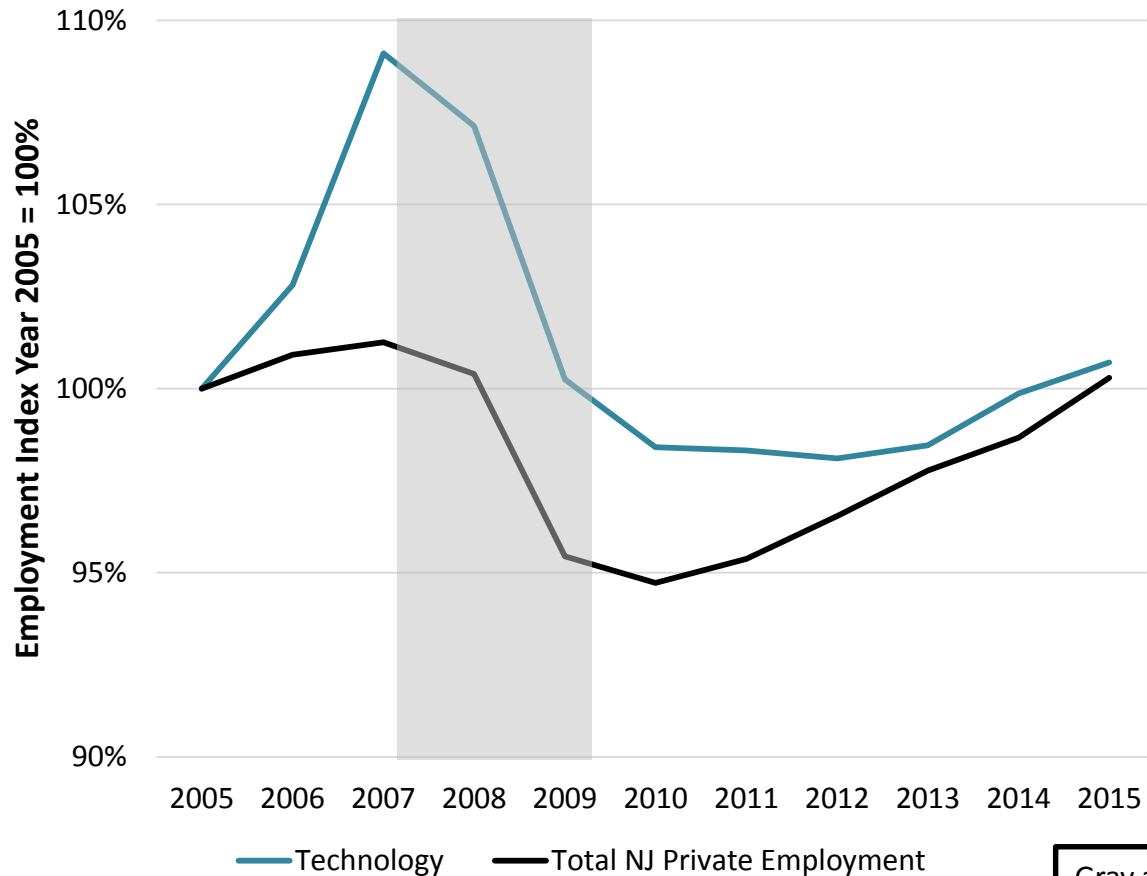




# **TECHNOLOGY INDUSTRY CLUSTER: EMPLOYMENT ANALYSIS**



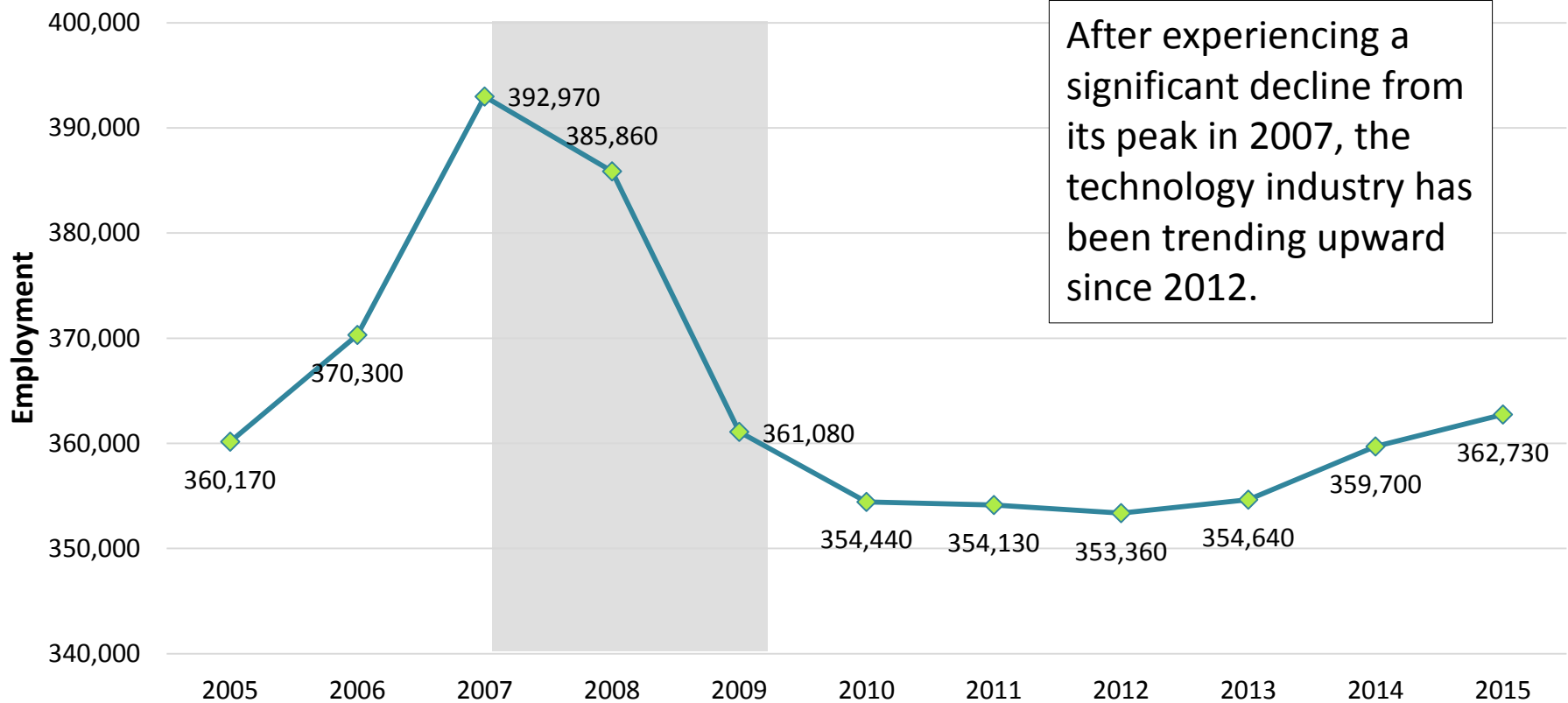
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ALL PRIVATE SECTOR VS. TECHNOLOGY EMPLOYMENT, 2005-2015



- After experiencing a 9.1 percent growth from 2005 to 2007, the technology industry declined sharply from 2007 to 2010 (-10.7%) before leveling out from 2010 to 2013 (+0.1%). The technology industry experienced growth from 2013 to 2015 (+2.2%), and is currently above the 2005 employment level (+0.7%).
- NJ private sector employment has experienced more growth than the technology industry since 2010 (+5.6% vs. 2.3%).

Gray area denotes U.S. economic recession as defined by the National Bureau of Economic Research (NBER)

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER 10-YEAR TECHNOLOGY CLUSTER EMPLOYMENT TREND, 2005-2015



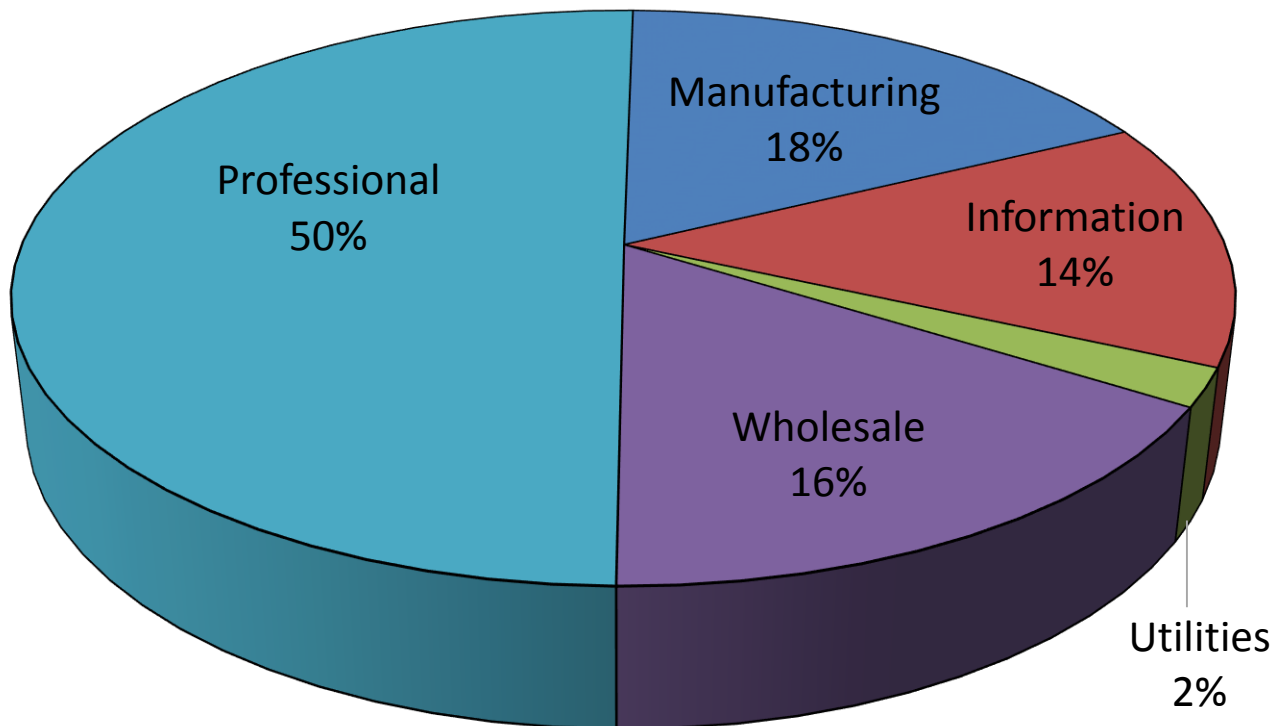
Gray area denotes U.S. economic recession as defined by the National Bureau of Economic Research (NBER)





# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER PERCENT EMPLOYMENT BY COMPONENT SECTOR, 2015

2015 Employment



- Professional, scientific, and technical services industries accounted for more than half of the NJ technology cluster with 181,730 employment in 2015.
- Computer systems design and related services represented the most of this subsector with more than 70,630 employment.



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER COMPONENT SECTORS, 2015 ANNUAL AVERAGES

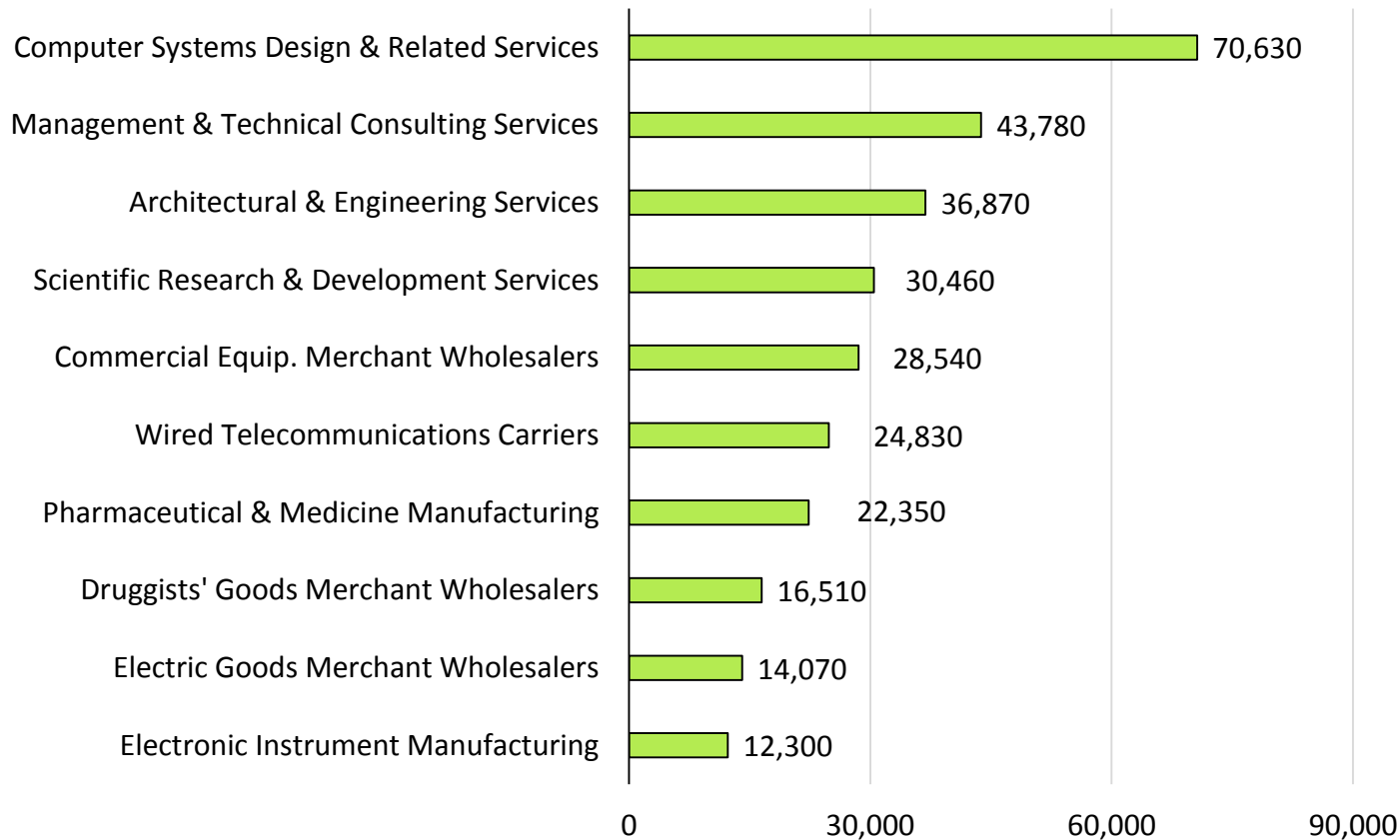
Description	Units	Average Employment	Wages	
			Average	Total
<b>All Private Sector Industries</b>	<b>254,480</b>	<b>3,318,030</b>	<b>\$61,980</b>	<b>\$205,653,708,700</b>
<b>Technology Industry Cluster</b>	<b>26,960</b>	<b>362,730</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
Manufacturing	1,500	63,470	\$112,370	\$7,131,879,080
Wholesale Trade	3,040	59,130	\$121,790	\$7,201,141,090
Information	2,430	50,560	\$115,430	\$5,836,338,250
Professional, Scientific, and Technical Services	19,800	181,730	\$119,960	\$21,800,463,470
Other	180	7,840	\$125,913	\$987,161,740

- Nearly  $\frac{3}{4}$  of all business establishments in the technology cluster were in the professional, scientific and technical services sector in 2015.
- The average wage for the utilities subsector was more than double the NJ total private sector average wage.



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TOP COMPONENT INDUSTRIES RANKED BY EMPLOYMENT, 2015

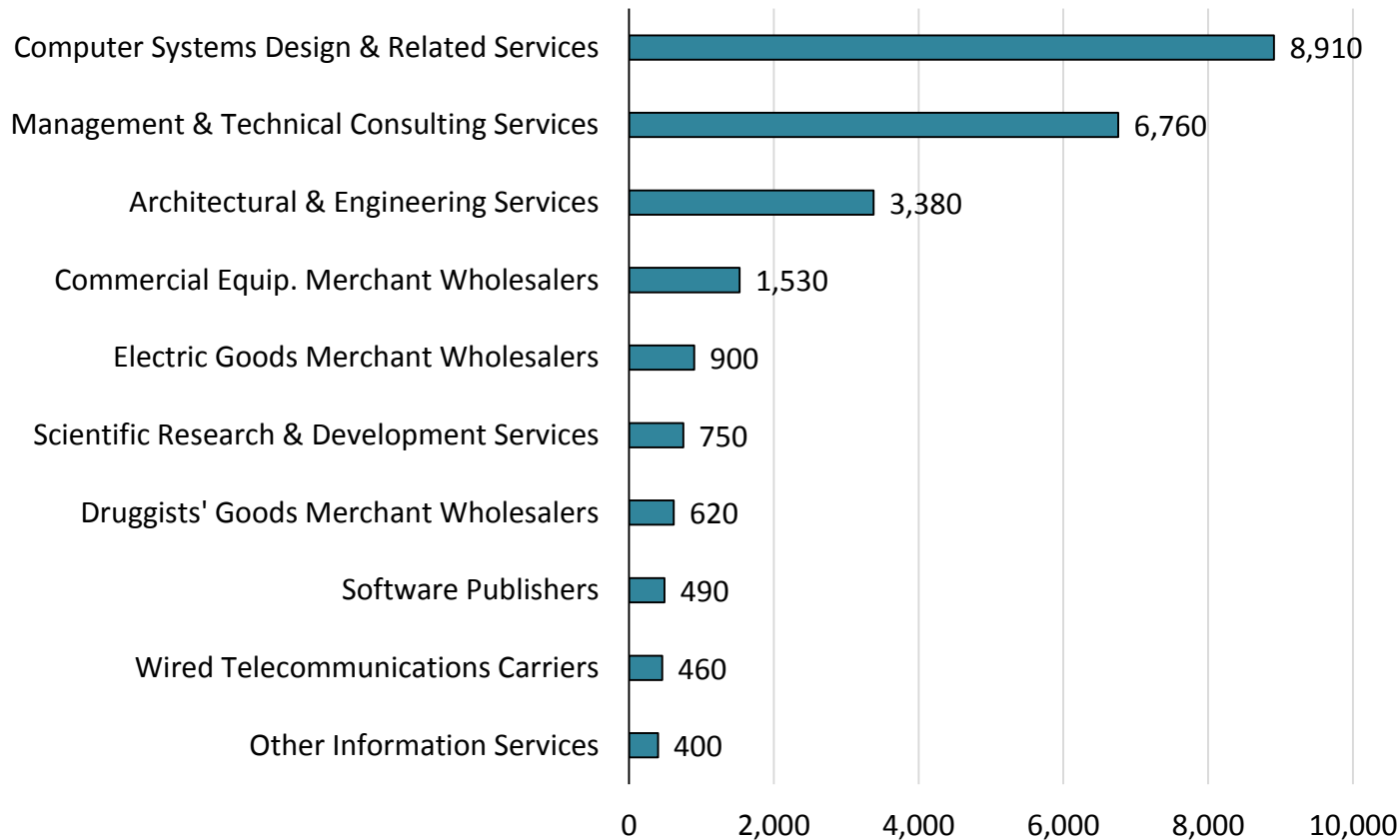
## 2015 Employment



Within the technology cluster over 82.8 percent of employment was found in only ten industries in 2015.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TOP COMPONENT INDUSTRIES RANKED BY ESTABLISHMENTS, 2015

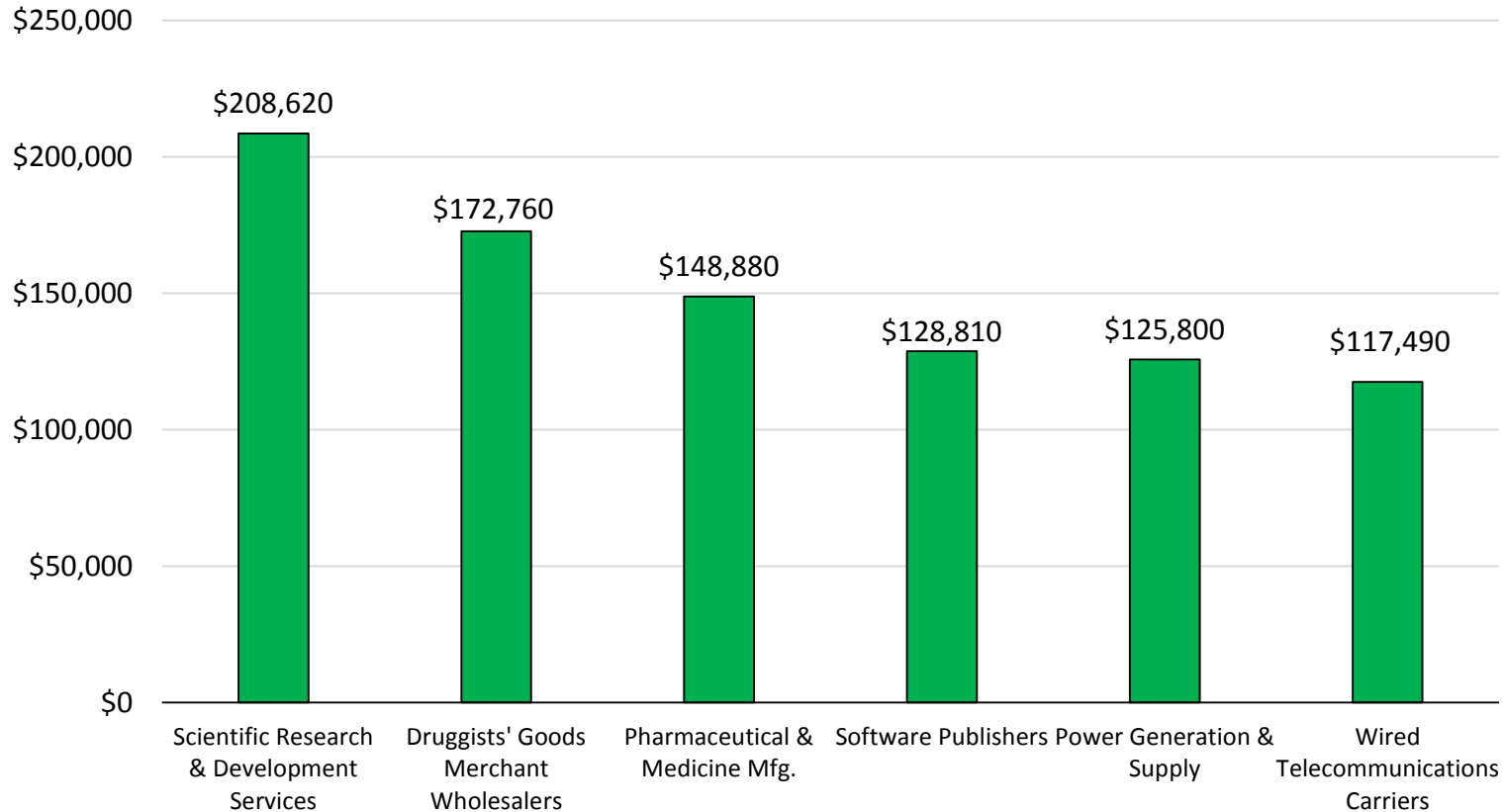
## 2015 Establishments



Computer systems design and related services, management and technical consulting services, and architectural and engineering services accounted for more than 70 percent of all establishments in the technology industry cluster in 2015.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TOP COMPONENT INDUSTRIES RANKED BY AVERAGE WAGE, 2015

## 2015 Average Wage

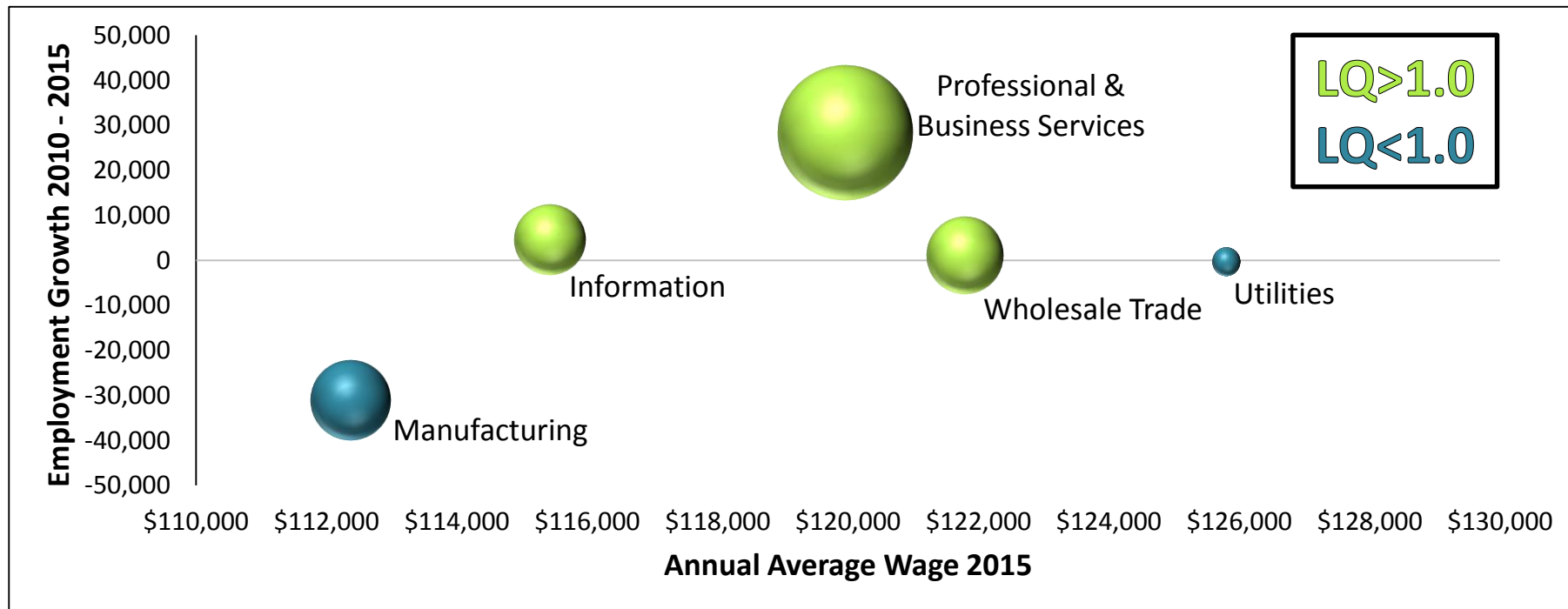


The scientific research and development services industry has the 4<sup>th</sup> highest 2015 annual average wage across all industries in New Jersey.





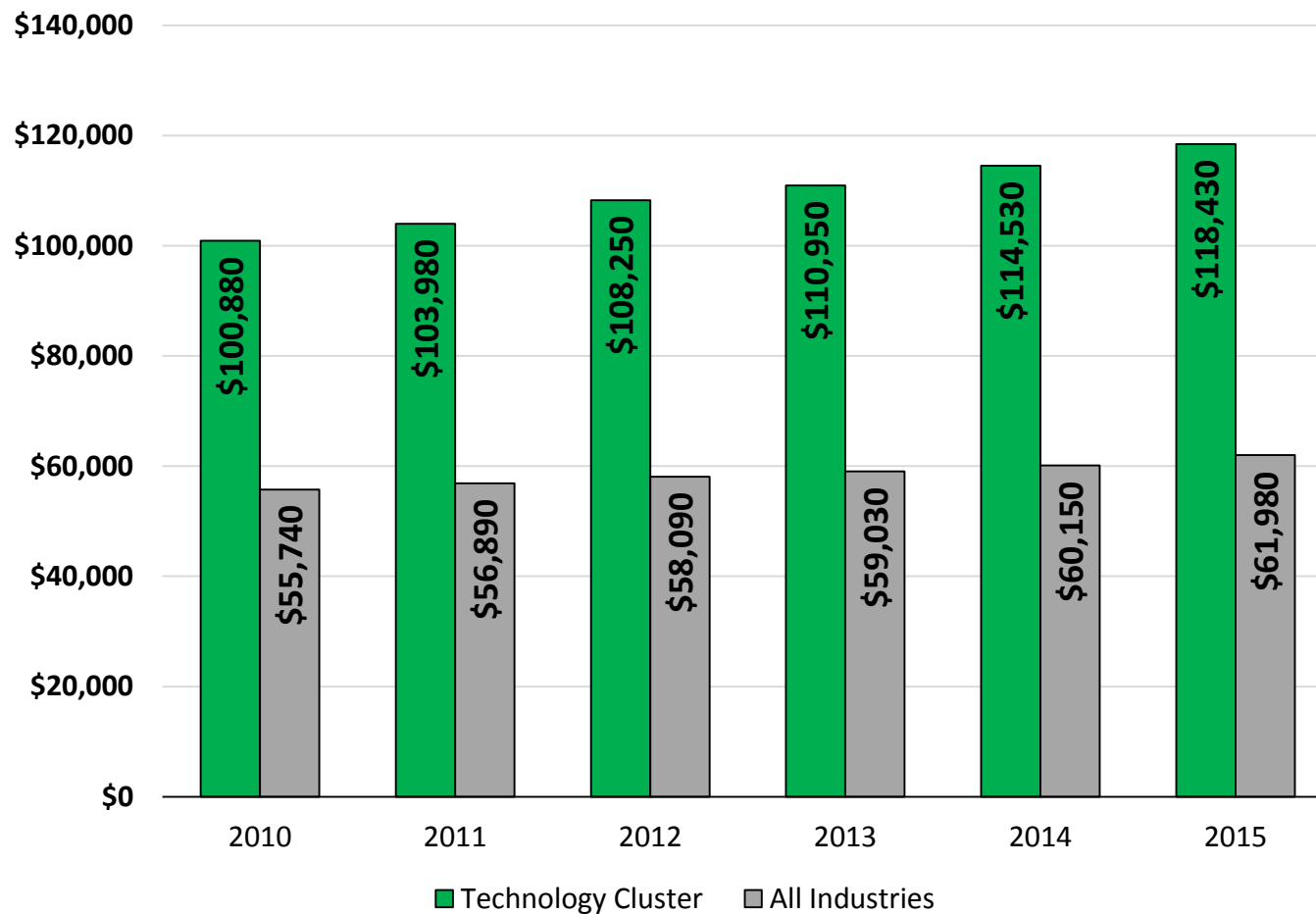
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER EMPLOYMENT SIZE, GROWTH, SALARY & LOCATION QUOTIENT



The above bubble graph has four elements:

1. Total 2015 employment - represented by the size of the bubble.
2. 2010-2015 employment growth- shown on the Y-axis, or vertical position.
3. 2015 annual average wages - shown on the X-axis, or horizontal position.
4. Location quotient - indicated by the color of the bubble. The location quotient compares the concentration of the industry subsectors in the state to those of the nation. Industries with a location quotient above 1 are known as “basic industries” which (in theory) export a good or service from the state and in return, bring in wealth.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ALL PRIVATE SECTOR VS. TECHNOLOGY ANNUAL AVERAGE WAGE



- Wages in the technology cluster have averaged 186.7% of the statewide annual average wage since 2010.
- Annual average wages for the technology cluster have risen +17.4% over the five year period from 2010 to 2015.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER PROFESSIONAL, SCIENTIFIC & TECHNICAL SERVICES, 2015

NAICS and Industry Description	Units	Average Employment	Wages	
			Average	Total
<b>Technology Industry Cluster</b>	<b>26,960</b>	<b>362,730</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Professional, Scientific, and Technical Services Sector</b>	<b>19,800</b>	<b>181,730</b>	<b>\$119,960</b>	<b>\$21,800,463,470</b>
Computer systems design & related services	8,910	70,630	\$112,150	\$7,921,523,500
Management & technical consulting services	6,760	43,780	\$95,020	\$4,159,330,560
Architectural & engineering services	3,380	36,870	\$91,300	\$3,365,566,790
Scientific research & development services	750	30,460	\$208,620	\$6,354,042,630

Employment in computer systems design and related services accounted for 19.5 percent of total technology cluster employment and 33.1 percent of its establishments.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER MANUFACTURING SECTOR, 2015

NAICS and Industry Description	Units	Average Employment	Wages	
			Average	Total
<b>Technology Industry Cluster</b>	<b>26,960</b>	<b>362,730</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Manufacturing Sector</b>	<b>1,500</b>	<b>63,470</b>	<b>\$112,370</b>	<b>\$7,131,879,080</b>
Pharmaceutical & Medicine	260	22,350	\$148,880	\$3,328,014,660
Electronic Instrument	310	12,300	\$102,220	\$1,257,360,280
Semiconductor & Electronic Component	190	7,540	\$72,090	\$543,337,910
Basic Chemical	120	6,050	\$110,210	\$666,293,220
Petroleum & Coal Products	70	2,840	\$117,060	\$332,089,440
Industrial Machinery	130	2,570	\$72,990	\$187,909,720
Communications Equipment	100	2,180	\$109,830	\$239,341,310
Electrical Equipment	80	1,910	\$70,490	\$134,940,570
Commercial & Service Industry Machinery	70	1,410	\$70,700	\$99,733,270
Aerospace Product & Parts	20	1,390	\$74,070	\$102,748,490
Computer & Peripheral Equipment	50	470	\$104,390	\$48,896,570

Pharmaceutical and medicine manufacturing led the manufacturing component in share of employment (35.2%) and wages (46.7%) in 2015.

Due to disclosure, totals may not be exact.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER INFORMATION SECTOR, 2015

NAICS and Industry Description	Units	Average Employment	Wages	
			Average	Total
<b>Technology Industry Cluster</b>	<b>26,960</b>	<b>362,730</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Information Sector</b>	<b>2,430</b>	<b>50,560</b>	<b>\$115,430</b>	<b>\$5,836,338,250</b>
Wired Telecommunications Carriers	460	24,830	\$117,490	\$2,917,526,960
Software Publishers	490	5,780	\$128,810	\$744,686,450
Other Information Services	400	5,270	\$114,850	\$605,101,090
Other Telecommunications	300	2,750	\$98,180	\$270,086,720
Wireless Telecommunications Carriers	210	2,240	\$88,160	\$197,595,270

Average wages paid for the information component were less than the technology industry cluster average in 2015 (\$115,430 vs. \$118,430).

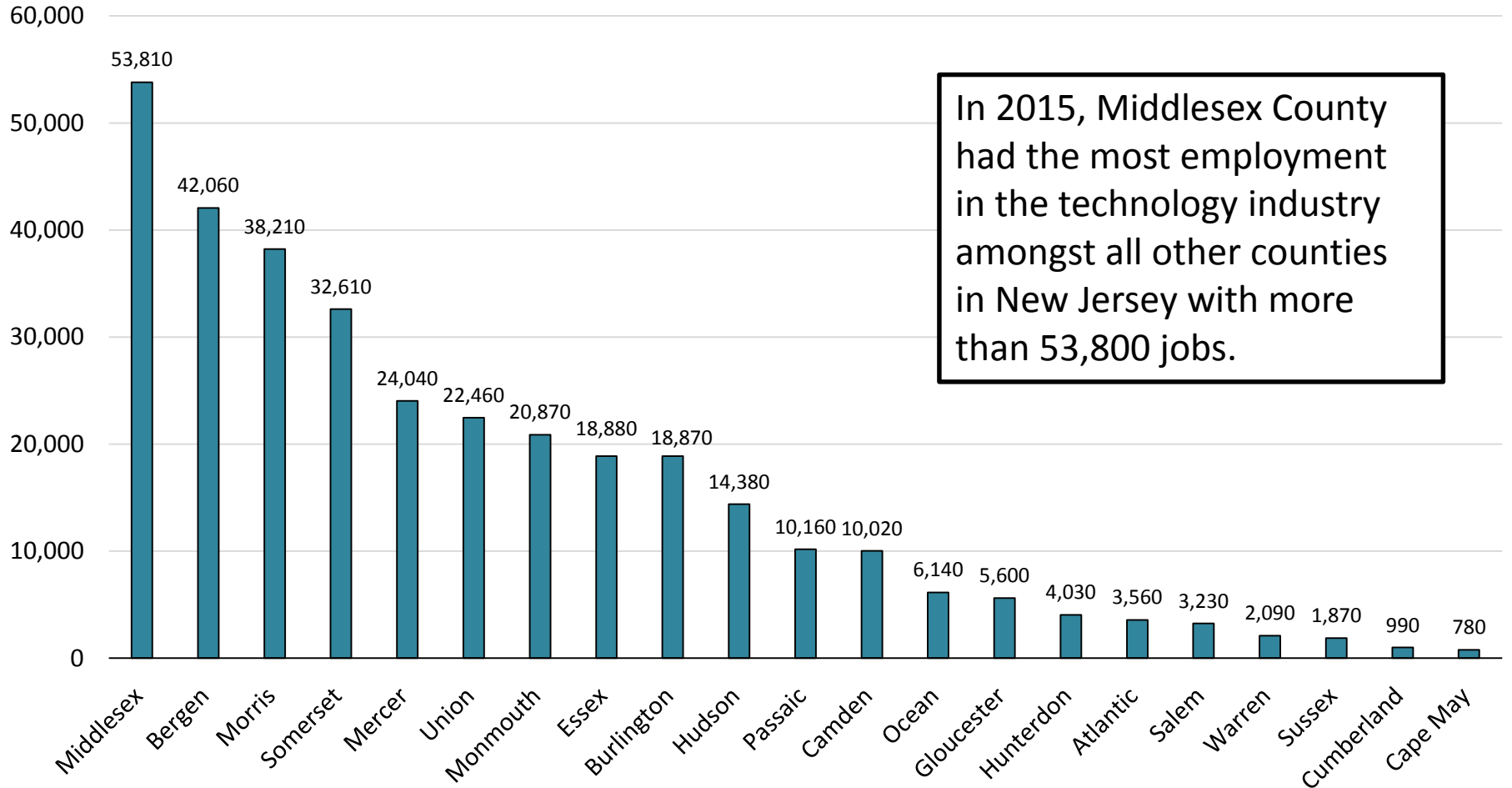
Due to disclosure some industries were not included.



# **TECHNOLOGY INDUSTRY CLUSTER: REGIONAL AND COUNTY EMPLOYMENT ANALYSIS**

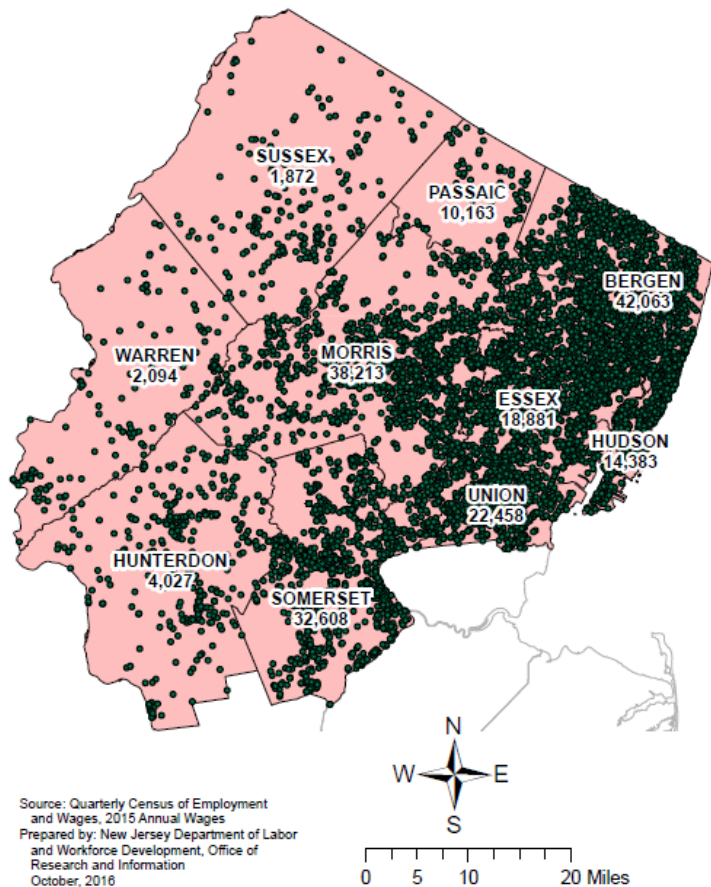


# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TECHNOLOGY EMPLOYMENT BY COUNTY, 2015 ANNUAL AVERAGES



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NORTHERN REGION, 2015 ANNUAL AVERAGES

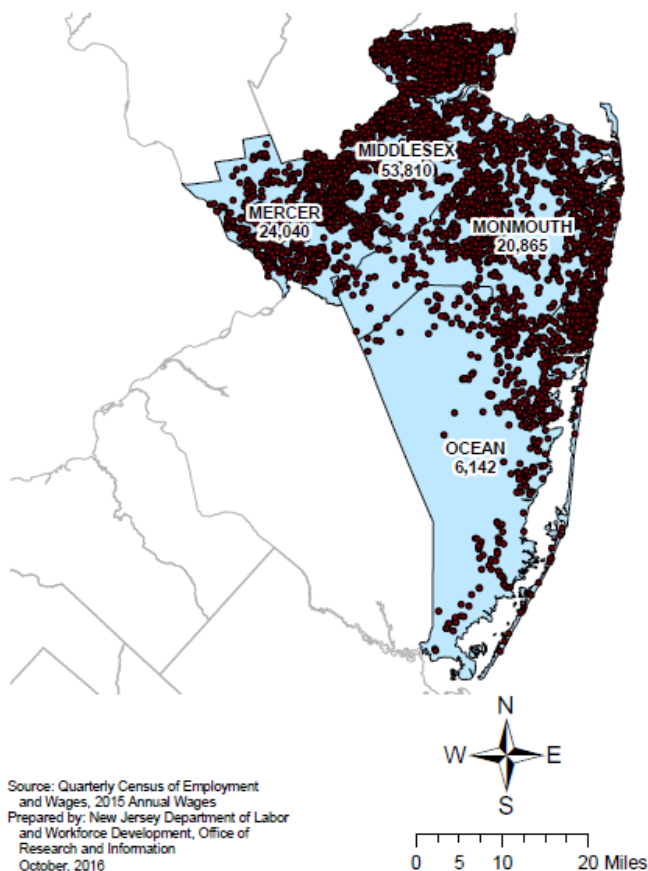
Technology Employment and Establishment Locations  
Northern Region of New Jersey, 2015



Area	Establishments	Wages	
		Average	Total
<b>Total NJ Technology</b>	<b>26,960</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Northern Region</b>	<b>11,130</b>	<b>\$128,810</b>	<b>\$24,056,234,060</b>
Bergen	2,910	\$107,140	\$4,506,543,870
Morris	1,980	\$137,820	\$5,266,380,920
Somerset	1,460	\$149,920	\$4,888,465,210
Essex	1,270	\$100,790	\$1,902,979,970
Hudson	1,020	\$118,160	\$1,699,527,660
Union	910	\$178,460	\$4,007,932,070
Passaic	720	\$95,170	\$967,205,730
Hunterdon	430	\$118,350	\$476,613,180
Sussex	250	\$79,380	\$148,599,850
Warren	190	\$91,680	\$191,985,610

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER CENTRAL REGION, 2015 ANNUAL AVERAGES

*Technology Employment and Establishment Locations  
Central Region of New Jersey, 2015*

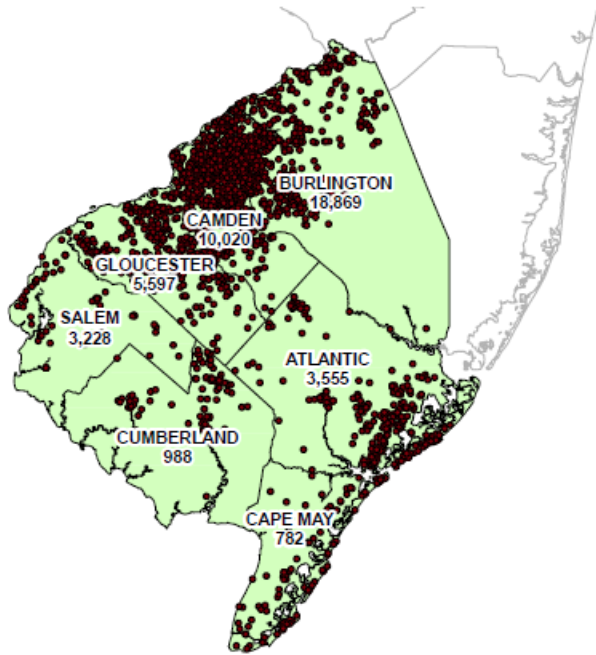


Area	Establishments	Wages	
		Average	Total
<b>Total NJ Technology</b>	<b>26,960</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Central Region</b>	<b>7,360</b>	<b>\$110,660</b>	<b>\$11,603,517,310</b>
Middlesex	3,330	\$107,130	\$5,764,905,500
Monmouth	1,870	\$102,930	\$2,147,603,660
Mercer	1,570	\$134,610	\$3,235,915,250
Ocean	590	\$74,100	\$455,092,900

Source: Quarterly Census of Employment and Wages, 2015 Annual Wages  
Prepared by: New Jersey Department of Labor and Workforce Development, Office of Research and Information  
October, 2016

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER SOUTHERN REGION, 2015 ANNUAL AVERAGES

Technology Employment and Establishment Locations  
Southern Region of New Jersey, 2015



0 5 10 20 Miles

Source: Quarterly Census of Employment  
and Wages, 2015 Annual Wages  
Prepared by: New Jersey Department of Labor  
and Workforce Development, Office of  
Research and Information  
October, 2016

Area	Establishments	Wages	
		Average	Total
<b>Total NJ Technology</b>	<b>26,960</b>	<b>\$118,430</b>	<b>\$42,956,983,630</b>
<b>Southern Region</b>	<b>2,800</b>	<b>\$87,660</b>	<b>\$3,772,712,060</b>
Burlington	1,060	\$94,270	\$1,778,850,010
Camden	780	\$78,120	\$782,779,590
Gloucester	400	\$76,100	\$425,946,730
Atlantic	300	\$84,210	\$299,354,900
Cape May	110	\$65,460	\$51,192,140
Cumberland	100	\$61,970	\$61,221,420
Salem	60	\$115,670	\$373,367,270



# **TECHNOLOGY INDUSTRY CLUSTER: OCCUPATIONAL ANALYSIS**



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER TOP OCCUPATIONAL GROUPS, 2015

Occupational Title	2015 Employment	Percent of Total Employment	2015 Average Salary
<b>All Technology Occupations</b>	<b>361,410</b>	<b>100.0%</b>	<b>\$77,340</b>
Computer And Mathematical Occupations	76,370	21.1%	\$94,550
Office And Administrative Support Occupations	56,170	15.5%	\$39,240
Management Occupations	41,770	11.6%	\$142,470
Business And Financial Operations Occupations	36,020	10.0%	\$79,990
Architecture And Engineering Occupations	31,530	8.7%	\$87,780
Production Occupations	28,330	7.8%	\$37,480
Sales And Related Occupations	28,300	7.8%	\$43,550
Life, Physical, And Social Science Occupations	18,750	5.2%	\$82,730
Installation, Maintenance, And Repair Occupations	17,710	4.9%	\$51,640
<b>Science, Technology, Engineering, and Mathematical (STEM) Occupations</b>	<b>126,650</b>	<b>35.0%</b>	<b>\$91,050</b>

Science, Technology, Engineering and Mathematical (STEM) occupations accounted for more than 1/3 of the technology cluster occupational employment in 2015 with 126,650 employment.

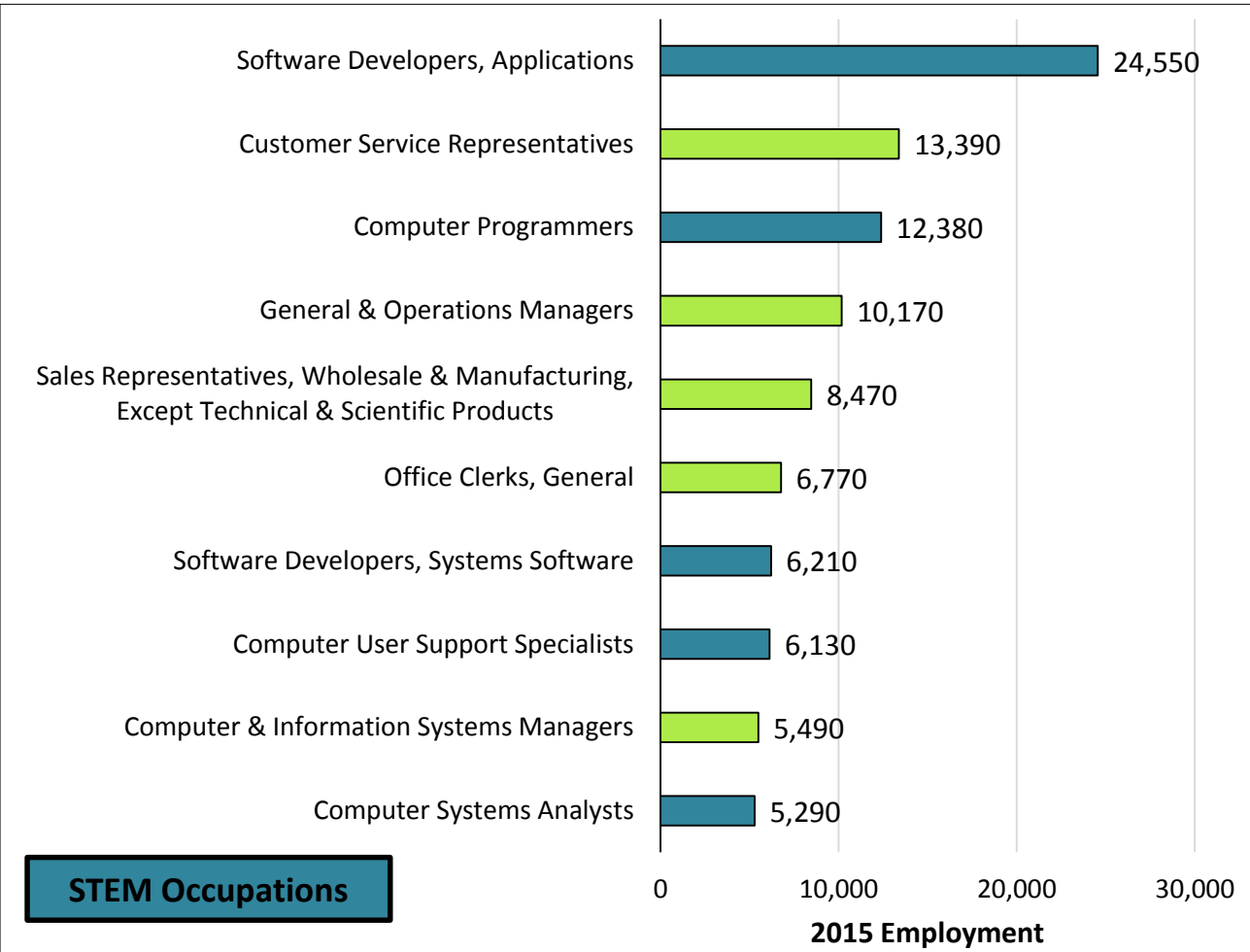


# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER INDUSTRY CLUSTER TOP 20 OCCUPATIONS BY EMPLOYMENT, 2015

## New Jersey Technology Cluster's Top 20 Occupations

NAICS and Occupational Title	2015 Employment	Education
15-1132 Software Developers, Applications	24,550	Bachelor's degree
43-4051 Customer Service Representatives	13,390	High school diploma or equivalent
15-1131 Computer Programmers	12,380	Bachelor's degree
11-1021 General & Operations Managers	10,170	Bachelor's degree
41-4012 Sales Representatives, Wholesale & Manufacturing, Except Technical & Scientific Products	8,470	High school diploma or equivalent
43-9061 Office Clerks, General	6,770	High school diploma or equivalent
15-1133 Software Developers, Systems Software	6,210	Bachelor's degree
15-1151 Computer User Support Specialists	6,130	Some college, no degree
11-3021 Computer & Information Systems Managers	5,490	Bachelor's degree
15-1121 Computer Systems Analysts	5,290	Bachelor's degree
15-1142 Network & Computer Systems Administrators	5,160	Bachelor's degree
13-1111 Management Analysts	4,990	Bachelor's degree
15-1143 Computer Network Architects	4,660	Bachelor's degree
17-2051 Civil Engineers	4,430	Bachelor's degree
49-2022 Telecommunications Equipment Installers & Repairers, Except Line Installers	4,220	Postsecondary non-degree award
43-3031 Bookkeeping, Accounting, & Auditing Clerks	4,200	High school diploma or equivalent
19-2031 Chemists	4,150	Bachelor's degree
13-1161 Market Research Analysts & Marketing Specialists	3,970	Bachelor's degree
13-2011 Accountants & Auditors	3,560	Bachelor's degree
17-2141 Mechanical Engineers	3,520	Bachelor's degree

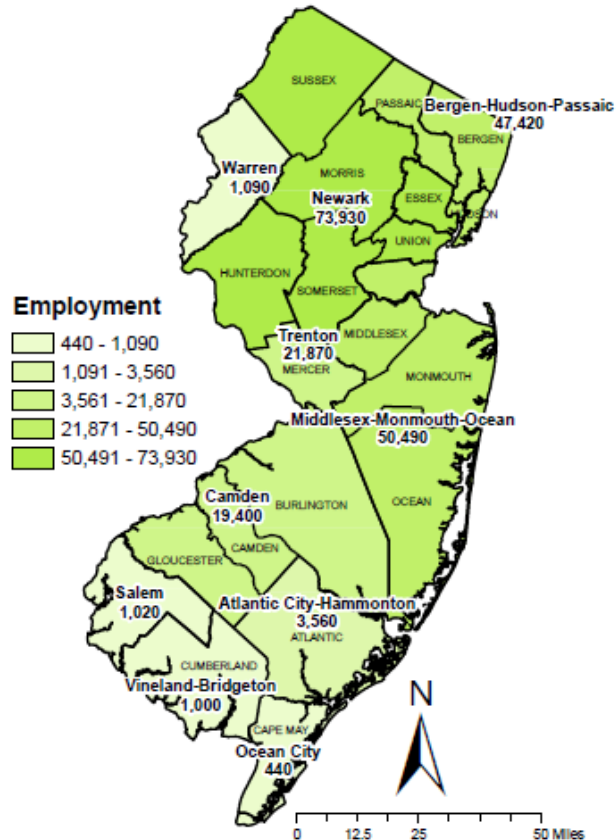
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ALL TOP TECHNOLOGY OCCUPATIONS, 2015



- Ten of the top twenty occupations are science, technology, engineering and math occupations and make-up 21.2 percent of total cluster occupational employment.
- The top twenty technology cluster occupations accounted for 39.2% percent of total technology cluster occupational employment in 2015.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ALL STEM OCCUPATIONS BY LABOR AREA

Employment by Labor Area  
STEM Occupations in New Jersey, 2015

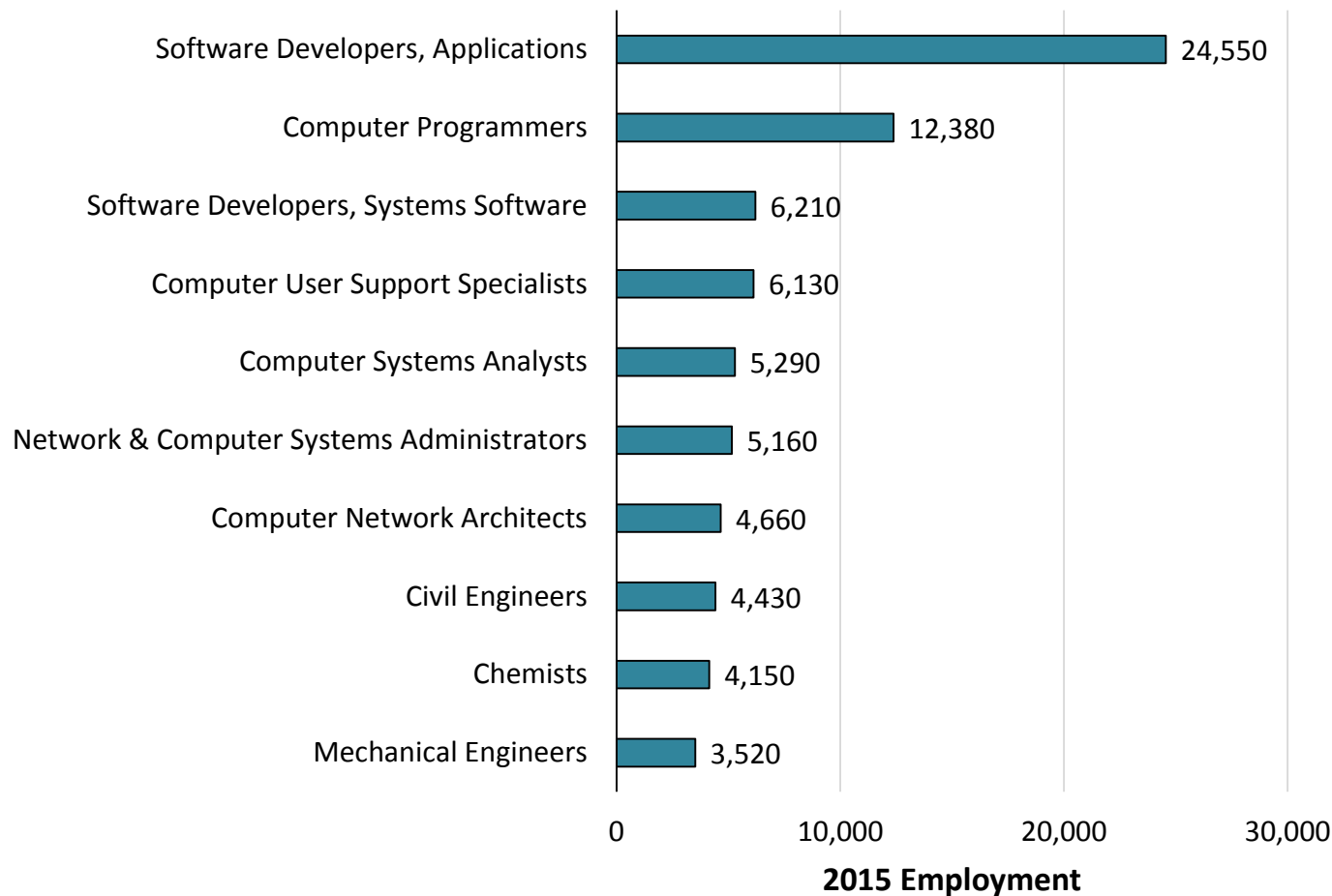


Labor Area	STEM Employment
Essex-Hunterdon-Morris-Somerset-Sussex-Union County Area	73,930
Middlesex-Monmouth-Ocean County Area	50,490
Bergen-Hudson-Passaic County Area	47,420
Mercer County Area	21,870
Burlington-Camden-Gloucester County Area	19,400
Atlantic County Area	3,560
Warren County Area	1,090
Salem County Area	1,020
Cumberland County Area	1,000
Cape May County Area	440





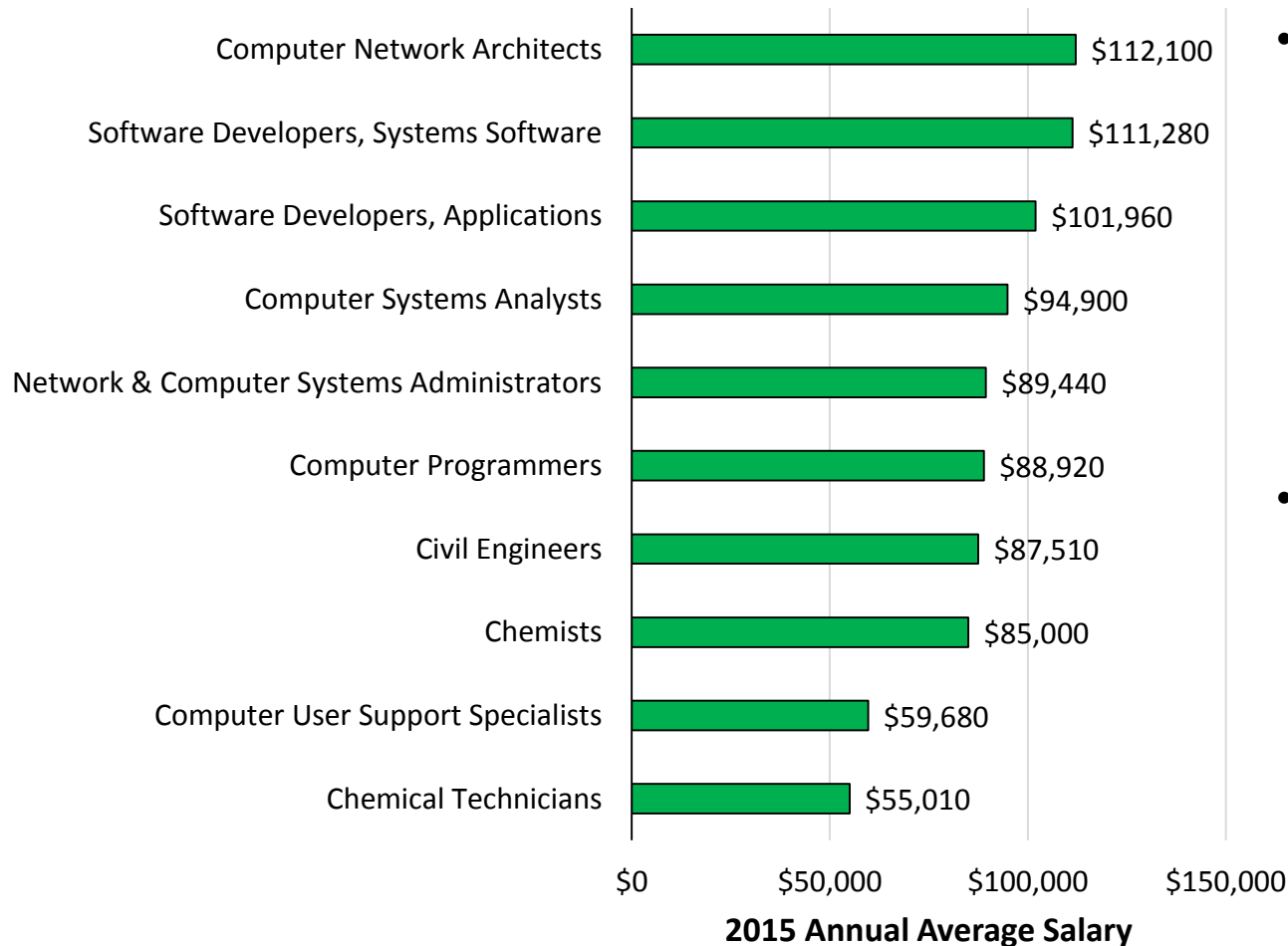
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER LARGEST STEM OCCUPATIONS BY EMPLOYMENT, 2015



- The top seven STEM occupations are related to computers.
- Applications software developers accounted for 6.8 percent of employment in the technology industry cluster in 2015.



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ANNUAL AVERAGE SALARY FOR LARGEST STEM OCCUPATIONS, 2015



- The highest annual average salary for STEM occupations in 2015 was petroleum engineers, but had less than 300 employment (\$180,440).
- The top twenty STEM occupations by employment all had an occupational annual average wage that was above the state (\$54,950).



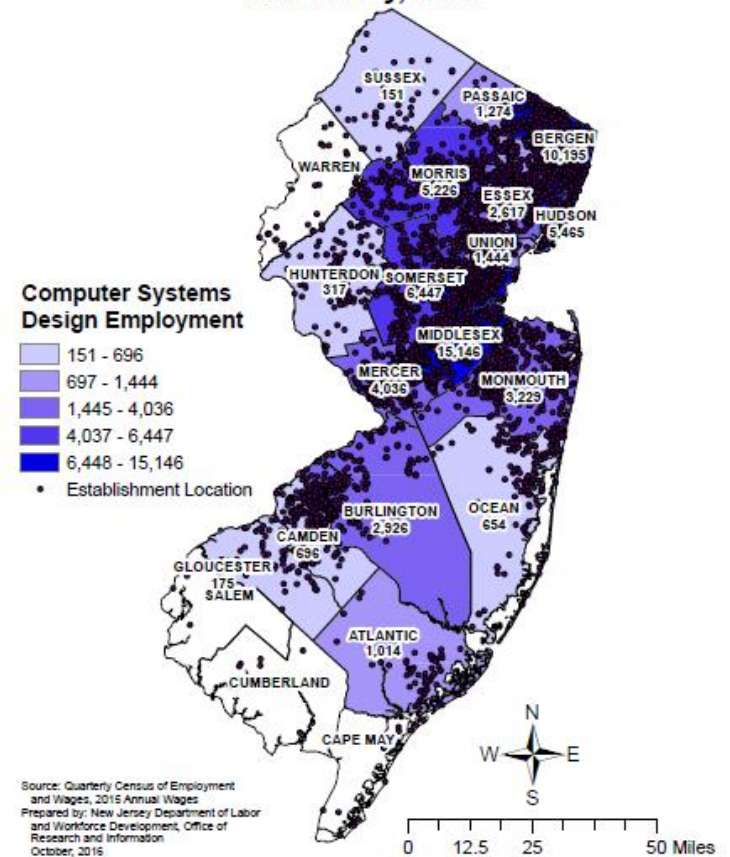
# **TECHNOLOGY INDUSTRY CLUSTER: SUB-SECTOR ANALYSIS**



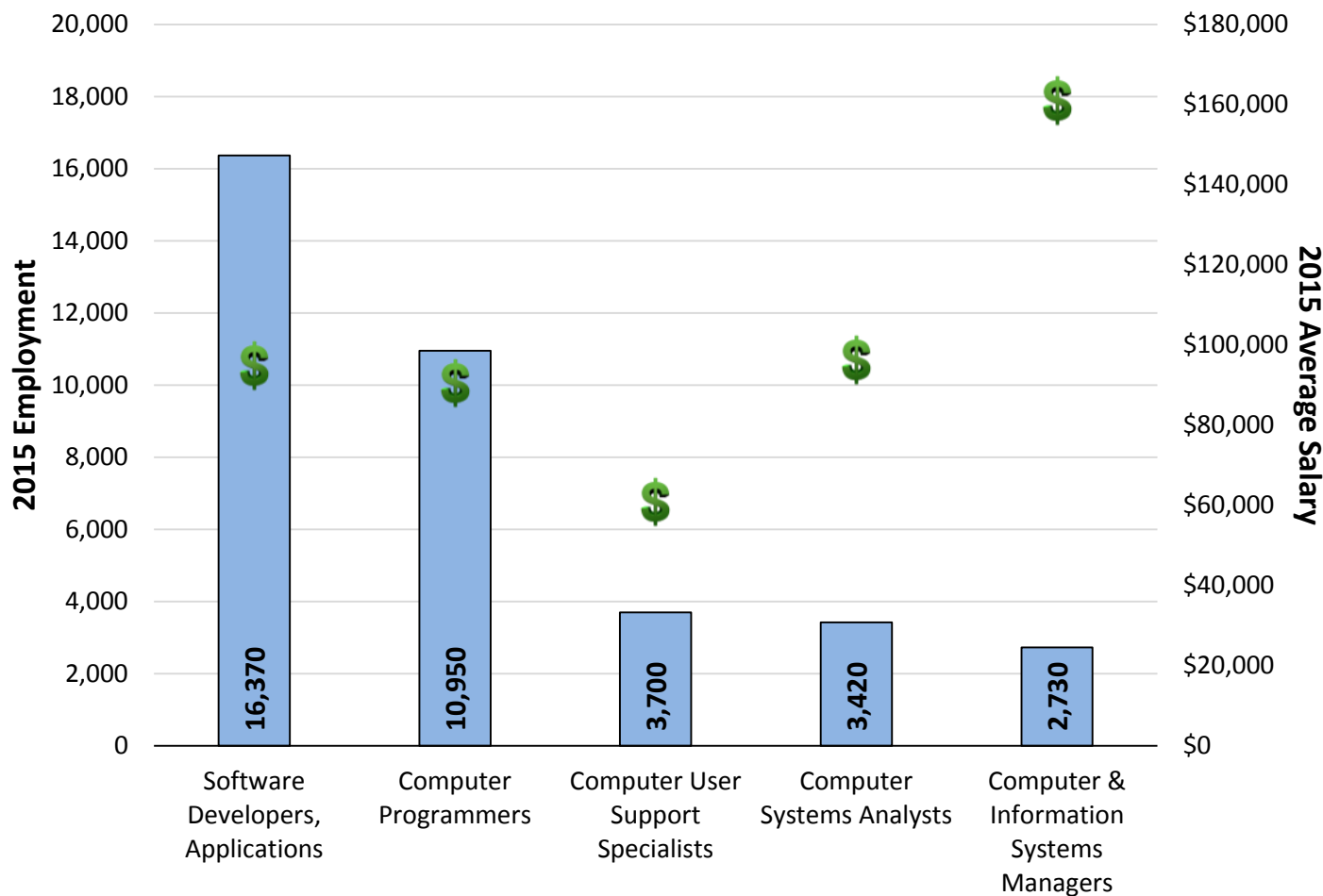
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER COMPUTER SYSTEMS DESIGN AND RELATED SERVICES, 2015

- Provide expertise in the field of information technologies, including software development, planning and development of computer systems and managing onsite computer systems for clients.
- Accounted for nearly one-third of all technology industry cluster establishments in NJ (8,910) in 2015.
- From 2010 to 2015 employment has grown 17.6 percent to 70,630 employment in 2015.
- Over \$7.9 billion dollars paid in total wages, making up nearly twenty percent of total technology industry cluster wages paid in 2015.

*Computer Systems Design Employment  
and Establishment Locations  
New Jersey, 2015*



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER COMPUTER SYSTEMS DESIGN AND RELATED SERVICES



- The top ten occupations in the computer systems design & related services industry make up 65.5 percent.
- The average salary in Computer Systems Design and Related Services (\$97,100) is 125.5 percent of the technology cluster average.

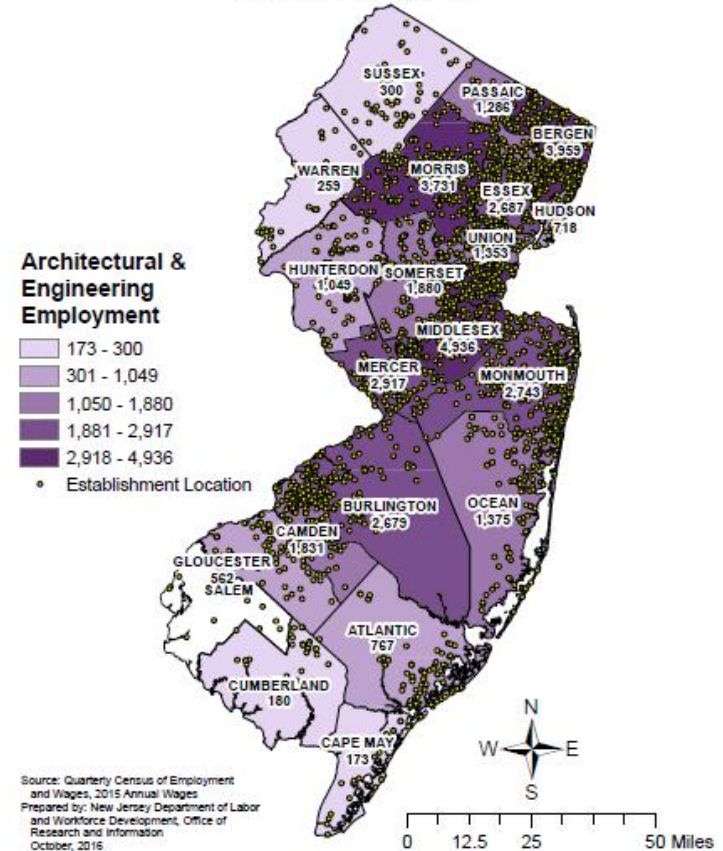




# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ARCHITECTURAL AND ENGINEERING SERVICES, 2015

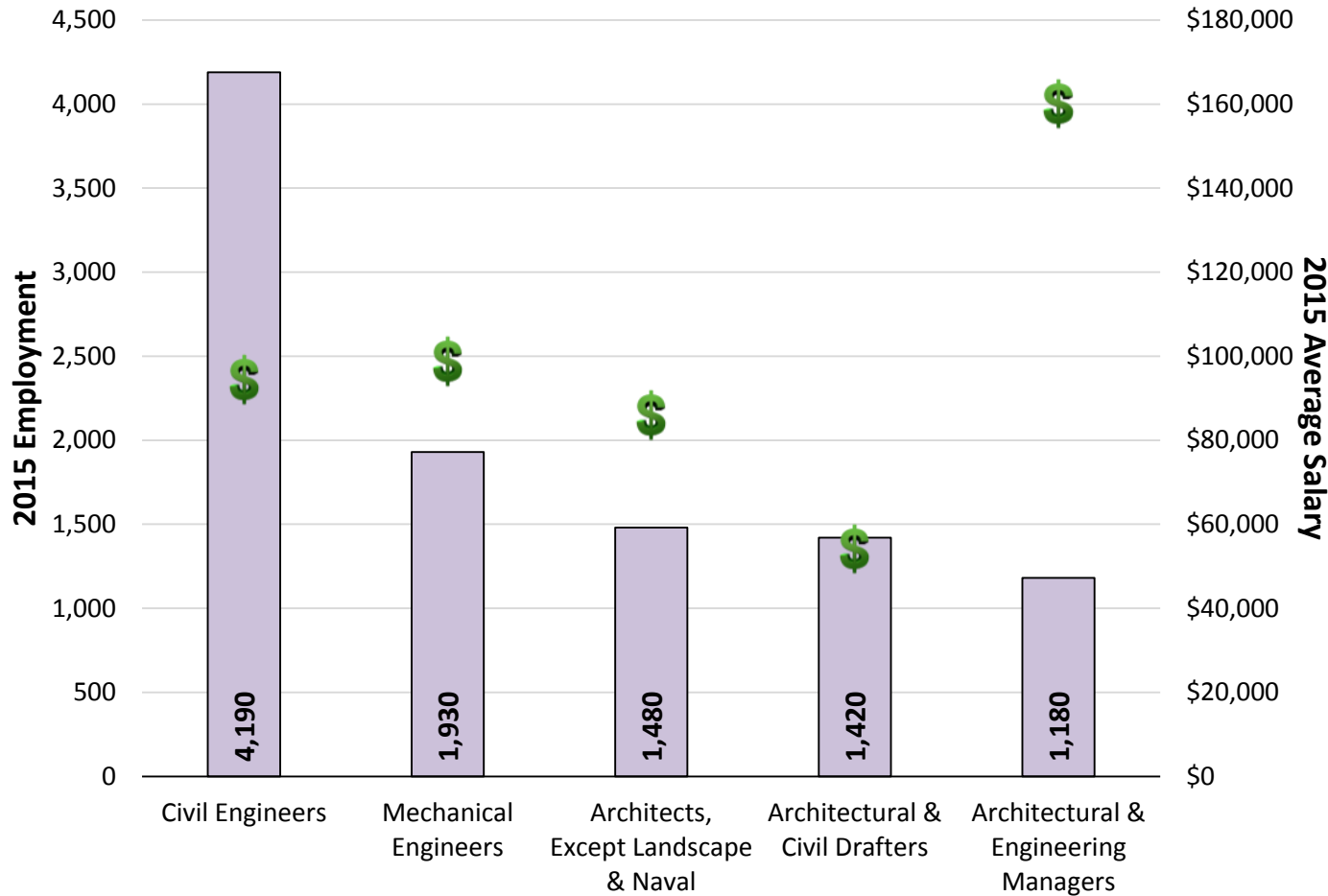
- Architectural and Engineering Services industry is distributed fairly evenly from Camden and Burlington counties in the southern part of the state through the central counties up through the northeast.
- Accounted for 10.2 percent of all technology industry cluster employment in NJ (36,870) in 2015.
- There are 3380 establishments throughout NJ, with the most in Bergen County (390).
- Over \$3.3 billion dollars paid in total wages, making up nearly eight percent of total technology industry cluster wages paid in 2015.

*Architectural and Engineering Employment  
and Establishment Locations  
New Jersey, 2015*





# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER ARCHITECTURAL, ENGINEERING & RELATED SERVICES



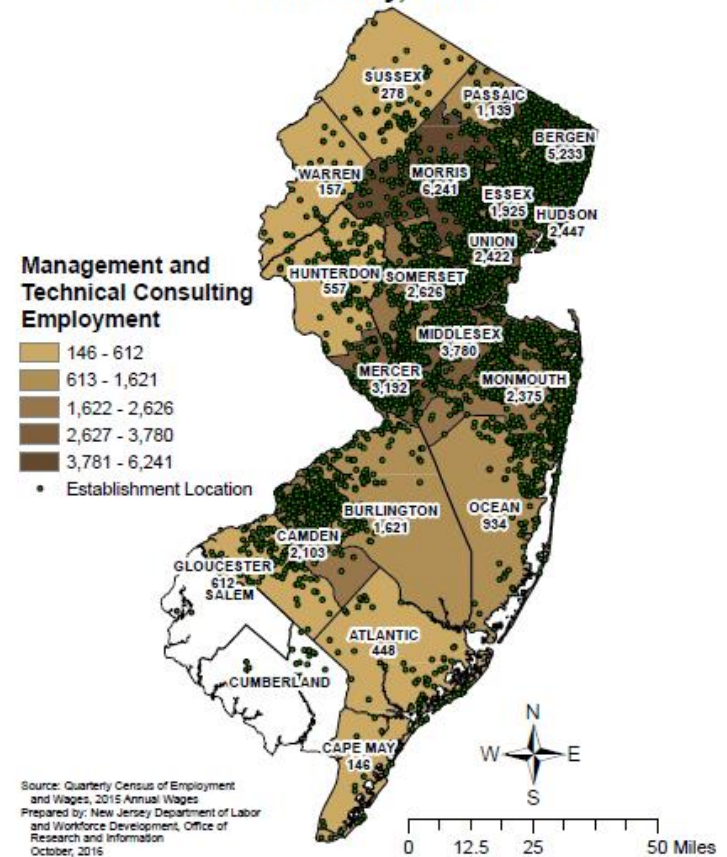
- Civil Engineers accounted for 11.3 percent of employment in the architectural, engineering and related services industry.
- The average salary for architectural, engineering, and related services (\$81,170) is higher than the total technology industry average.



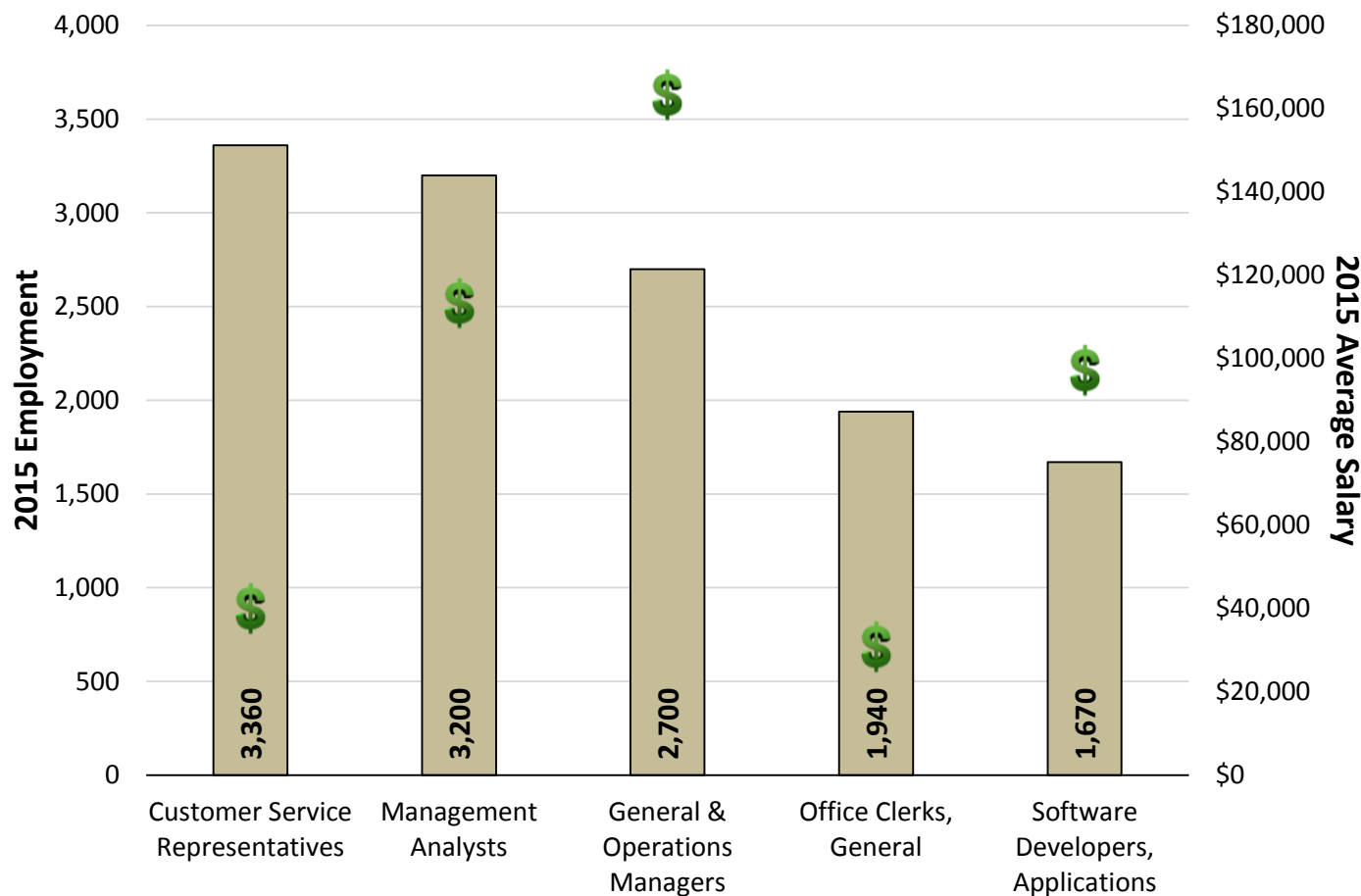
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER MANAGEMENT AND TECHNICAL CONSULTING SERVICES, 2015

- Management and technical consulting services employment (43,780) made up 12.1 percent of the technology industry cluster.
- The average wage for this industry is much lower than the technology industry cluster average (\$95,020 vs. \$118,430).
- Establishments for this cluster accounted for slightly more than one quarter of total technology industry cluster establishments throughout NJ (6,760).
- Nearly \$4.2 billion dollars paid in total wages, making up more than 9.7 percent of all wages paid for the technology industry cluster in 2015.

*Management and Technical Consulting Employment  
and Establishment Locations  
New Jersey, 2015*



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER MANAGEMENT, SCIENTIFIC & TECHNICAL CONSULTING SERVICES



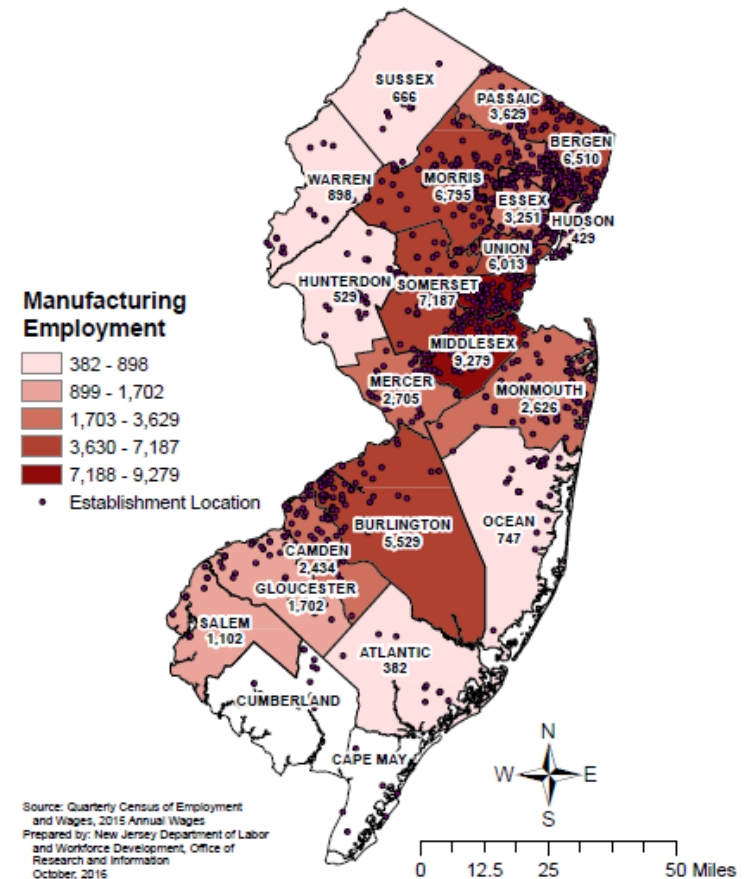
- Accounts for 12.2 percent of the technology industry cluster employment.
- Average salary for the management, scientific, and technical consulting services industry (\$84,230) is higher than the technology industry cluster average.



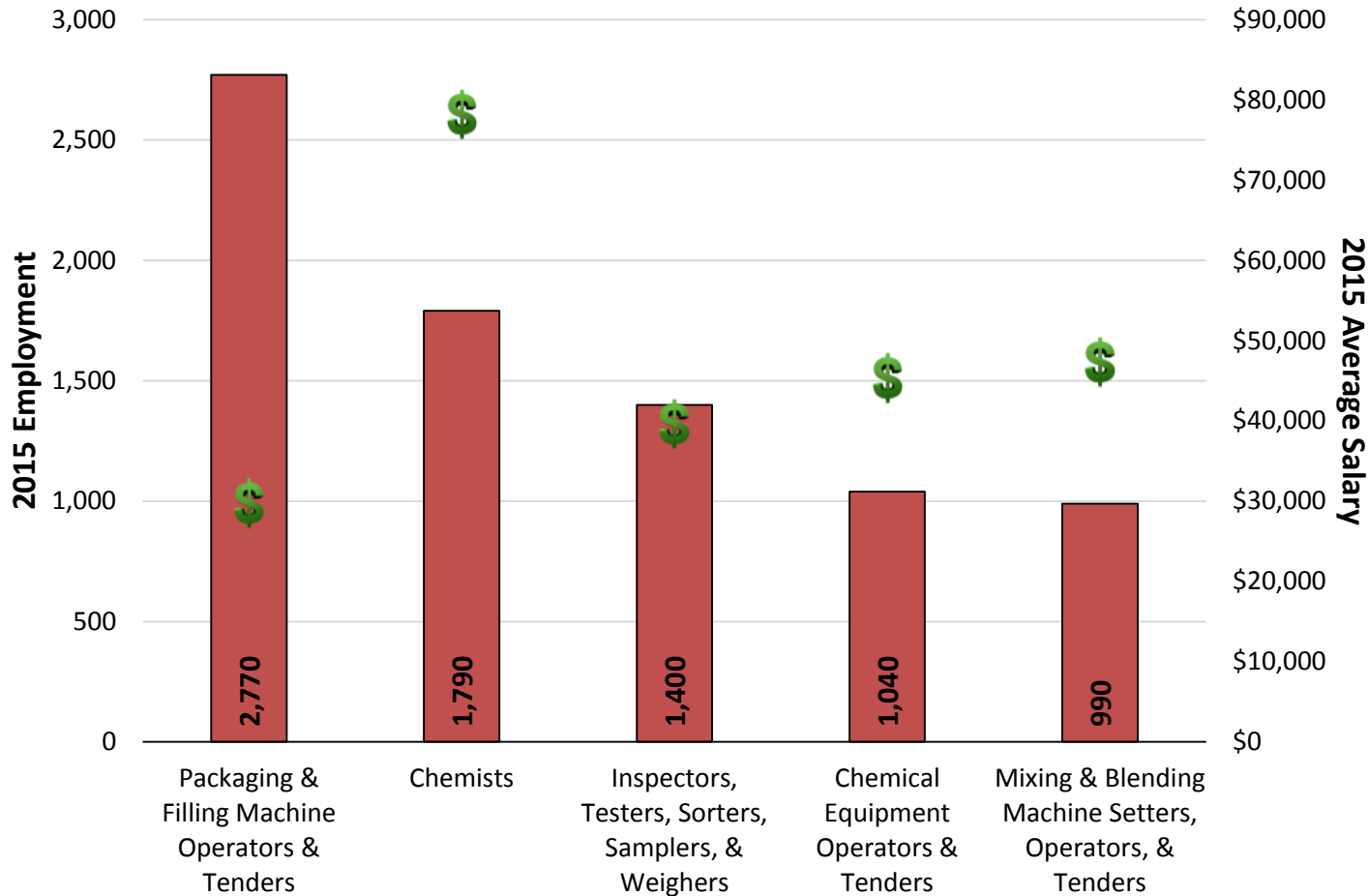
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER MANUFACTURING, 2015

- The state's high technology manufacturing sector is led by the pharmaceutical and medicine manufacturing, and medical device manufacturing industries.
- Average wage is lower than the total technology industry cluster average (\$112,380 vs. \$118,430).
- Manufacturing accounted for 17.5 percent of all technology industry cluster employment (63,470).
- Nearly \$7.1 billion dollars paid in total wages, making up 16.6 percent of all wages paid for the technology industry cluster in 2015.

*Manufacturing Employment and Establishment Locations  
New Jersey, 2015*



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER MANUFACTURING, 2015

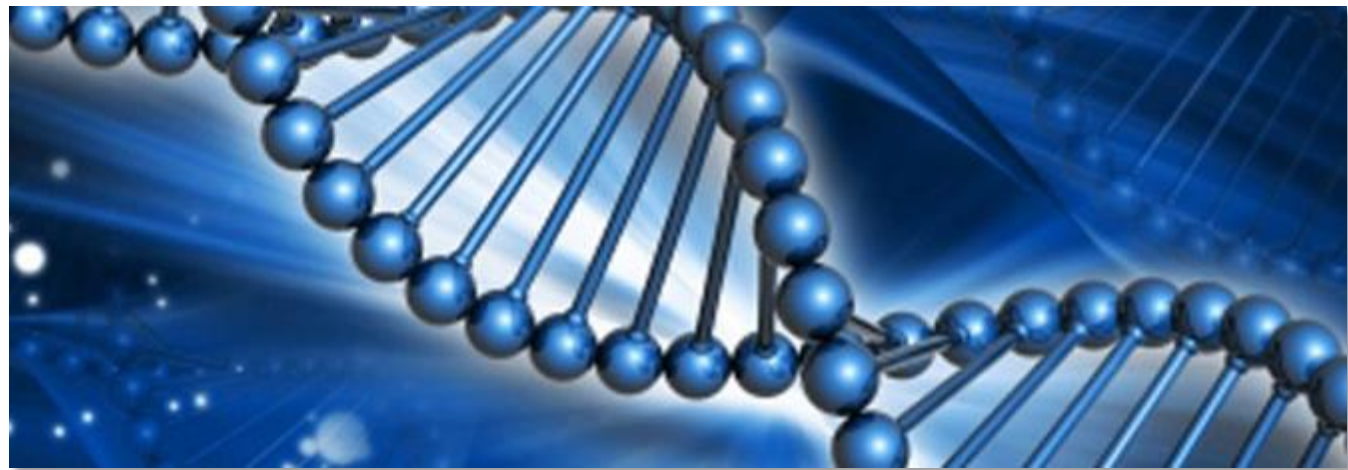


- Pharmaceutical manufacturing industry accounted for 6.2 percent of the technology industry cluster employment.
- Pharmaceutical manufacturing industry average salary (\$65,280) is well below the technology industry cluster average.





# **TECHNOLOGY INDUSTRY CLUSTER: 2015 DEMOGRAPHIC OVERVIEW**

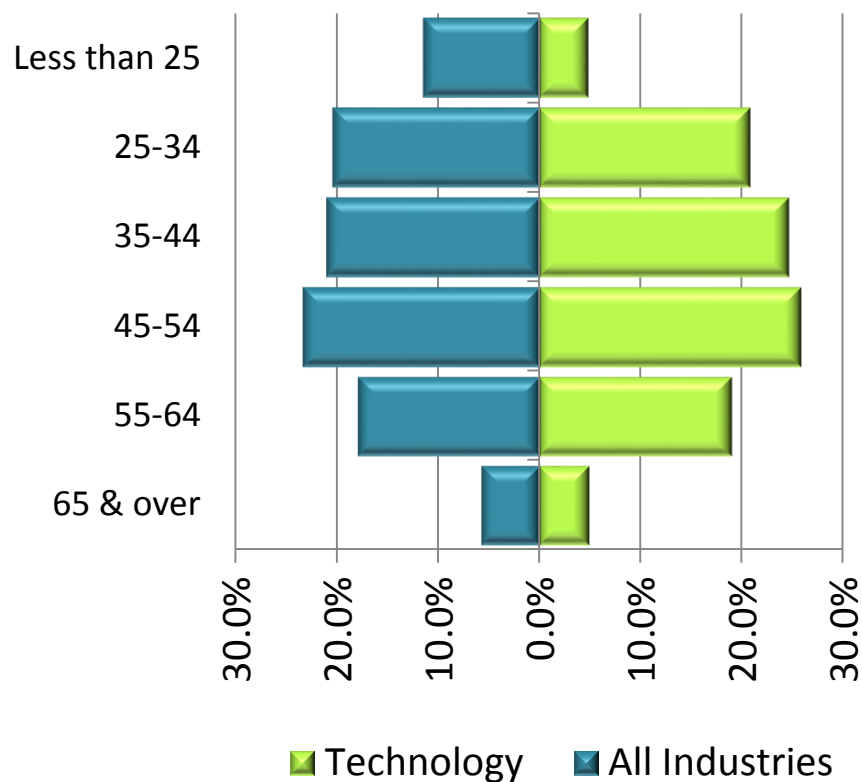




# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER

## NJ RESIDENTS IN TECHNOLOGY WORK FORCE VS. TOTAL NONFARM

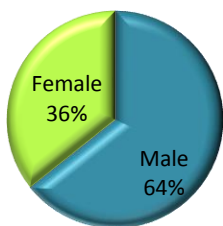
Age Breakdown of Workers in Technology  
and All Industries  
New Jersey, 2015



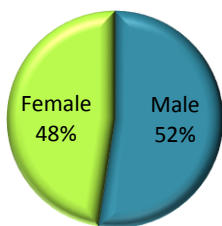
- The workforce of the technology industry has seen a slight shift with 50.3 percent aged 44 and under, compared to 2014 in which 45 and up held about 51.2 percent.
- The largest disparity among age cohorts occurs in the youngest group, where only 4.9 percent of the technology workforce is 25 years old or younger, but has increased by .5 percent since 2014.
- 5 percent of the current NJ resident technology workforce is aged 65 and older, dropping .2 percent from 2014.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NJ RESIDENTS IN TECHNOLOGY WORK FORCE VS. TOTAL NONFARM

**Technology**



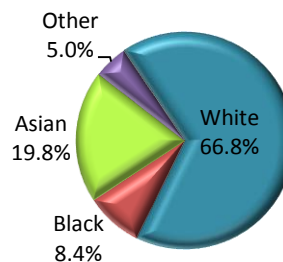
**All Industries**



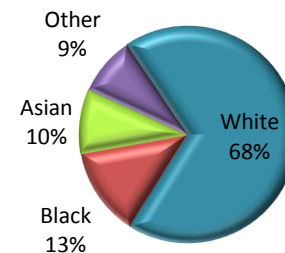
Males continue to outnumber females by nearly a 2 to 1 margin in the technology workforce.

NJ residents who are Asian (19.8%) hold the 2<sup>nd</sup> highest percentile in the technology industry.

**Technology**

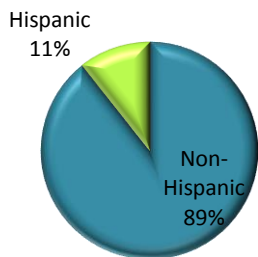


**All Industries**

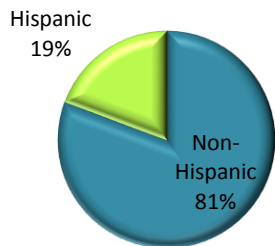


The technology workforce has seen a 1% increase in Hispanics presence since 2014.

**Technology**

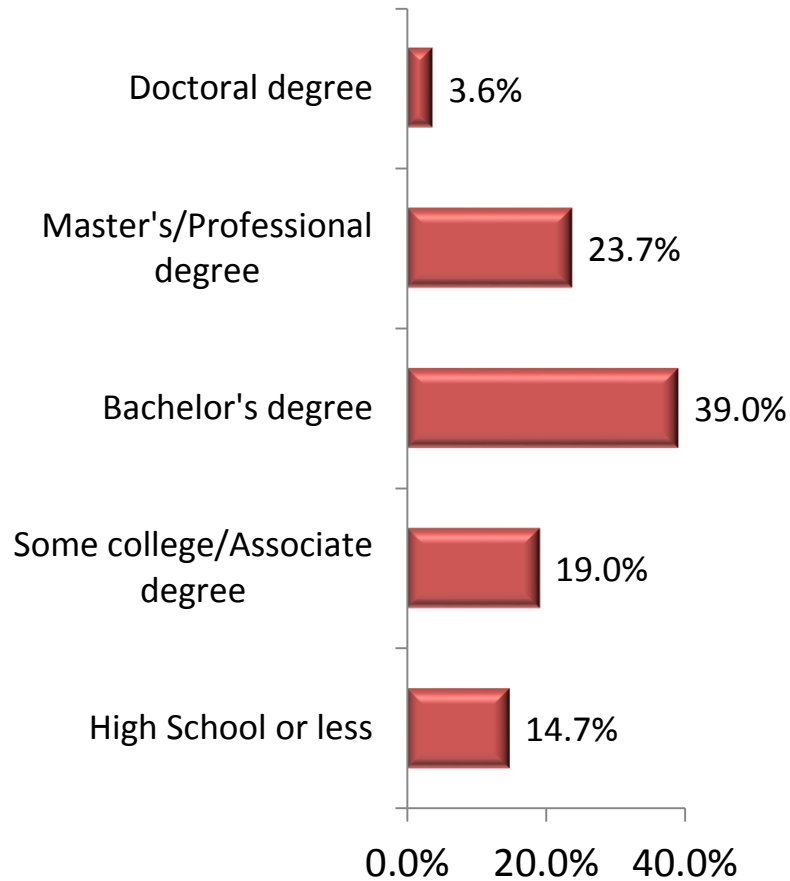


**All Industries**

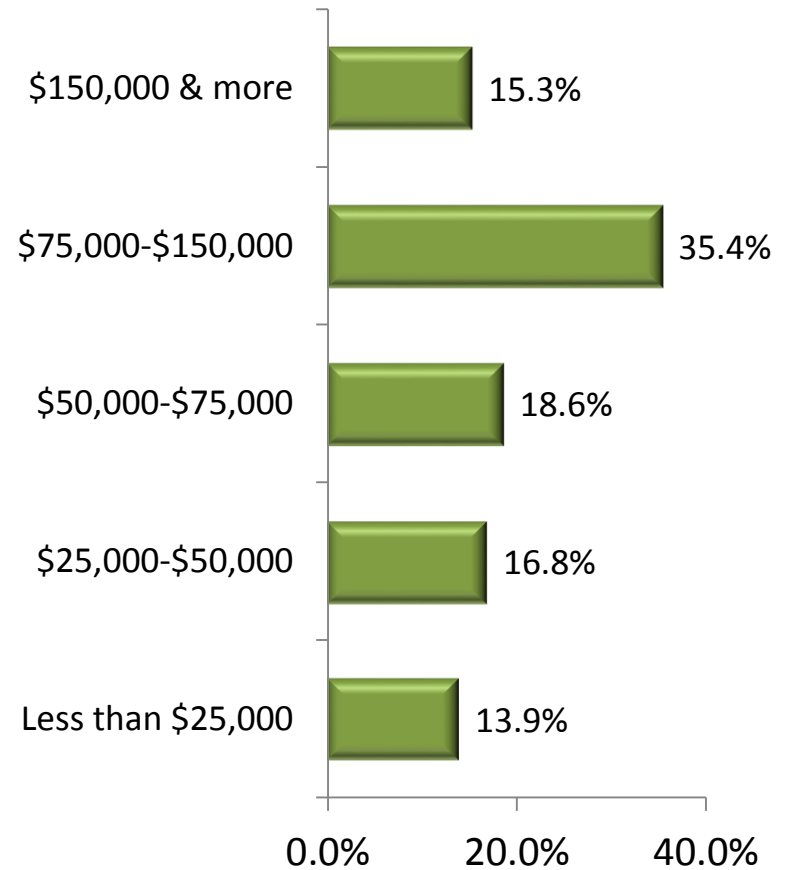


# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NJ RESIDENTS IN TECHNOLOGY WORK FORCE

## Education Level



## Personal Earnings



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER

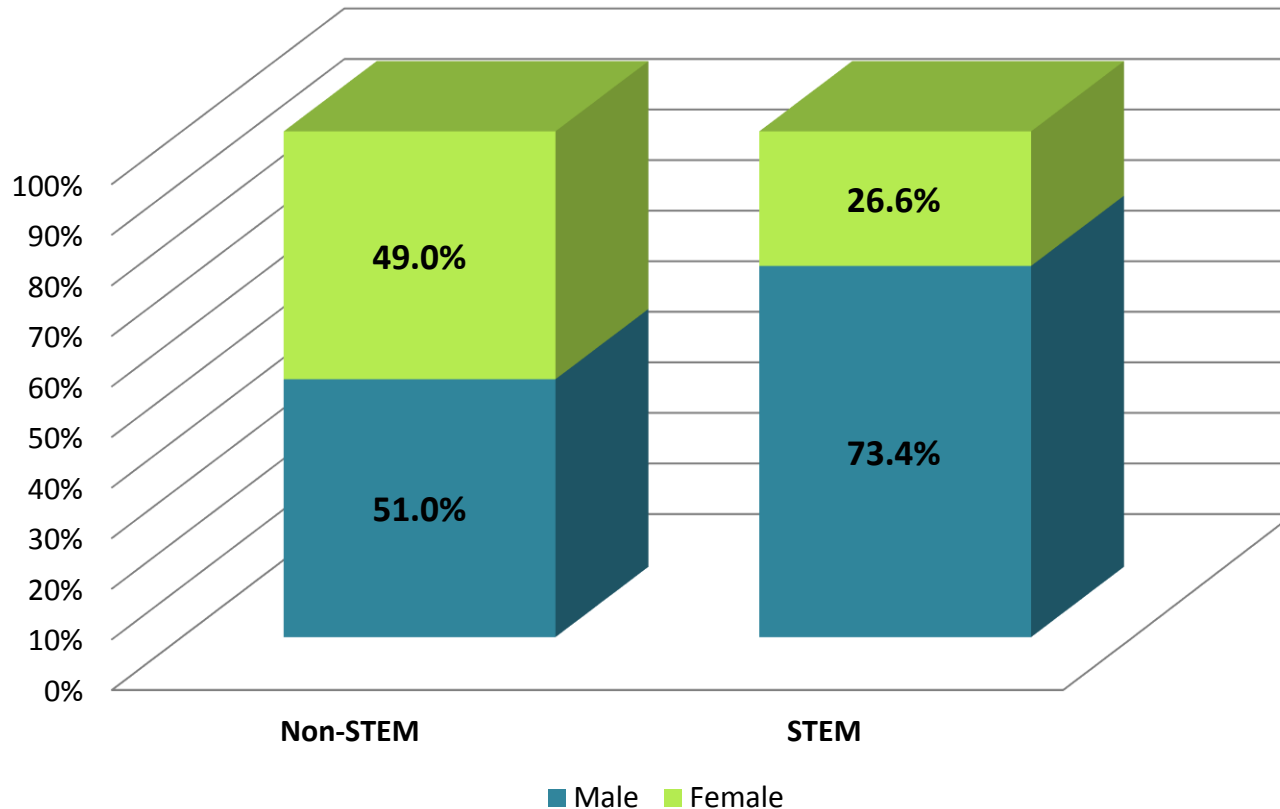
## NJ RESIDENTS IN STEM JOBS

Occupation	Total Employment	Male		Female	
		Number	Percent	Number	Percent
<b>STEM total</b>	<b>318,900</b>	<b>234,000</b>	<b>73.4%</b>	<b>84,900</b>	<b>26.6%</b>
Computer Science & Math	173,700	128,200	73.8%	45,500	26.2%
Engineering & Surveying	63,300	55,000	86.9%	8,300	13.1%
Physical & Life Science	43,600	21,300	48.9%	22,300	51.1%
STEM Managers	38,300	29,500	77.0%	8,800	23.0%

- The highest percentage of women is found in physical and life science occupations for NJ residents (51.1%).
- 77.0 percent of NJ residents that are managers for STEM occupations are male, down 2% from the previous year.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NJ RESIDENTS IN STEM JOBS

## Gender Shares of Non-STEM and STEM Jobs, 2014

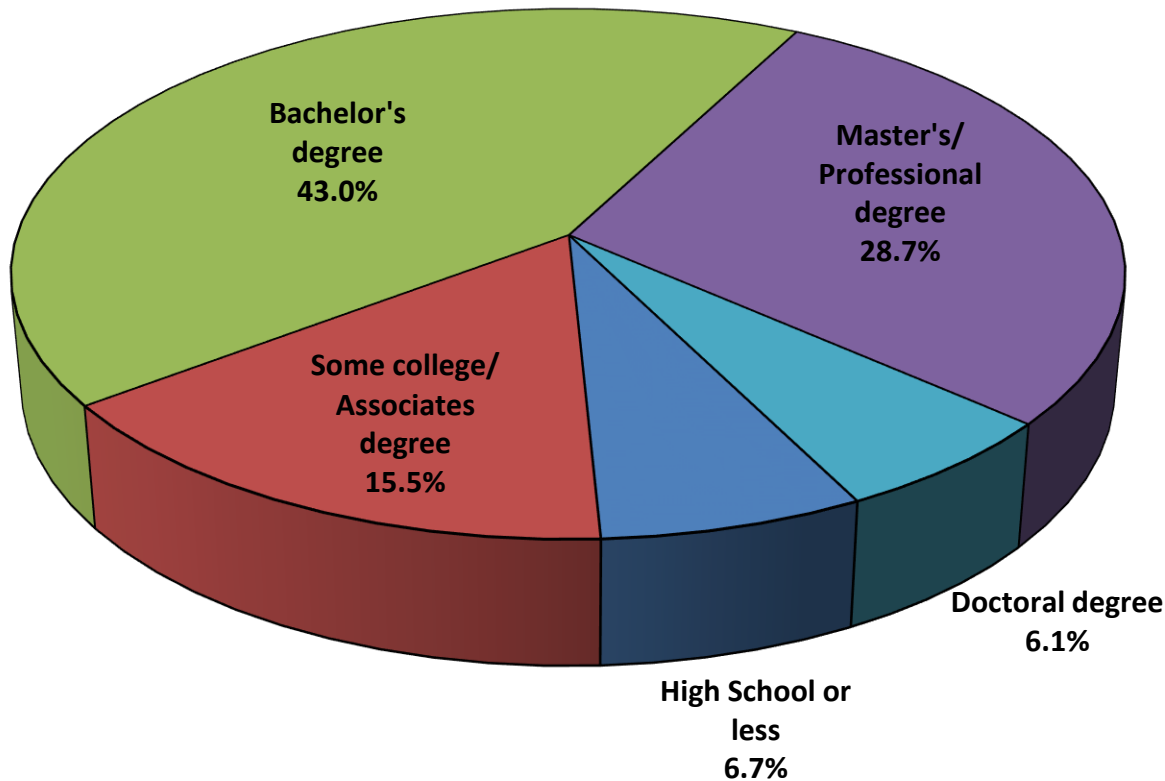


The STEM workforce is predominantly male driven. Resident women hold less than twenty-seven percent of science, technology, engineering & math jobs in New Jersey.



# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER EDUCATION CHARACTERISTICS FOR NJ RESIDENTS IN STEM JOBS

## Educational Breakdown

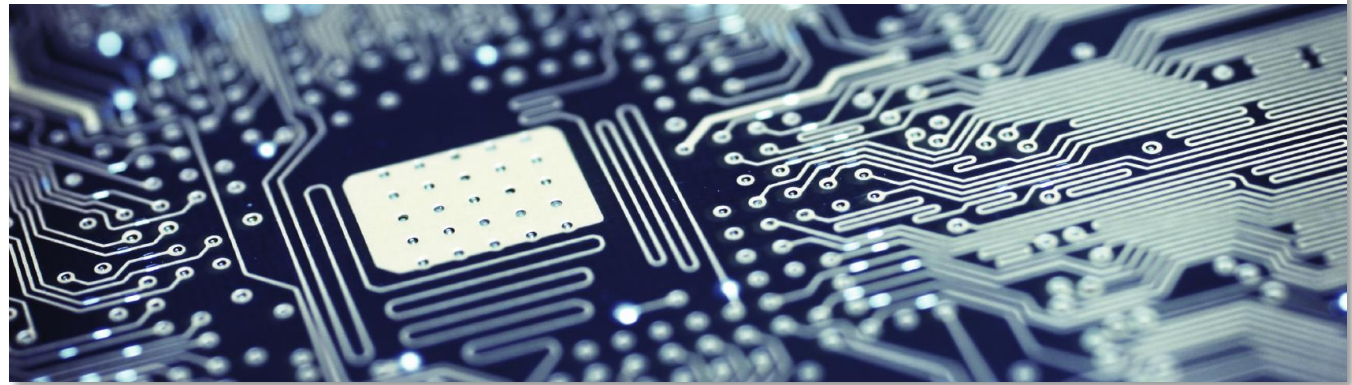


- The STEM workforce requires well-educated and highly skilled workers to meet the high level and technical demands of many of the occupations they fill.
- More than  $\frac{3}{4}$  of NJ residents in the STEM workforce hold at least a Bachelor's degree compared to only 37.8% percent of NJ residents in non-stem occupations.





# **TECHNOLOGY INDUSTRY CLUSTER: OCCUPATIONAL PROJECTIONS AND OUTLOOK**



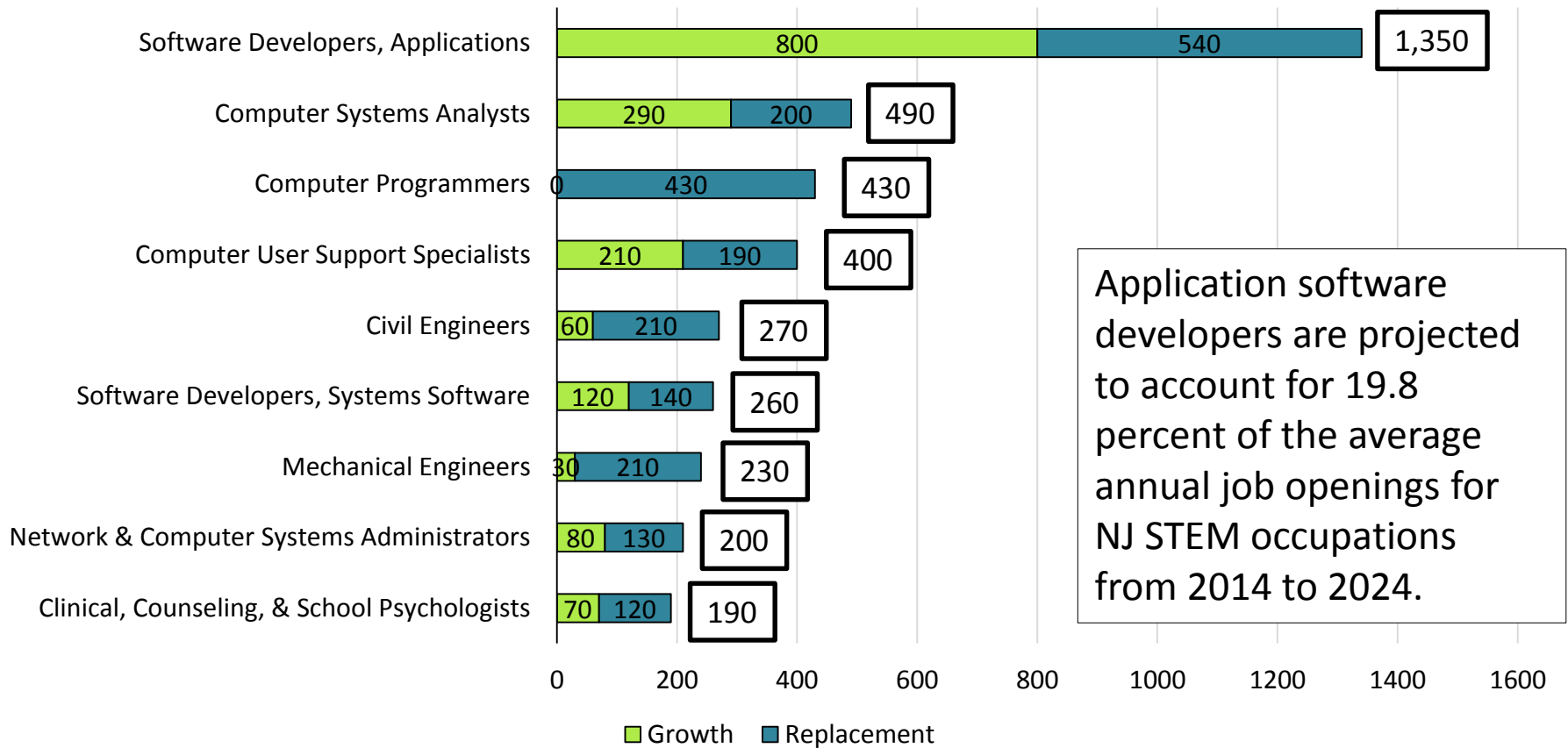
# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER NJ DETAILED OCCUPATIONAL EMPLOYMENT PROJECTIONS 2014-2024

Occupational Title	Employment				Average Annual		
	Actual 2014	Projected 2024	Change 2014-2024		Job Openings		
			Number	Percent	Total	Growth	Replacement
<b>Total, All Occupations</b>	<b>4,214,100</b>	<b>4,491,550</b>	<b>277,450</b>	<b>6.6</b>	<b>131,040</b>	<b>32,130</b>	<b>98,910</b>
<b>Non-STEM Occupations</b>	<b>3,984,200</b>	<b>4,240,600</b>	<b>256,400</b>	<b>6.4</b>	<b>124,230</b>	<b>29,780</b>	<b>94,450</b>
<b>STEM Occupations</b>	<b>229,900</b>	<b>250,950</b>	<b>21,050</b>	<b>9.2</b>	<b>6,800</b>	<b>2,340</b>	<b>4,460</b>
Computer and Mathematical Occupations	139,350	156,050	16,700	12.0	4,000	1,870	2,130
Architecture and Engineering Occupations	53,350	55,400	2,000	3.8	1,540	230	1,310
Life, Physical, and Social Science Occupations	37,200	39,500	2,300	6.3	1,260	240	1,020

- 34.4 percent of projected average annual job openings for STEM occupations will be due to growth over the ten year period from 2014 to 2024.
- STEM occupations are projected to experience a 9.2 percent employment growth by 2024.

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER PROJECTED ANNUAL AVERAGE OPENINGS FOR STEM OCCUPATIONS

## 2014-2024 Projected Annual Average Job Openings



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STATE OF NEW JERSEY  
DEPARTMENT OF LABOR AND  
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NEW JERSEY DEPARTMENT OF  
**LWD**  
LABOR AND WORKFORCE DEVELOPMENT  
nj.gov/labor

# NEW JERSEY TECHNOLOGY INDUSTRY CLUSTER CONTACT INFORMATION

## New Jersey Department of Labor & Workforce Development

<http://lwd.dol.state.nj.us/>

P.O. Box 057

Trenton, NJ 08625-0057

### **Office of Research and Information**

[http://lwd.dol.state.nj.us/labor/lpa/LMI\\_index.html](http://lwd.dol.state.nj.us/labor/lpa/LMI_index.html)

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