CompTIA.

Cyberstates
2021

The definitive guide to
the U.S. tech industry
and tech workforce

Nationwide | State | Metro Area

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#cyberstates

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IS PRODUCED BY
The Computing Technology Industry Association (CompTIA)

CompTIA is responsible for all content and analysis. Any questions regarding the report should be directed to CompTIA Research and Market Intelligence staff at research@comptia.org.

Cyberstates can be accessed online at Cyberstates.org.

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ABOUT

ABOUT COMPTIA

The Computing Technology Industry Association (CompTIA) is a leading voice and advocate for the $5 trillion global information technology ecosystem; and the estimated 75 million industry and tech professionals who design, implement, manage, and safeguard the technology that powers the world's economy. Through education, training, certifications, advocacy, philanthropy, and market research, CompTIA is the hub for advancing the tech industry and its workforce.

CompTIA is the world's leading vendor-neutral IT-certifying body with more than 2.8 million certifications awarded based on the passage of rigorous, performance-based exams. CompTIA sets the standard for preparing entry-level candidates through expert-level professionals to succeed at all stages of their career in technology. Through CompTIA's philanthropic arm, CompTIA develops innovative on-ramps and career pathways to expand opportunities to populations that traditionally have been under-represented in the information technology workforce.

> CompTIA Technology Career Pathway Roadmap
> CompTIA Certifications Job Match
> CompTIA Training and Learning
> CompTIA Tech Career Academy
> CompTIA IT Salary Calculator
> CompTIA Member Communities and Councils

ABOUT CYBERSTATES

CompTIA designed Cyberstates to serve as a reference tool, making national, state, and metro area-level data accessible to a wide range of users. Cyberstates quantifies the size and scope of the tech industry and the tech workforce across multiple vectors. To provide additional context, Cyberstates includes time-series trending, average wages, business establishments, job postings, gender ratios, innovation and emerging tech metrics, and more. For the interactive online version of Cyberstates, visit www.cyberstates.org.

As with any sector-level report, there are varying interpretations of what constitutes the tech sector and the tech workforce. Some of this variance may be attributed to the objectives of the author. Is the goal to depict the broadest possible representation of STEM and digital economy fields, or a more narrowly defined technology subset? Is the goal to capture all possible knowledge workers, or a more narrowly defined technology subset? For the purposes of this report, CompTIA focuses on the more narrowly defined technology subset. See the methodology section for details of the specific NAICS codes and SOC codes CompTIA uses in its definitions of the tech sector and the tech workforce.

Due to periodic updates to industry and occupation categories by the U.S. Bureau of Labor Statistics, as well as occasional revisions of historical data, direct comparisons to previous publications of Cyberstates is not always possible. Additionally, CompTIA adjusts its methodology at times to best reflect available data and the needs of users. For these reasons, it is best to view the most recent release as the best representation of the state of the tech industry and workforce. If historical comparison data is required, requests can be submitted to research@comptia.org.

CompTIA's base of IT certification holders spans 232 countries
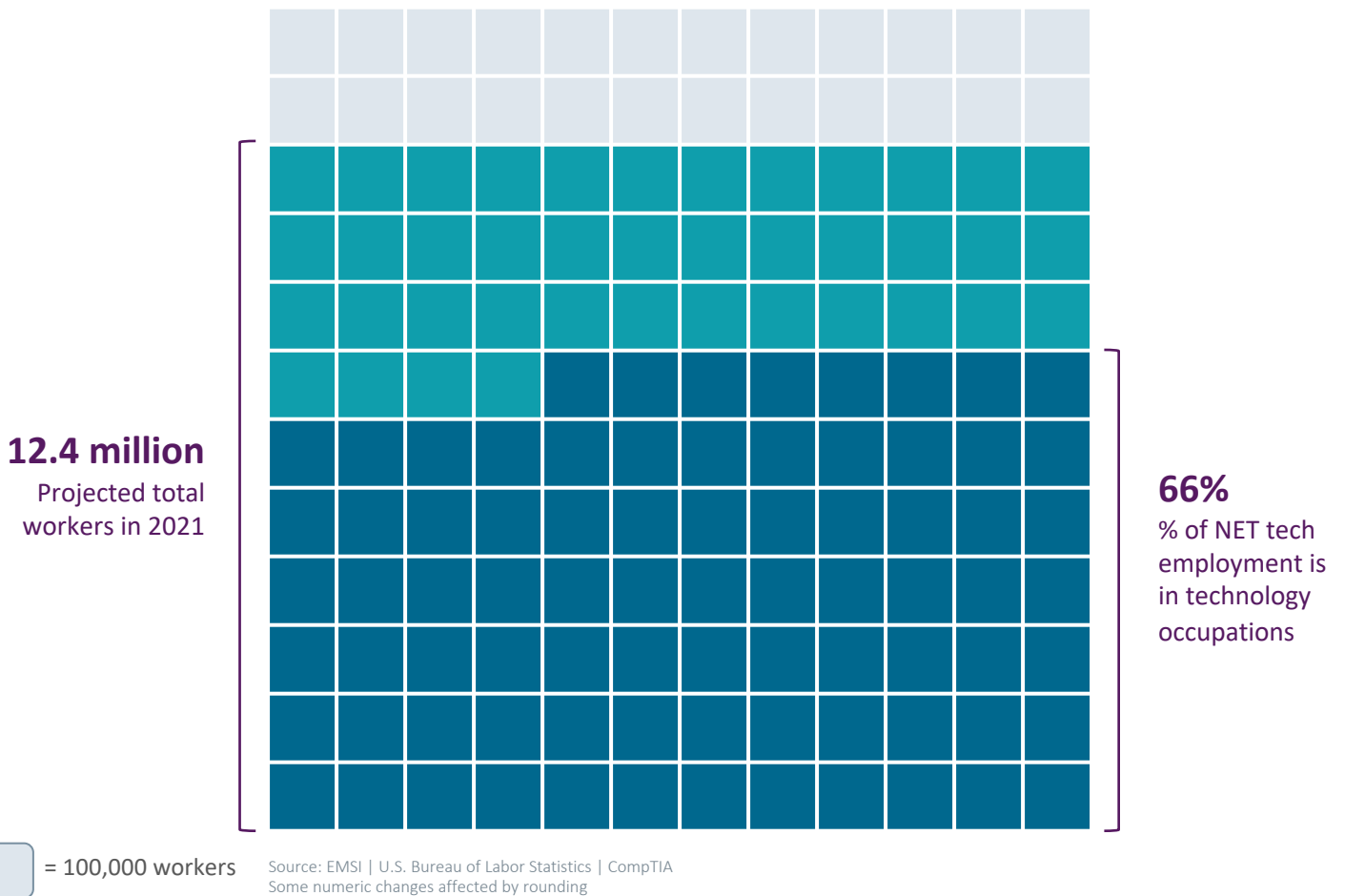
TABLE OF CONTENTS

DEFINING NET TECH EMPLOYMENT

The tech workforce consists of two primary components, represented as a single figure by the 'net tech employment' designation. The foundation is the set of technology professionals working in technical positions, such as IT support, network engineering, software development, data scientist, and related roles. Many of these professionals work for technology companies (46.5 percent), but many others are employed by organizations across every industry sector in the U.S. economy (53.5 percent).

The second component consists of the business professionals employed by technology companies. These professionals – encompassing sales, marketing, finance, HR, operations and management, play an important role in supporting the development and delivery of the technology products and services used throughout the economy. Slightly more than 34 percent of the net tech-employment total consists of tech industry business professionals.

One final segment involves workers classified as self-employed. For the purposes of this report, only dedicated, full-time self-employed technology workers are counted towards net tech employment. Workers that are characterized as "gig" workers, which may entail working on the side for supplementary income, are excluded from this analysis due to several uncertainties with the data and to minimize the possibility of double counting.

N = Technology professionals employed across the economy, including in the tech sector
(e.g. software developers, network architects, database admins, etc.)

N = Tech sector employment, less technology professionals
(e.g. sales, marketing, finance, HR, etc.)

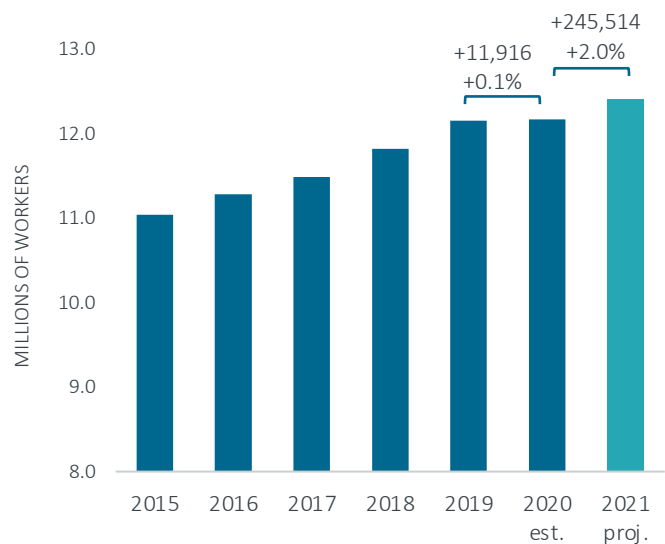**12.4 million**
Projected total workers in 2021

66%
% of NET tech employment is in technology occupations

= 100,000 workers

Source: EMSI | U.S. Bureau of Labor Statistics | CompTIA
Some numeric changes affected by rounding
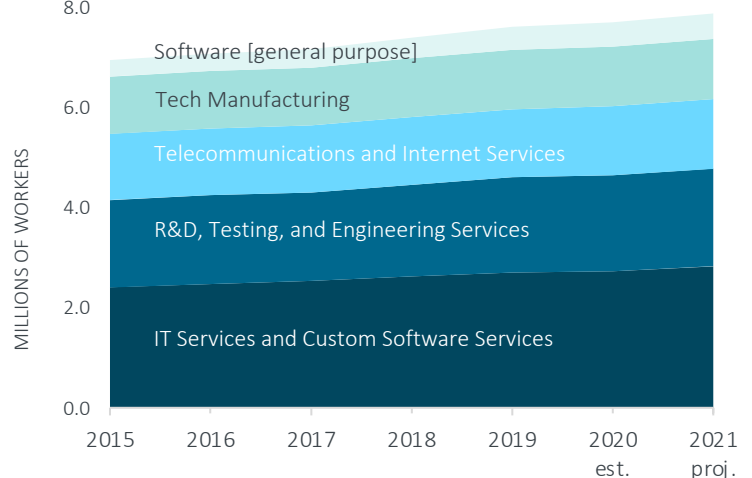
YEAR IN REVIEW

KEY POINTS

➞ The global pandemic devastated many sectors of the U.S. economy and labor market. During April 2020 alone, more than 20 million Americans lost their jobs leading to an unemployment rate approaching levels not seen since the Great Depression.

➞ The tech sector and the broader base of technology workers employed across the economy experienced several bumps during this turbulent period, but generally held up well. In some cases, demand for technology services and infrastructure to support new remote work models, ecommerce, or revamped supply chains exploded, stretching the capacity of solution providers and MSPs.

➞ These positives, however, were offset by reductions or postponements in spending and hiring of tech workers, especially in the hardest hit industry sectors of transportation, hospitality, entertainment and related.

➞ Additionally, several prominent tech and telecom companies had retail divisions where staffing cutbacks occurred in sales, marketing, or customer service, while core technology positions were preserved. Lastly, the IT services segment of the industry is dominated by small businesses serving primarily other small businesses, tends to be more vulnerable to economic shocks.

➞ Net tech employment in the United States – as described on the previous page, reached an estimated 12,159,552 workers in 2020, essentially flat year-over-year. Of that number, just 11,916 were net new workers, representing just +0.1% growth.

➞ At the time of writing, tech employment was off to a strong start during the first two months of 2021. If the momentum continues and the U.S. economy returns to a degree of normalcy, net tech employment could reach its projected target of 245,514 net new workers added or +2.0% growth.

➞ Among the components of net tech employment, the tech sector side of the equation experienced estimated growth of +1.0%, while the occupation side across all industry sectors experienced a modest loss of -0.3%. Looking ahead, the segment encompassing tech occupations employed in the tech sector is projected to expand hiring the fastest.

➞ The occupation side of the equation within the tech sector itself (tech professionals working for a tech company) is projected to contribute most to growth in the year ahead at +2.9%, with the other two components contributing in the +1.4% to +1.9% range.

➞ Top projected growth occupations for 2021:
  +4.4% Cybersecurity
  +4.4% Data Scientists
  +3.7% Software Developers and Software QA
  +2.6% Web Developers and Digital Interface Designers
  +2.4% CIOs and IT Managers
  +2.2% Database Administrators and Architects
  +2.2% IT User Support Specialists

NET TECH EMPLOYMENT TRENDING

+11,916
+0.1%

+245,514
+2.0%

MILLIONS OF WORKERS

2015 2016 2017 2018 2019 2020 est. 2021 proj.

TECH INDUSTRY EMPLOYMENT TRENDING

MILLIONS OF WORKERS

Software [general purpose]

Tech Manufacturing

Telecommunications and Internet Services

R&D, Testing, and Engineering Services

IT Services and Custom Software Services

2015 2016 2017 2018 2019 2020 est. 2021 proj.

TECH OCCUPATION EMPLOYMENT TRENDING

■ Core Information Technology (IT) Occupations
■ Engineering, Technician, Repair, Install Occupations

MILLIONS OF WORKERS

2015 2016 2017 2018 2019 2020 est. 2021 proj.
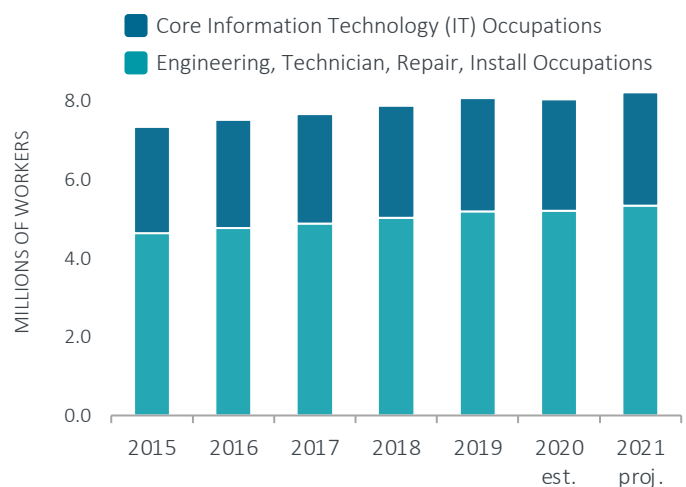
Source: EMSI | U.S. Bureau of Labor Statistics | CompTIA

INDEX OF 2020 MONTHLY EMPLOYMENT CHANGES ACROSS INDUSTRY SECTORS

Note: chart intended to show relative positioning of the tech industry to other sectors

Finance and insurance
Tech
Retail
Constuction
Healthcare
Legal Services
Real Estate
Auto Manufacturing
Education
Food and Drinking Places
Air Transportation
Arts and Entertainment
Accommodation and Hotels

Severe industry sector job losses

→ In the hardest hit industry sectors, such as Food and Drinking Places or Hotels, employment contracted severely and has still not recovered. Total U.S. employment remains nearly 10 million workers short of pre-pandemic levels.

→ Despite a few bumps, tech industry employment held up reasonably well.

TOTAL PROJECTED EMPLOYMENT GAINS IN 2021 ACROSS INDUSTRY SECTORS

Note: the Tech Industry spans multiple sectors so there will be a degree of double-counting | graph intended for comparison purposes

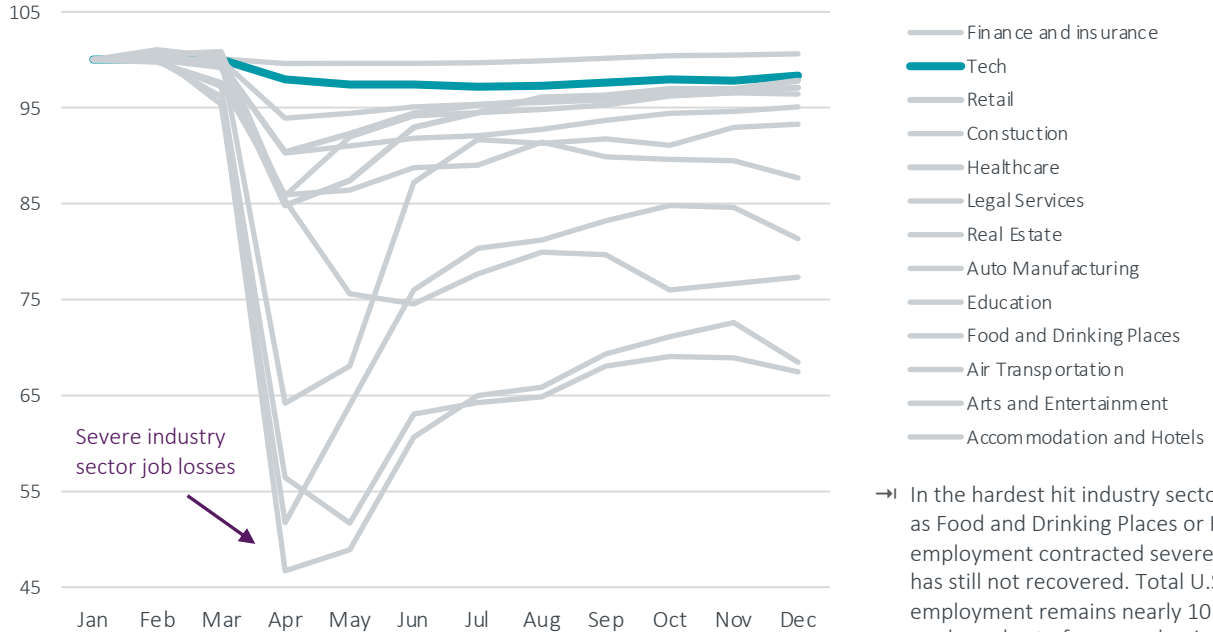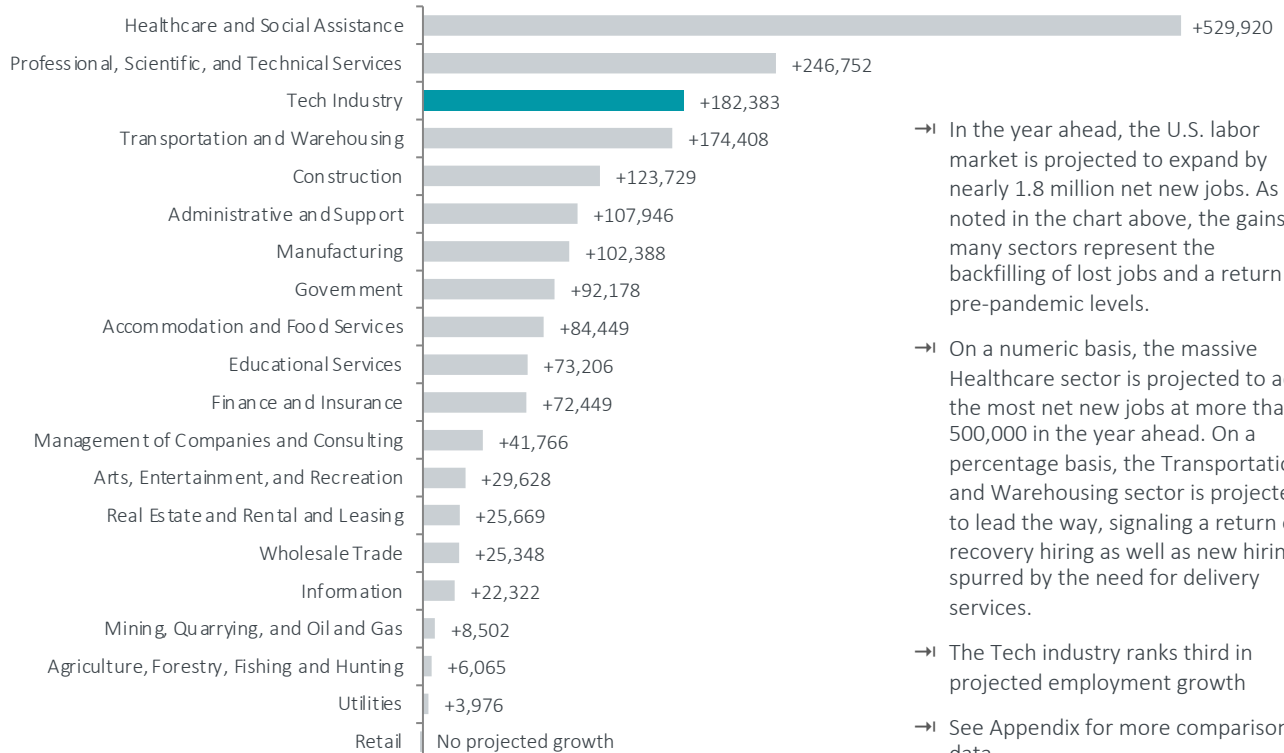| Sector	Gains
Healthcare and Social Assistance	+529,920
Professional, Scientific, and Technical Services	+246,752
Tech Industry	+182,383
Transportation and Warehousing	+174,408
Construction	+123,729
Administrative and Support	+107,946
Manufacturing	+102,388
Government	+92,178
Accommodation and Food Services	+84,449
Educational Services	+73,206
Finance and Insurance	+72,449
Management of Companies and Consulting	+41,766
Arts, Entertainment, and Recreation	+29,628
Real Estate and Rental and Leasing	+25,669
Wholesale Trade	+25,348
Information	+22,322
Mining, Quarrying, and Oil and Gas	+8,502
Agriculture, Forestry, Fishing and Hunting	+6,065
Utilities	+3,976
Retail	No projected growth

→ In the year ahead, the U.S. labor market is projected to expand by nearly 1.8 million net new jobs. As noted in the chart above, the gains in many sectors represent the backfilling of lost jobs and a return to pre-pandemic levels.

→ On a numeric basis, the massive Healthcare sector is projected to add the most net new jobs at more than 500,000 in the year ahead. On a percentage basis, the Transportation and Warehousing sector is projected to lead the way, signaling a return of recovery hiring as well as new hiring spurred by the need for delivery services.

→ The Tech industry ranks third in projected employment growth

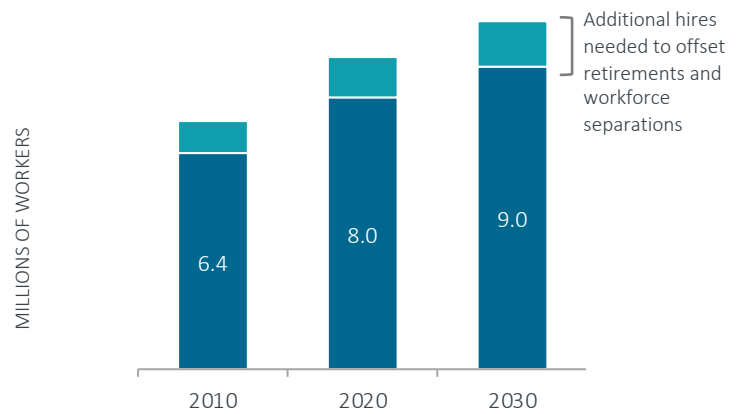→ See Appendix for more comparison data.

THE DECADE AHEAD

KEY POINTS

→ By 2030, projections from the U.S. Bureau of Labor Statistics and EMSI put the base of tech occupation employment at approximately 9.0 million (note: this covers occupations only and represents a subset of the net tech employment figure presented previously).

→ Calculating future workforce needs over the next decade is a function of several variables. First, there is a growth component, which may entail organizations adding headcount due to expansion or possibly to support new emerging technologies. Secondly, there is a retirement factor, with a portion of the workforce transitioning away from the workforce permanently. And lastly, there is a segment leaving the workforce for some other reason, also referred to as separations. These may stem from a career change, a return to school, family pursuits, or other. Changes to any of these variables can boost or shrink future workforce projections.

→ The average replacement rate for tech occupations during 2020-2030 is expected to average about 7 percent annually, or nearly 580,000 workers each year, totaling several million through 2030. This is in addition to the workers needed due to growth.

→ Tech occupation employment is expected to grow at about twice the rate of overall employment across the economy. Many tech occupations will grow at 4x to 5x the national rate. See Appendix for detailed 2020-2030 comparisons.

> → Cybersecurity, +31%
> → Data Scientists, +30%
> → Software Developers, +23%
> → Web Developers, +15%
> → CIOs and IT Managers, +14%
> → Database Admins and Architects, +13%
> → IT Support Specialists, +13%
> → Systems Analysts and Engineers, +12%

→ Job posting data provides another layer of insight into the tech job market outlook. Because government labor taxonomies – Standard Occupation Codes (SOCs), lag the speed with which the market changes, job posting data provides a more up-to-date look at the skills and experiences employers seek.

→ Overall quarterly tech job postings among U.S. employers dipped during 2020 due to the pandemic slowdown. Postings rebounded in Q1 2021 with employers playing catch-up with pent-up demand. Note: job postings should not be interpreted as unfilled jobs and there is not a 1:1 relationship between postings and actual hires made.

→ Demand for emerging tech skills and experiences continue to grow as employers across industries pursue digital transformation strategies. Over the past five years, posting volume surged 190 percent, as employers sought skills and expanded job roles in areas such as emerging infrastructure, emerging hardware, artificial intelligence, data, and next-gen cybersecurity.

Source: EMSI | U.S. Bureau of Labor Statistics | Burning Glass Labor Insights | CompTIA

TECH OCCUPATION EMPLOYMENT OUTLOOK
Workforce need = annual replacement rate + growth rate

Additional hires needed to offset retirements and workforce separations

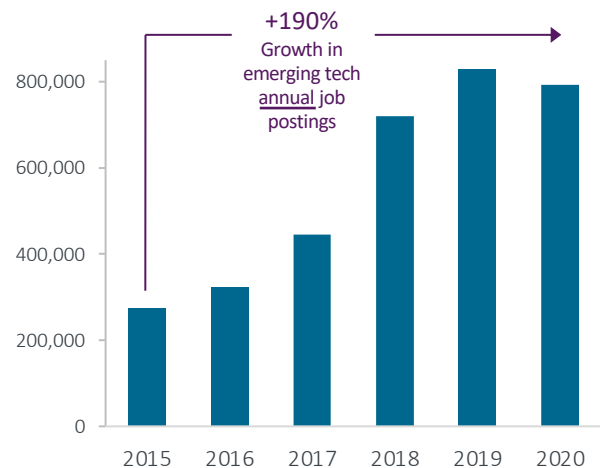MILLIONS OF WORKERS

6.4 — 2010
8.0 — 2020
9.0 — 2030

AGGREGATE QUARTERLY JOB POSTINGS FOR TECH OCCUPATIONS
Job postings by U.S. employers

EMERGING TECH DEMAND RAMPS UP
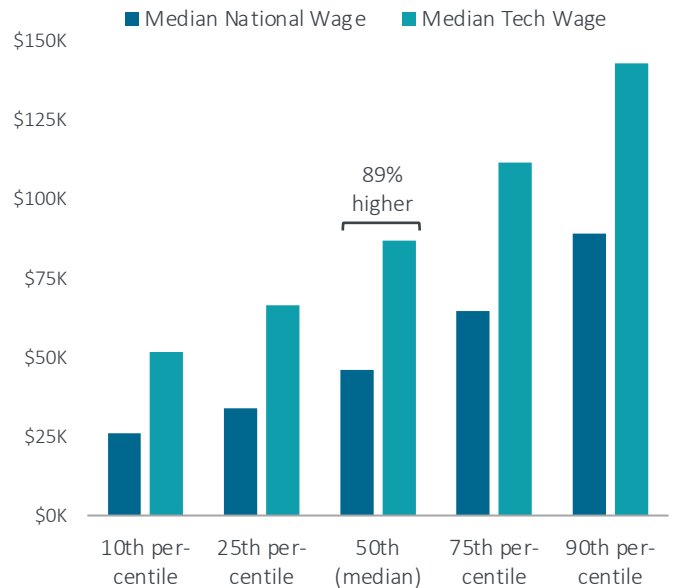Annual emerging tech job postings by U.S. employers

+190%
Growth in emerging tech annual job postings

THE MANY FACETS OF WAGE DATA

KEY POINTS

→ There are many nuances to the tech wage discussion. At the industry level – meaning the universe of technology companies in the sector, wages encompass all staff positions, from the CEO down to entry-level helpdesk workers. Both technical and non-technical positions factor into the industry wage calculation. Because of the diversity of positions covered, interpreting summary industry wage data requires accounting for these factors. In comparison, tech occupation wages cover only technical positions. This is the primary focus of the wage data of this report.

→ Cost of living differences mean the wages in one location are not directly comparable to another. For example, the buying power of a salary in San Francisco will not go nearly as far as in Des Moines. According to the National Association of Realtors, the median price for a home in Silicon Valley exceeds $1.1 million. See CompTIA's Tech Town Index for guidance on tech wages relative to cost of living or See CompTIA IT Salary Calculator for detailed wage data across 400+ metro areas.

→ Beyond location, the other important variables to consider when reviewing wage data are job role, areas of expertise, job experience, industry sector, and company size. A skilled employee in a hot field such as artificial intelligence, working for a Fortune 500 company, will earn on average far more than a tech worker in an established field, working for a small business in a rural area.

→ Percentiles help provide insight into wage ranges. This approach minimizes the impact of outlier data points, such as workers receiving massive stock payouts. It is also useful in depicting wages along common career paths, with workers just starting out earning wages at the 10th percentile, and then with experience and additional training and certification, moving up through the higher wage levels.

→ Across all tech occupation categories covered by Cyberstates, the median wage, also referred to as the 50th percentile or midpoint, was an estimated $86,852 in 2019, the most recent year of available data. This figure is nearly double the median wage across all occupations of the U.S. labor force.

→ The scatterplot graph to the right illustrates the degree to which wages will differ across states. The data presents wages for software developers and IT support specialists across percentiles. Tenth and 25th percentiles often correspond to early-stage career positions (e.g. 0-4 years of experience), while 75th and 90th percentiles cover higher-end experience and expertise.

→ When drilling down to the metro area level, wage differences may become even more pronounced. Top tier wages in locations such as San Jose or New York City may run into hundreds of thousands, if not more when factoring in bonuses or stock options.

MEDIAN ANNUAL OCCUPATIONAL WAGE COMPARISON

■ Median National Wage ■ Median Tech Wage

89% higher

TECH WAGES CAN VARY SIGNIFICANTLY BASED ON OCCUPATION, LOCATION, AND PERCENTILE

California software developer at 90th percentile →

New Jersey IT support specialist at 90th percentile →

New Mexico IT support specialist at 25th percentile →

TECH WAGE PERCENTILES

○ 10th percentile   ● 75th percentile
○ 25th percentile   ● 90th percentile

Source: EMSI | U.S. Bureau of Labor Statistics | CompTIA

LABOR FORCE CHARACTERISTICS OVERVIEW

➞ The U.S. Bureau of Labor Statistics (BLS) tracks labor market composition across several demographic and firmographic characteristics. By race and ethnicity, the BLS segments data by seven top-level categorizations. Described in detail here:

- American Indian and Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian and Other Pacific Islander
- Two or More Races
- White

➞ Additional population segmentations are available from the Census Bureau, but for the purposes of analyzing labor market compositions of specific occupation categories, the seven categories above are the extent of data availability.

DIVERSITY INDEX

➞ There are several approaches to assessing labor force characteristics. Numeric totals and relative percentages are good starting points. Taking it a step further, however, provides deeper insights and more context.

➞ To measure overall race and ethnicity characteristics within the tech workforce, this report uses a metric called *Simpson's Diversity Index*. This index weights two key facets of race and ethnicity within the workforce – richness and evenness (or think of it as depth and breadth) and reflects it in a single metric.

➞ The overall U.S. workforce Diversity Index measure in 2020 was 56 on a 100-point scale. In comparison the overall U.S. population has a Diversity Index score of 58, which indicates there is a degree of race and ethnic underrepresentation in the U.S. workforce.

➞ The U.S. tech workforce (specifically, workers in core information technology across 16 occupation categories) recorded a Diversity Index measure of 57, roughly on par with the overall U.S. workforce. The District of Columbia recorded the highest tech workforce Diversity Index score at 66, followed by Texas, California, and Georgia. In contrast, the states at the other end of the continuum had tech workforce Diversity Index scores below 20.

TECH WORKFORCE REPRESENTATION

➞ As the name implies, tech workforce representation measures the composition of the tech workforce relative to the overall composition across all occupations.

➞ Nationally, Black or African American workers represent 13% of the U.S. workforce and 8% of tech occupations. This gap signals underrepresentation in the tech workforce. Examples of states with high levels of tech workforce representation numerically and in relation to the overall workforce composition include District of Columbia, Mississippi, Georgia, and Maryland.

➞ Nationally, Hispanic or Latino workers represent 16% of the U.S. workforce and 7% of tech occupations. This gap signals underrepresentation in the tech workforce. Examples of states with high levels of tech workforce representation numerically and in relation to the overall workforce composition include New Mexico, Florida, Texas, and Arizona.

➞ Nationally, women represent approximately 49% of the U.S. workforce and 26% of tech occupations. This gap signals underrepresentation in the tech workforce. Examples of states with high levels of tech workforce representation in relation to the overall workforce composition include South Carolina, Maine, Wisconsin, and Louisiana.

TECH WORKFORCE CHARACTERISTICS[2]

U.S. tech occupation representation

Black or African American	Hispanic or Latino	Women
8%	7%	26%
13%	16%	49%
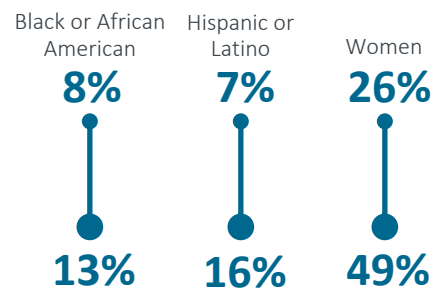
vs. representation across all U.S. occupations

EXAMPLES OF TECH JOB REPRESENTATION VS. ALL JOBS IN STATE REPRESENTATION[2]

BLACK OR AFRICAN AMERICAN REPRESENTATION

	Tech Jobs	All Jobs
District of Columbia	29%	34%
Mississippi	25%	38%
Georgia	23%	32%
Maryland	20%	27%

HISPANIC OR LATINO REPRESENTATON

	Tech Jobs	All Jobs
New Mexico	31%	45%
Florida	16%	25%
Texas	16%	34%
Arizona	15%	30%

WOMEN REPRESENTATION

	Tech Jobs	All Jobs
South Carolina	29%	50%
Maine	29%	50%
Wisconsin	28%	49%
Louisiana	28%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

Source: EMSI | U.S. Bureau of Labor Statistics | CompTIA

U.S. NET TECH EMPLOYMENT

➜❙ U.S. net tech employment totaled an estimated 12.2 million in 2020, essentially flat when compared to the previous year. Net tech employment is projected to grow at an estimated 2.0 percent year-over-year reaching 12.4 million in 2021.

➜❙ Net tech employment accounted for approximately 7.9 percent of the overall U.S. workforce in 2020. As noted previously, because of the blurring of lines across industries, there is a degree of undercounting in tech sector employment.

U.S. TECH INDUSTRY EMPLOYMENT

➜❙ U.S. tech industry employment totaled an estimated 7.7 million in 2020, an increase of 79,540 workers from 7.6 million in 2019. Tech industry employment is projected to grow at an estimated 2.4 percent year-over-year reaching 7.8 million in 2021. As noted, tech industry employment is a subset of net tech employment.

➜❙ Tech manufacturing employment totaled an estimated 1.2 million in 2020 and is projected to grow by 10,602 jobs in 2021.

➜❙ Among the seven major tech manufacturing subsectors – the OEMs and companies producing computing hardware, peripherals, semiconductors, etc., two are projected to experience employment losses, while the remaining categories are projected to experience job gains.

➜❙ Employment in the telecommunications and Internet services sector totaled an estimated 1.4 million in 2020, projected to go up by 11,391 jobs in 2021. These employment gains are driven by growth in the data processing, hosting, and search portal services categories, where employment should increase by 29,157 jobs. Wired and wireless telecommunications services are projected to lose 18,882 jobs for the same time period.

➜❙ The software category, consisting of general purpose software that is not custom developed, also known as published or packaged software products (including SaaS), employed an estimated 483,966 workers in 2020, and is projected to add more than 25,000 net new jobs. On a percent change basis, software will lead the tech sector with a 5.3 percent projected year-over-year growth rate.

➜❙ The IT services and custom software services subsector will generate the largest numerical gain in employment, adding more than 102,000 net-new jobs in 2021. This gain of 3.8 percent will increase the employment base to 2.8 million. This growth reflects the ongoing digital transformations occurring across the economy and the corresponding need for expertise in areas such as cloud computing migration, application integration, process automation, data analytics, and cybersecurity.

U.S. TECH OCCUPATION EMPLOYMENT

➜❙ Tech occupation jobs reached an estimated 8.0 million workers in 2020 and is projected to increase 166,879 jobs in 2021 . On a percent change basis, the rate is on par with the annual growth rates experienced over the past several years.

➜❙ Since 2015, nearly 870,000 new tech occupation jobs were added, a function of the demand for tech talent across every industry sector in the economy.

➜❙ The IT occupations segment of tech occupations accounts for 65 percent of the total. IT occupations is projected to add over 130,000 net-new jobs in 2021, a year-over-year growth rate of 2.5 percent. On a numeric basis, software developers, systems analysts and cybersecurity analysts, network architects, and IT support specialists recorded the largest gains in employment. The U.S. Bureau of Labor Statistics does not yet break out many emerging tech roles, other data sources indicate these new specialties are starting to make meaningful contributions to the growth of the tech workforce.

U.S. NET TECH EMPLOYMENT

	2020 est.	2021 proj.	Numeric Change
Tech employment net of industry, occupation, and self-employed	12.2m	12.4m	+254,514
Total	12.2m	12.4m	+254,514

U.S. TECH INDUSTRY EMPLOYMENT

	2020 est.	2021 proj.	Numeric Change
Tech Manufacturing	1.2m	1.2m	+10,602
Telecommunications and Internet Services	1.4m	1.4m	+11,391
Software [packaged]	0.5m	0.5m	+25,720
IT Services & Custom Software services	2.7m	2.8m	+102,662
Engineering Services, R&D, and Testing	1.9m	2.0m	+32,007
Total	7.7m	7.8m	+182,383

U.S. TECH OCCUPATION EMPLOYMENT

	2020 est.	2021 proj.	Numeric Change
IT Occupations	5.2m	5.3m	+131,878
Engineering and Technician Occupations	2.8m	2.9m	+35,001
Total	8.0m	8.2m	+166,879

TOP TECH OCCUPATION KEY CATEGORIES

	2021 proj.	% Change
Software, Programmers, Web and QA	1,939,788	+3.3%
Cybersecurity and Systems Analysts and Engineers	757,509	+2.5%
Network Admins., Architects and Support	701,794	+1.7%
IT Support Specialists	672,908	+2.2%
Database, Data Scientists and Computer Scientists	197,598	+2.7%

Source: EMSI | U.S. Bureau of Labor Statistics | CompTIA
Some numeric changes affected by rounding

STATE NET TECH EMPLOYMENT

→ Twenty-two states experienced job gains in net tech employment from 2019 to 2020. Forty-nine states are projected to generate positive tech employment job growth in 2020. While the largest job gains are associated with the states with a significant tech presence, the fact that most states experienced tech employment job gains speaks to the broad-based impact of technology across the nation.

→ On an industry sector basis, the software services sector has been the growth engine for the greatest number of states over the past year. Year-over-year distribution of counts of top categories by state:

- → Software: 43 states
- → R&D, Testing, and engineering services: 42 states
- → IT services/custom software services: 38 states
- → Telecommunications: 24 states
- → Tech manufacturing: 17 states

→ The metrics used to provide context and insight into the data tend to be based on absolute size or are relative, which may involve percent change or account for factors such as population or economic size differences. Absolute measures tend to be highly correlated with the size of the state or metro area. For example, California is the largest state in the nation by a wide margin. Its population is 40 percent larger and its economy is 54 percent larger than second place Texas. California's economy is equal to the combined total of the bottom 25 states. Unsurprisingly, California is the leader in many Cyberstates categories.

→ California's net tech employment was an estimated 1,882,167 workers in 2020, a gain of 8,680 net new jobs year-over-year. Other states that experienced notable tech employment gains include Texas, Washington, Colorado, Florida, and Virginia.

→ On a percent change basis, the top five states for job growth in 2020 were Utah (+1.5 percent), Washington (+1.3 percent), New Mexico (+1.3 percent), District of Columbia (+1.2 percent), and Colorado (+1.2 percent).

→ Employment concentration is a relative metric that compares tech employment to the overall base of employment within a state. Sixteen states are at or higher than the national average of 7.9 percent.

→ Massachusetts has the highest concentration (12.1 percent) of tech workers relative to its overall employment base, which means citizens of the state are more likely to hold a tech job relative to other industry sectors. Top ten states for net tech employment concentration:

- → Massachusetts: 12.1%
- → Washington: 11.2%
- → Virginia: 11.1%
- → Colorado: 10.8%
- → District of Columbia: 10.8%
- → Maryland: 10.7%
- → New Hampshire: 10.3%
- → California: 10.0%
- → Utah: 9.6%
- → Michigan: 8.8%

→ Conversely, the states with the lowest concentration of tech workers are: Wyoming, Mississippi, Louisiana, West Virginia, and Arkansas. Because these states are starting with a relatively low base, modest increases in tech employment can translate to large percentage change gains.

TOP CYBERSTATES BY NET TECH EMPLOYMENT

1.	California	1,882,167
2.	Texas	1,060,588
3.	New York	670,806
4.	Florida	595,156
5.	Virginia	451,268
6.	Massachusetts	450,548
7.	Illinois	442,076
8.	Pennsylvania	441,162
9.	Washington	405,816
10.	Ohio	391,539

TOP CYBERSTATES BY NET TECH EMPLOYMENT JOB GAINS

1.	Texas	+11,862
2.	California	+8,680
3.	Washington	+5,222
4.	Colorado	+3,767
5.	Florida	+3,623
6.	Virginia	+3,032
7.	North Carolina	+2,609
8.	Arizona	+2,547
9.	Massachusetts	+2,456
10.	Utah	+2,275

TOP CYBERSTATES BY PROJECTED PERCENT CHANGE IN TECH OCCUPATION GROWTH 2020-2030

1.	Utah	27%
2.	Nevada	24%
3.	Florida	18%
4.	Idaho	18%
5.	Arizona	18%
6.	Texas	17%
7.	South Carolina	17%
8.	Georgia	15%
9.	Montana	15%
10.	Maryland	14%

STATE INNOVATION

→ According to data from the Pitchbook-National Venture Capital Association (NVCA) Venture Monitor, venture capital investments flowing to the software category increased 39 percent in 2020 year-over-year, pushing the category total to $23.0 billion. The IT hardware category increased 28 percent to $2.8 billion. Many VC investments in other categories, such as media, healthcare, or commercial services, are in startups that often have a strong technology and data component, so the figures tend to understate the true impact of tech.

→ The top five states garnered an estimated 80 percent of venture capital investment in 2020, up slightly from 78 percent in the prior year. It is important to remember that venture capital is only one source of financing for startups and/or expanding firms. Self-funding, traditional bank loans, SBA loans, low-dollar equity placements, and crowdfunding may all come into play.

→ On a percent change basis, tech startups and new tech business formations were down in 2020 compared to 2019, according to data from D&B Hoovers. Across the economy, startups as a share of all businesses have been in slow decline since the late 1970s, a trend that is concerning and not easily explained.

→ Job postings among U.S. employers for emerging tech roles declined 4 percent in 2020 compared to the previous year, according to data from Burning Glass Technologies Labor Insights.

STATE TECH BUSINESS ESTABLISHMENTS

→ Fifty states added to their base of tech business establishments. On a numeric basis, California had the largest year-over-year increase of net-new tech business establishments (+1,744). Rounding out the top five for net-new tech business establishments were Texas, Florida, New York, and North Carolina.

STATE TECH ECONOMIC IMPACT

→ Economic impact is an assessment of output – the dollar value of goods and services produced during a given year (also referred to as gross domestic or regional product). As a percentage of the overall U.S. economy, the tech industry accounts for about 10.5 percent of direct economic value, which translates to over $2.0 trillion.

→ In addition to the direct economic impact, there are downstream, indirect benefits of the technology industry. One way to assess this impact is the use of job multiplier metrics, also referred to as input-output modeling. For example, the IT services and custom software development services category has an estimated jobs multiplier of 4.8. For every one job in this tech subsector, an estimated 4.8 additional jobs are created or supported through direct, indirect, or induced means.

STATE EMPLOYER JOB POSTINGS

→ The top states for IT job postings in 2020 are California, Texas, and Virginia. States that saw the best improvement year-over-year were Idaho, Rhode Island, New Hampshire, Arizona, and Utah.

→ Top states for emerging tech job postings in 2020 were California (147,260), Texas (73,545), Virginia (47,793), New York (43,114), and Massachusetts (38,253). States that saw the largest increase in emerging tech positions in 2020 when compared to the previous year were Washington (+3,914), Massachusetts (+3,635), and Arizona (+3,166).

→ Emerging tech job postings as a percentage of total IT job postings are highest in Massachusetts (29.4% of IT job postings are emerging tech), Washington (28.1%), Delaware (26.9%), California (23.7%), and New York (22.6%).

TOP CYBERSTATES BY INNOVATION[1] RANK

1. California
2. New York
3. Texas
4. Florida
5. Georgia

TOP CYBERSTATES BY NUMBER OF TECH BUSINESS ESTABLISHMENTS

1.	California	68,837
2.	Texas	44,727
3.	Florida	36,344
4.	New York	27,478
5.	Virginia	23,233

TOP CYBERSTATES BY TECH ECONOMIC IMPACT AS PERCENT OF STATE ECONOMY

1.	Washington	23%
2.	California	19%
3.	Massachusetts	18%
4.	Colorado	15%
5.	New Hampshire	14%

TOP CYBERSTATES BY EMPLOYER JOB POSTINGS FOR TECH OPENINGS

1.	California	622,255
2.	Texas	363,642
3.	Virginia	211,856
4.	New York	190,720
5.	Florida	170,796

Source: EMSI | U.S. Bureau of Labor Statistics | U.S. Bureau of Economic Analysis | U.S. Patent & Trademark Office | D&B Hoovers | Pitchbook-National Venture Capital Association

[1]CompTIA metric based on VC investment funding and the volume of tech startup activity

METRO AREA NET TECH EMPLOYMENT

→ The top ten metropolitan areas employ a little more than 4 million tech industry and tech occupation workers, or about 1 in 3 tech workers in the nation.

→ New York City is the largest metropolitan area in the country by a wide margin. It follows that it also has the largest base of tech employment.

→ Silicon Valley continues to be a critically important hub for innovation. Between San Francisco and San Jose, nearly 12,000 net tech employment jobs were added over the past year. The discussion doesn't end there, however, as technology increasingly has a significant presence across the nation. Cities such as Boston, Seattle, New York, Dallas, Atlanta, Los Angeles, Denver and more, boast sizable tech workforces and notable job gain rates. This includes the sometimes "under the radar" tech cities of Austin, Raleigh, Charlotte, Phoenix, Detroit, Orlando, and more.

→ As noted throughout this report, there are many nuances to assessing the tech landscape and a single figure rarely tells the whole story. For example, metro areas that may appear to be lagging based on overall tech job gains, typically also have pockets of growth. In the case of Detroit, which had a decline in tech employment, the telecommunications category increased by 2 percent. Job growth is also relative, where tech industry employment gains outperformed many other sectors in the local economy, including health care services, retail, and construction.

METRO AREA EMPLOYMENT CONCENTRATION

→ Employment concentration provides a measure of tech employment relative to employment across all the other industry sectors in a local economy. Along with economic impact as a percentage of a local economy, these metrics help to put tech into context.

→ At 34 percent, San Jose has the highest concentration of net tech employment as a percentage of its overall employment base. Similarly, San Jose is an outlier in the economic impact of tech to the local economy at nearly 60 percent, about twice the rate as the next highest metro area.

→ Compared to the national tech employment concentration benchmark of 7.9 percent, 28 metro areas had a higher rate, confirming the importance of technology to a far-reaching set of cities across the country.

METRO AREA TECH BUSINESS ESTABLISHMENTS

→ A large, dynamic base of business establishments, also referred to as company locations, is another measure of a healthy tech sector. The New York City metro area is home to 25,300 tech business establishments. Other top cities are Washington DC, Los Angeles, Sam Francisco, and Dallas.

→ The vast majority of tech business establishments are categorized as small businesses under the Small Business Administration's definition of up to 500 employees.

→ Outside of the top five, the next largest metropolitan areas for the number of tech sector business establishments include Boston, Chicago, Atlanta, Seattle, Denver, and Atlanta.

METRO AREA EMPLOYER JOB POSTINGS

→ Cities with the most IT job postings in 2020 were Washington DC, New York, Los Angeles, Dallas, and San Francisco. In terms of year-over-year change the top metros were Phoenix, Denver, Washington DC, Boston, and Baltimore.

→ Emerging tech job positions were highest in Washington DC (58,789). New York City (57,659), San Francisco (48,863), and San Jose (40,031) round out the top five cities for emerging tech job postings.

TOP CYBERMETROS BY NET TECH EMPLOYMENT

1.	New York City	680,527
2.	Los Angeles	512,500
3.	Washington DC	452,666
4.	San Francisco	426,286
5.	San Jose	398,839
6.	Boston	392,781
7.	Dallas	373,695
8.	Chicago	339,000
9.	Seattle	326,355
10.	Atlanta	272,869

TOP CYBERMETROS BY NET TECH EMPLOYMENT JOB GAINS

1.	San Francisco	+7,543
2.	Seattle	+4,695
3.	Dallas	+4,466
4.	San Jose	+4,269
5.	Austin	+3,364
6.	Boston	+2,882
7.	New York City	+2,860
8.	Denver	+2,532
9.	Phoenix	+2,367
10.	Washington DC	+2,002

TOP CYBERMETROS BY TECH ECONOMIC IMPACT AS A PERCENT OF LOCAL ECONOMY

1.	San Jose	60%
2.	Seattle	29%
3.	San Francisco	28%
4.	Huntsville	27%
5.	Austin	25%
6.	Raleigh	22%
7.	Boston	21%
8.	San Diego	17%
9.	Portland	16%
10.	Washington	16%

NATIONAL SNAPSHOT

United States
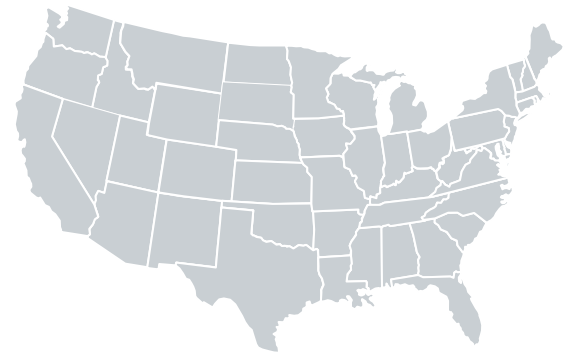
STATE OF TECHNOLOGY SUMMARY

12,159,552	NET TECH EMPLOYMENT[1]
7.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.0t	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.5%	ECONOMIC IMPACT AS A % OF OVERALL
585,325	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
3,944,703	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
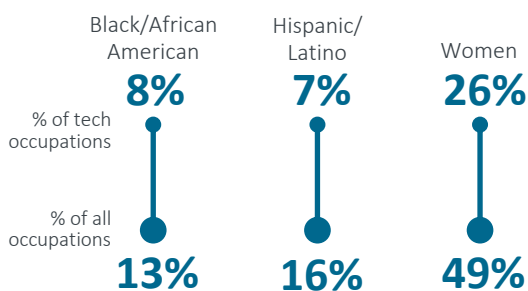
TECH INDUSTRY JOBS
7.7 million

TECH OCCUPATION JOBS
8.0 million

46% intersection =
12.2 million NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+11,916 jobs
+0.1%

Projected growth of +245,514 jobs and +2.0%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

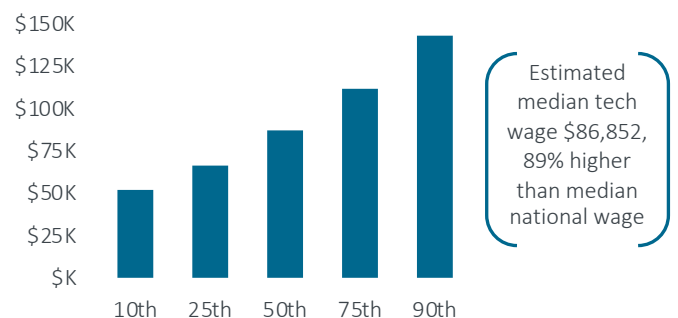|	2020	YoY % Change
Software, Programmers, Web and QA	1,878,203	+1.1%
Cybersecurity and Systems Analysts and Engineers	738,677	+0.2%
Network Administrators, Architects and Support	690,232	-0.8%
IT Support Specialists	658,513	-0.5%
Database, Data Scientists and Computer Scientists	192,339	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	2,723,424	+0.7%
R&D, Testing, and Engineering Services	1,922,921	+1.2%
Telecommunications and Internet Services	1,379,612	+0.9%
Tech Manufacturing	1,190,807	-0.1%
Software [packaged]	483,966	+5.5%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	7%	26%
% of all occupations	13%	16%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $86,852, 89% higher than median national wage

10th 25th 50th 75th 90th

STATE SNAPSHOTS

Alabama
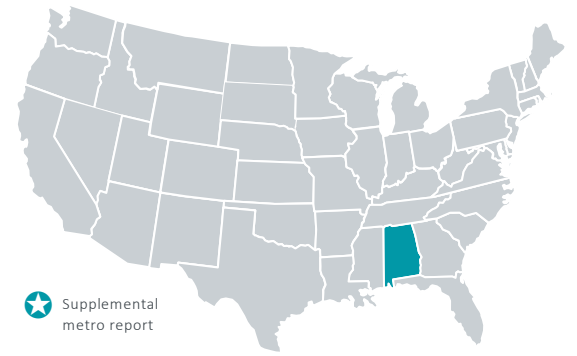
STATE OF TECHNOLOGY SUMMARY

148,657	NET TECH EMPLOYMENT[1]
7.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$14.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.1%	ECONOMIC IMPACT AS A % OF OVERALL
6,891	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
36,586	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
11.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

25th	NET TECH EMPLOYMENT RANK
27th	NET TECH EMPLOYMENT JOBS ADDED RANK
26th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = highest	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank across 7 categories using Simpson's Diversity Index measure | See Methodology.
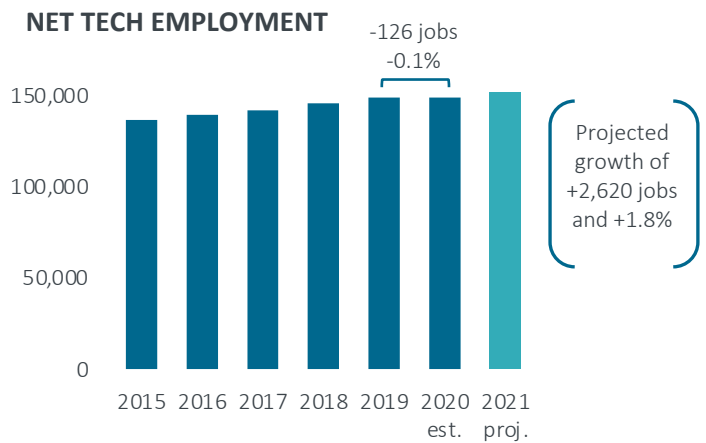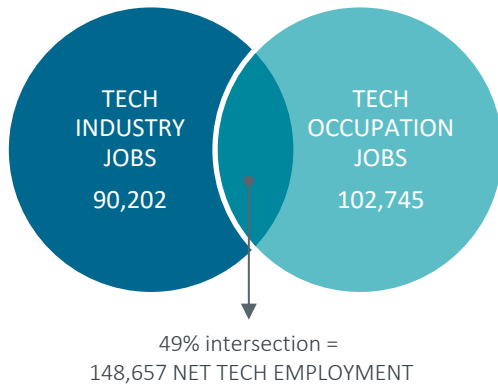
TECH INDUSTRY JOBS
90,202

TECH OCCUPATION JOBS
102,745

49% intersection =
148,657 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-126 jobs
-0.1%

150,000

100,000

50,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +2,620 jobs and +1.8%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	20,218	+0.8%
Network Administrators, Architects and Support	6,768	-0.6%
IT Support Specialists	6,512	-0.9%
Cybersecurity and Systems Analysts and Engineers	6,494	+1.2%
Database, Data Scientists and Computer Scientists	3,033	-0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

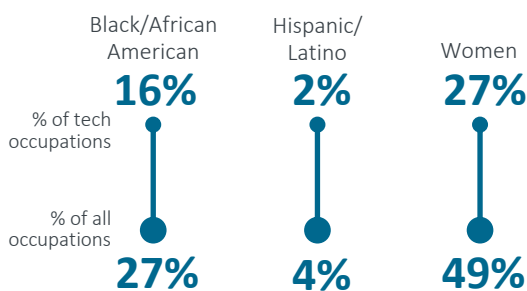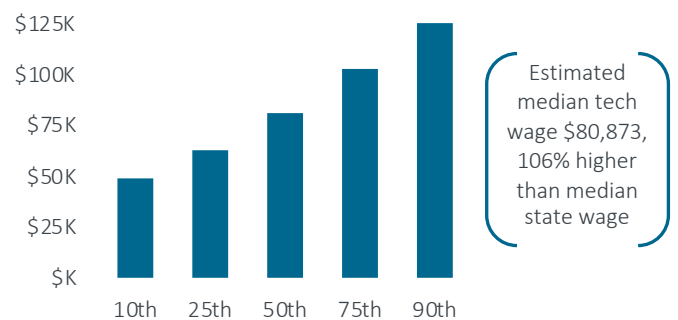|	2020	YoY % Change
R&D, Testing, and Engineering Services	33,228	+2.0%
IT Services and Custom Software Services	30,222	+0.9%
Tech Manufacturing	13,212	-1.7%
Telecommunications and Internet Services	10,959	-0.6%
Software [packaged]	2,582	-2.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	16%	2%	27%
% of all occupations	27%	4%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $80,873, 106% higher than median state wage

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Alaska
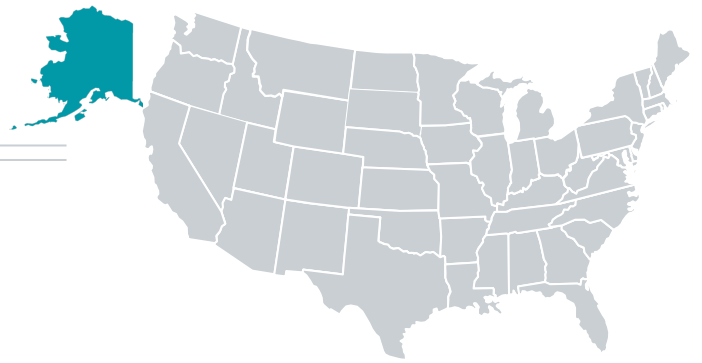
STATE OF TECHNOLOGY SUMMARY

17,914	NET TECH EMPLOYMENT[1]
5.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
4.4%	ECONOMIC IMPACT AS A % OF OVERALL
1,074	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
5,226	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
8.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

50th	NET TECH EMPLOYMENT RANK
32nd	NET TECH EMPLOYMENT JOBS ADDED RANK
50th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = highest	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 10,254

TECH OCCUPATION JOBS 11,755

40% intersection = 17,914 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-286 jobs
-1.6%

Projected growth of +130 jobs and +0.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Network Administrators, Architects and Support	1,345	-2.3%
Software, Programmers, Web and QA	1,324	+0.1%
Cybersecurity and Systems Analysts and Engineers	836	-0.2%
IT Support Specialists	766	-1.1%
Database, Data Scientists and Computer Scientists	308	-1.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	4,409	-2.8%
Telecommunications and Internet Services	3,697	-2.8%
IT Services and Custom Software Services	1,995	+3.0%
Tech Manufacturing	119	-1.0%
Software [packaged]	34	+6.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	4%	27%
% of all occupations	3%	7%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $84,451, 61% higher than median state wage
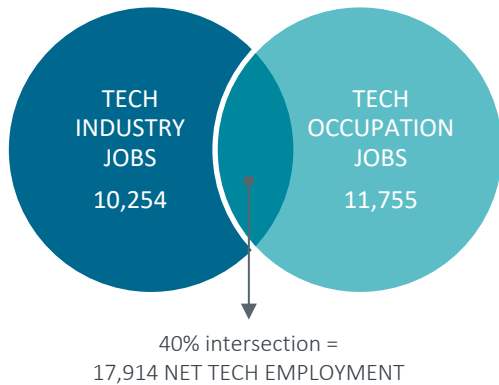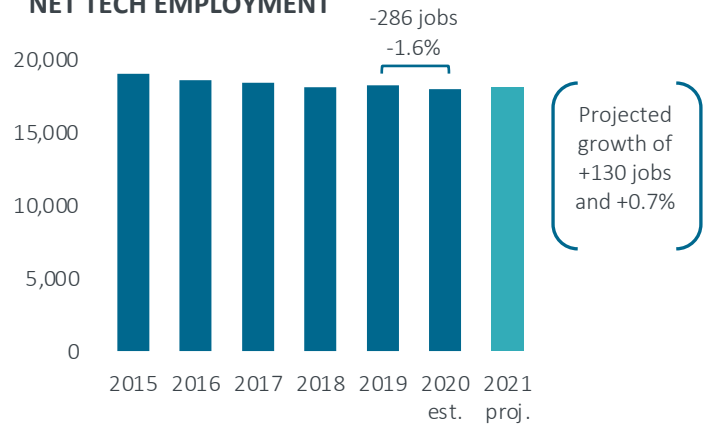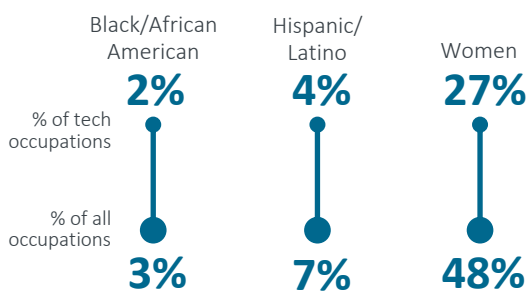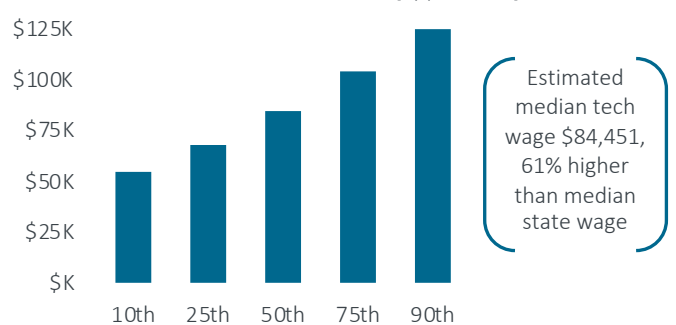
Arizona
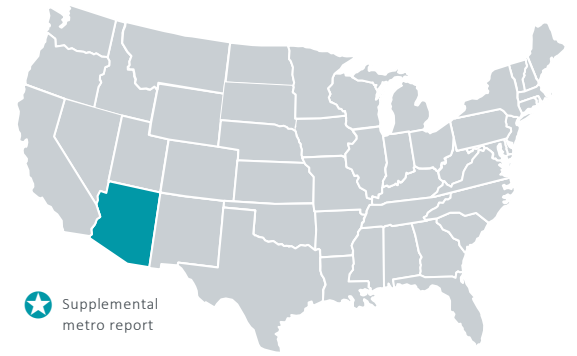
STATE OF TECHNOLOGY SUMMARY

255,998   NET TECH EMPLOYMENT[1]

8.2%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$34.1b   ECONOMIC IMPACT [estimated direct impact of tech sector]

10.2%   ECONOMIC IMPACT AS A % OF OVERALL

13,025   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

108,302   EMPLOYER JOB POSTINGS [2020 total for tech occupations]

19.1%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

17th   NET TECH EMPLOYMENT RANK

8th   NET TECH EMPLOYMENT JOBS ADDED RANK

17th   ECONOMIC IMPACT RANK

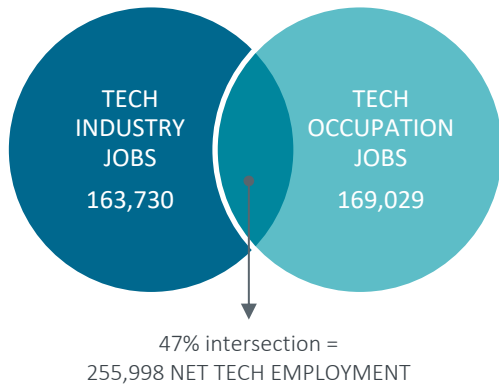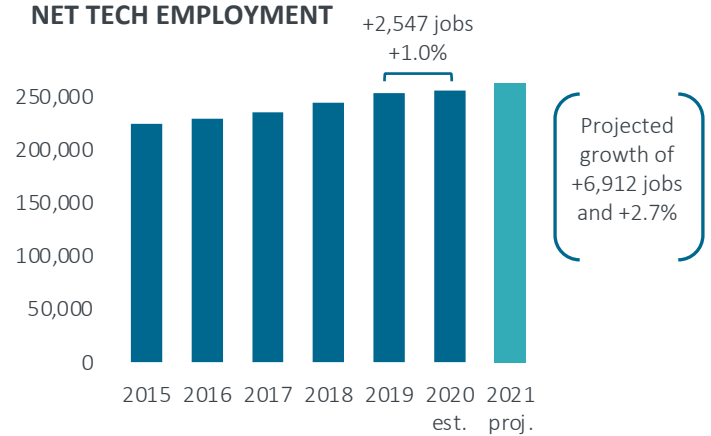2nd   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
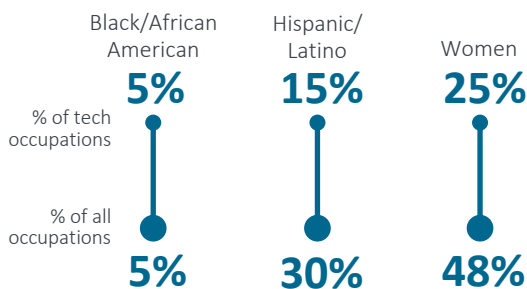

TECH INDUSTRY JOBS
163,730

TECH OCCUPATION JOBS
169,029

47% intersection =
255,998 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,547 jobs
+1.0%

Projected growth of +6,912 jobs and +2.7%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	38,318	+1.4%
IT Support Specialists	18,055	-0.3%
Cybersecurity and Systems Analysts and Engineers	15,983	+0.7%
Network Administrators, Architects and Support	15,196	-0.4%
Database, Data Scientists and Computer Scientists	3,607	+1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	50,684	+2.3%
IT Services and Custom Software Services	49,057	+0.7%
Telecommunications and Internet Services	30,067	-0.9%
R&D, Testing, and Engineering Services	27,319	+1.3%
Software [packaged]	6,604	+12.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	**5%**	**15%**	**25%**
% of all occupations	**5%**	**30%**	**48%**

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $82,313, 88% higher than median state wage
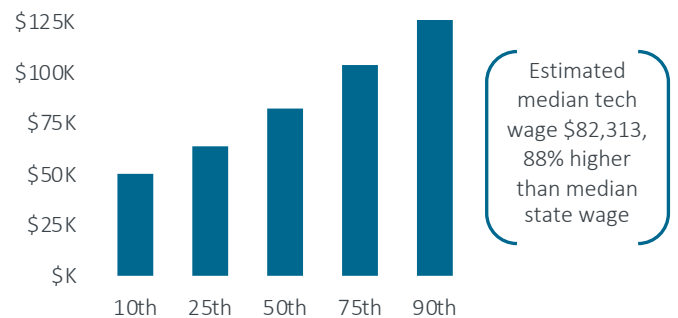
Arkansas
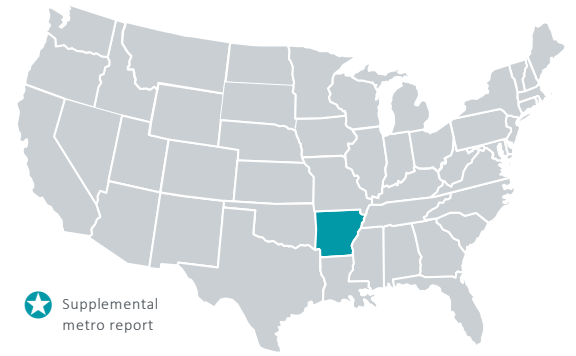
STATE OF TECHNOLOGY SUMMARY

56,329	NET TECH EMPLOYMENT[1]
4.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$4.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.8%	ECONOMIC IMPACT AS A % OF OVERALL
4,156	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
11,850	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

38th	NET TECH EMPLOYMENT RANK
18th	NET TECH EMPLOYMENT JOBS ADDED RANK
40th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 26,334

TECH OCCUPATION JOBS 42,456

47% intersection = 56,329 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+234 jobs +0.4%

Projected growth of +1,074 jobs and +1.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	8,263	+0.8%
Network Administrators, Architects and Support	4,484	-1.2%
Cybersecurity and Systems Analysts and Engineers	4,304	+0.1%
IT Support Specialists	3,395	-0.5%
Database, Data Scientists and Computer Scientists	663	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	11,698	-3.7%
Telecommunications and Internet Services	6,281	+16.2%
R&D, Testing, and Engineering Services	5,348	+1.6%
Tech Manufacturing	2,597	+1.4%
Software [packaged]	411	-8.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	9%	4%	26%
% of all occupations	15%	7%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $65,364, 78% higher than median state wage
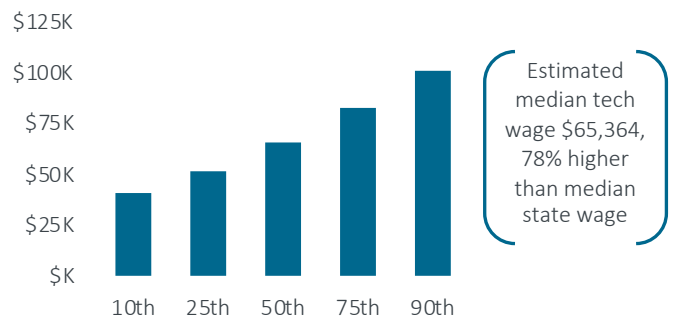
California
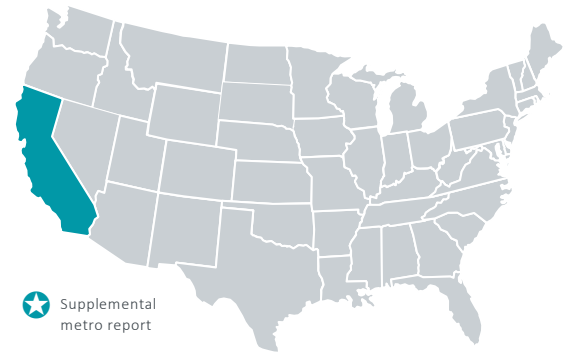
STATE OF TECHNOLOGY SUMMARY
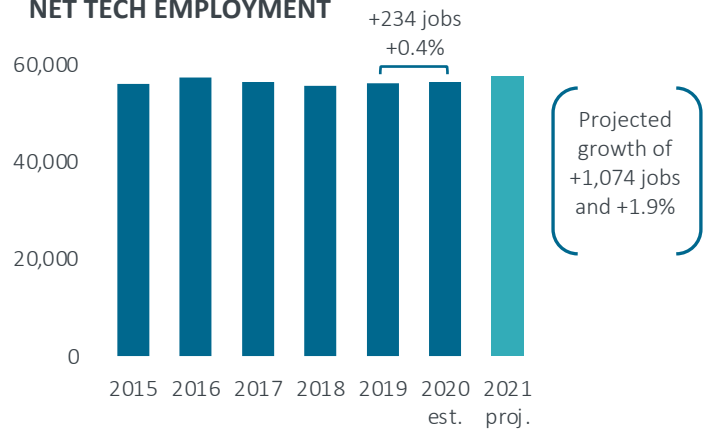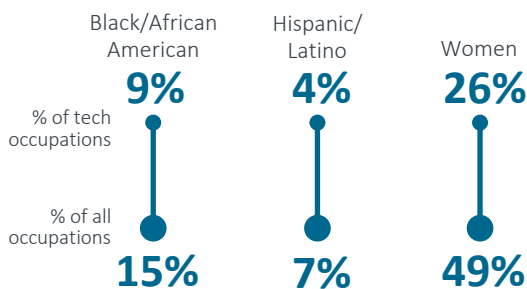
1,882,167	NET TECH EMPLOYMENT[1]
10.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$519.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
18.9%	ECONOMIC IMPACT AS A % OF OVERALL
68,837	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
622,255	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
23.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

1st	NET TECH EMPLOYMENT RANK
2nd	NET TECH EMPLOYMENT JOBS ADDED RANK
1st	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
1,379,883

TECH OCCUPATION JOBS
1,148,256

47% intersection =
1,882,167 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+8,680 jobs
+0.5%

Projected growth of +41,632 jobs and +2.2%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	317,790	+1.3%
IT Support Specialists	84,216	-0.3%
Cybersecurity and Systems Analysts and Engineers	77,778	+0.4%
Network Administrators, Architects and Support	70,248	-0.4%
Database, Data Scientists and Computer Scientists	26,559	+1.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	416,419	+0.2%
Tech Manufacturing	320,076	+0.4%
R&D, Testing, and Engineering Services	298,201	+1.7%
Telecommunications and Internet Services	243,812	+2.3%
Software [packaged]	101,375	+4.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	12%	25%
% of all occupations	6%	35%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $105,037, 98% higher than median state wage

CompTIA.
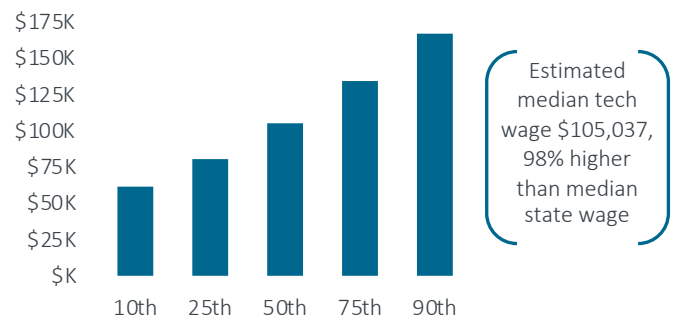
Colorado
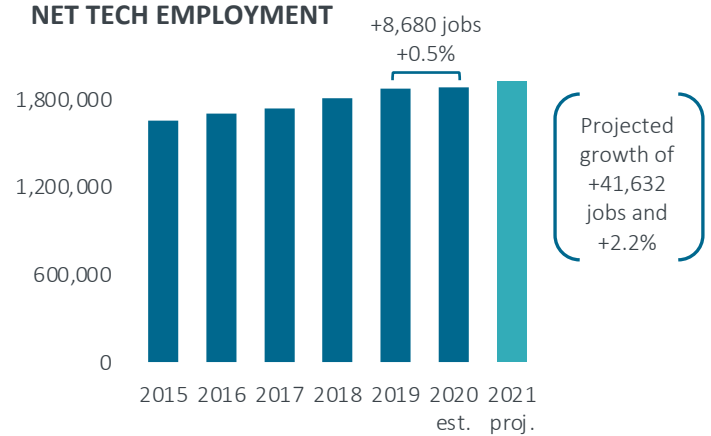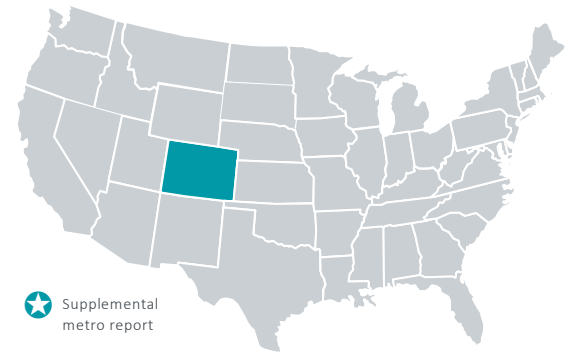
STATE OF TECHNOLOGY SUMMARY

313,260	NET TECH EMPLOYMENT[1]
10.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$54.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
15.0%	ECONOMIC IMPACT AS A % OF OVERALL
18,838	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
128,451	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
19.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

15th	NET TECH EMPLOYMENT RANK
4th	NET TECH EMPLOYMENT JOBS ADDED RANK
12th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
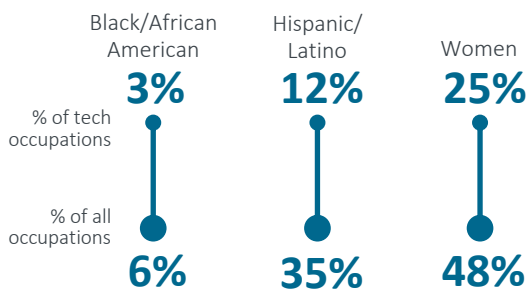

TECH INDUSTRY JOBS
226,167

TECH OCCUPATION JOBS
199,727

50% intersection =
313,260 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+3,767 jobs
+1.2%

Projected growth of +7,513 jobs and +2.4%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	54,982	+2.1%
Network Administrators, Architects and Support	23,959	-0.1%
IT Support Specialists	15,639	+0.6%
Cybersecurity and Systems Analysts and Engineers	14,300	+1.7%
Database, Data Scientists and Computer Scientists	4,454	+1.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	80,259	+2.3%
R&D, Testing, and Engineering Services	55,620	+2.1%
Telecommunications and Internet Services	44,465	+1.4%
Tech Manufacturing	29,708	+1.0%
Software [packaged]	16,115	+4.5%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	8%	24%
% of all occupations	4%	18%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $94,366, 88% higher than median state wage
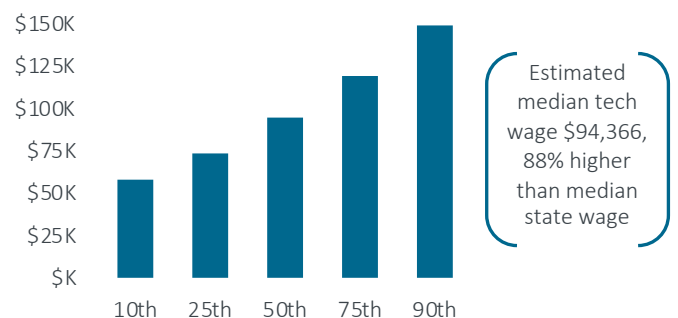
Connecticut
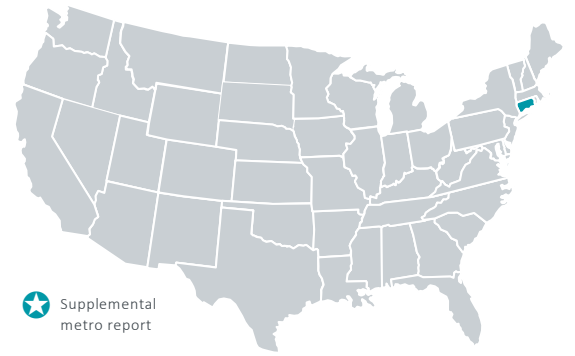
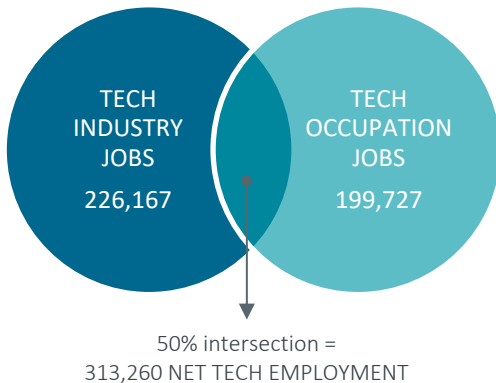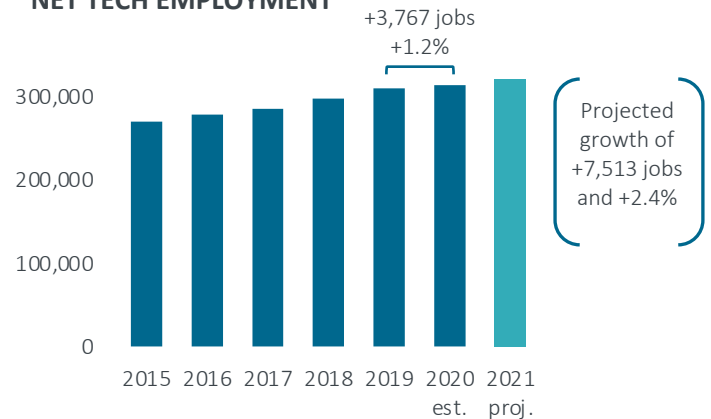## STATE OF TECHNOLOGY SUMMARY

137,744   NET TECH EMPLOYMENT[1]

8.0%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$19.3b   ECONOMIC IMPACT [estimated direct impact of tech sector]

7.0%   ECONOMIC IMPACT AS A % OF OVERALL

8,034   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

41,476   EMPLOYER JOB POSTINGS [2020 total for tech occupations]

20.8%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

26th   NET TECH EMPLOYMENT RANK

43rd   NET TECH EMPLOYMENT JOBS ADDED RANK

23rd   ECONOMIC IMPACT RANK

2nd   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
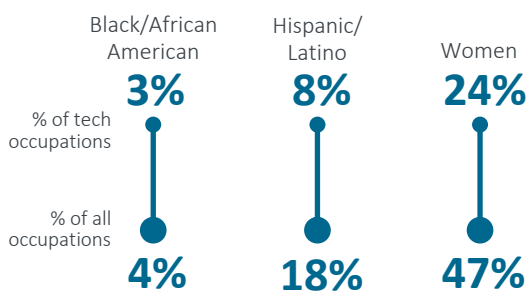

TECH INDUSTRY JOBS
74,021

TECH OCCUPATION JOBS
97,168

45% intersection =
137,744 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,091 jobs
-0.8%

Projected growth of +252 jobs and +0.2%

150,000

100,000

50,000

0

2015   2016   2017   2018   2019   2020 est.   2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	21,369	-0.3%
IT Support Specialists	9,016	-1.6%
Cybersecurity and Systems Analysts and Engineers	8,209	-0.8%
Network Administrators, Architects and Support	5,038	-1.0%
Database, Data Scientists and Computer Scientists	2,295	-0.3%

LEADING TECH INDUSTRY SECTORS [by employment]

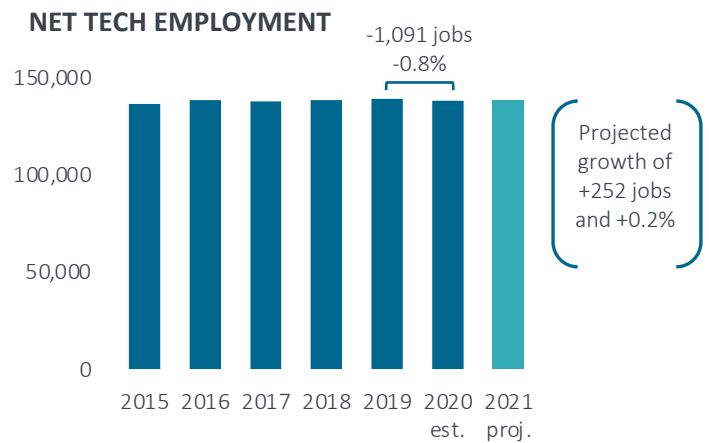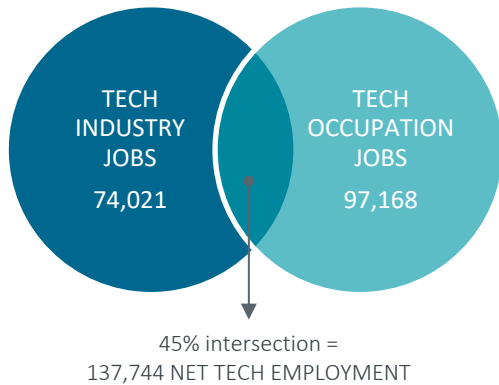|	2020	YoY % Change
IT Services and Custom Software Services	27,849	-0.2%
R&D, Testing, and Engineering Services	18,686	+0.4%
Tech Manufacturing	11,615	-1.9%
Telecommunications and Internet Services	11,407	+0.8%
Software [packaged]	4,464	-1.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	6%	6%	26%
% of all occupations	11%	14%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K

$125K

$100K

$75K

$50K

$25K

$K

10th   25th   50th   75th   90th

Estimated median tech wage $90,376, 66% higher than median state wage

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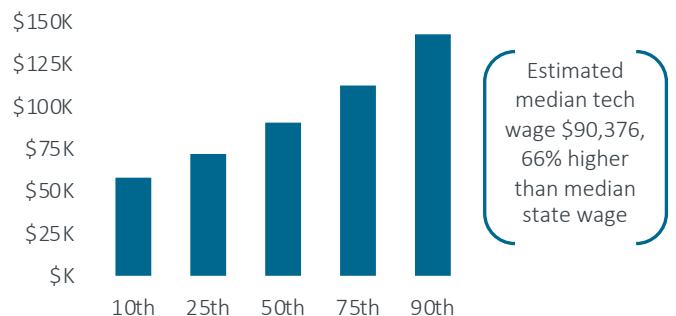
Delaware
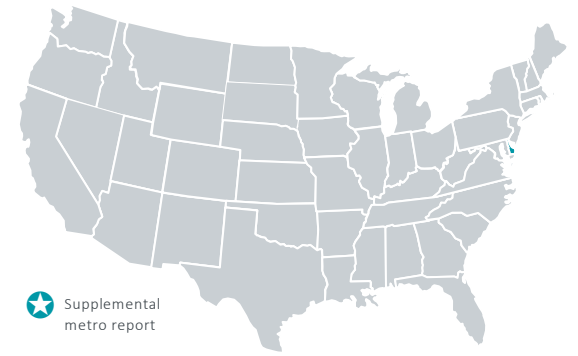
STATE OF TECHNOLOGY SUMMARY

31,243	NET TECH EMPLOYMENT[1]
6.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$4.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.1%	ECONOMIC IMPACT AS A % OF OVERALL
3,178	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
11,537	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
26.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

Supplemental metro report

43rd	NET TECH EMPLOYMENT RANK
36th	NET TECH EMPLOYMENT JOBS ADDED RANK
39th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
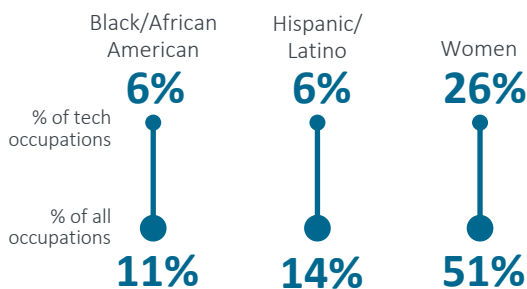
TECH INDUSTRY JOBS 17,064

TECH OCCUPATION JOBS 22,007

46% intersection = 31,243 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-490jobs -1.5%

Projected growth of -62 jobs and -0.2%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	6,094	-0.9%
Cybersecurity and Systems Analysts and Engineers	2,765	-0.7%
Network Administrators, Architects and Support	2,079	-1.2%
IT Support Specialists	1,804	-1.2%
Database, Data Scientists and Computer Scientists	868	-1.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,960	-2.6%
R&D, Testing, and Engineering Services	5,603	-2.8%
Tech Manufacturing	2,900	-4.2%
Telecommunications and Internet Services	2,355	+2.2%
Software [packaged]	246	-1.5%

TECH WORKFORCE CHARACTERISTICS[2]
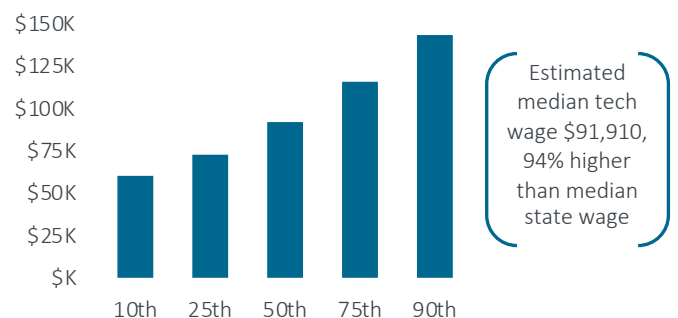
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	12%	4%	26%
% of all occupations	21%	9%	52%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $91,910, 94% higher than median state wage

District of Columbia
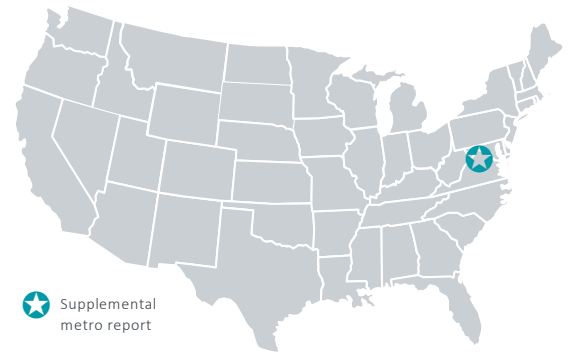
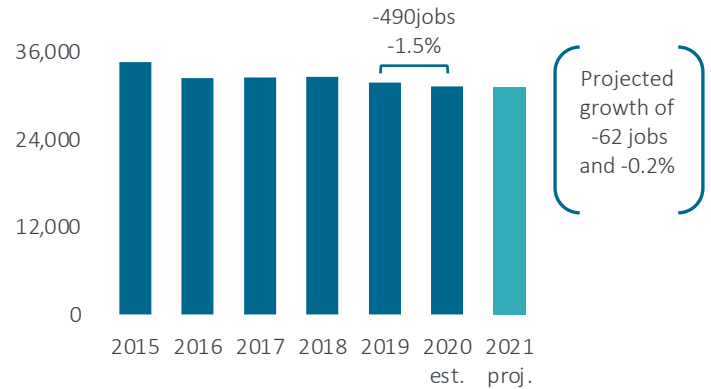## STATE OF TECHNOLOGY SUMMARY

84,230	NET TECH EMPLOYMENT[1]
10.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$9.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.8%	ECONOMIC IMPACT AS A % OF OVERALL
4,482	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
65,746	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
19.5%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

32nd	NET TECH EMPLOYMENT RANK
13th	NET TECH EMPLOYMENT JOBS ADDED RANK
32nd	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 43,121
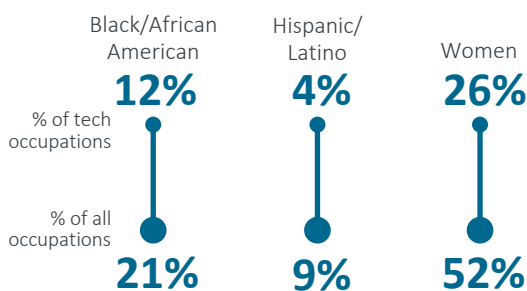
TECH OCCUPATION JOBS 60,816

46% intersection = 84,230 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+1,003 jobs +1.2%

Projected growth of +1,583 jobs and +1.9%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	9,007	+3.0%
Cybersecurity and Systems Analysts and Engineers	6,013	+1.8%
IT Support Specialists	4,066	+1.2%
Network Administrators, Architects and Support	3,810	+1.1%
Database, Data Scientists and Computer Scientists	2,076	+1.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	26,837	+2.6%
R&D, Testing, and Engineering Services	9,142	+0.4%
Telecommunications and Internet Services	5,524	+6.8%
Software [packaged]	1,533	+0.6%
Tech Manufacturing	86	+2.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	29%	6%	29%
% of all occupations	34%	10%	52%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $114,304, 41% higher than median state wage
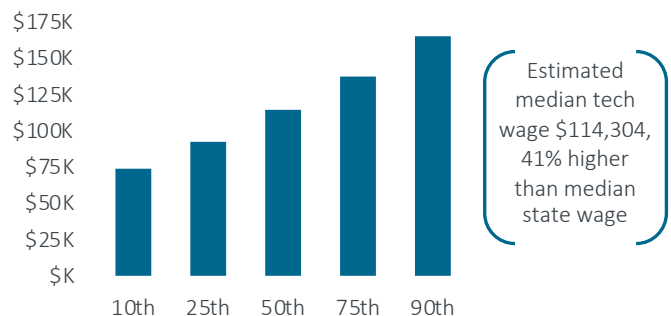
Florida

STATE OF TECHNOLOGY SUMMARY

595,156	NET TECH EMPLOYMENT[1]
6.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$77.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.8%	ECONOMIC IMPACT AS A % OF OVERALL
36,344	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
170,796	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

4th	NET TECH EMPLOYMENT RANK
5th	NET TECH EMPLOYMENT JOBS ADDED RANK
6th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
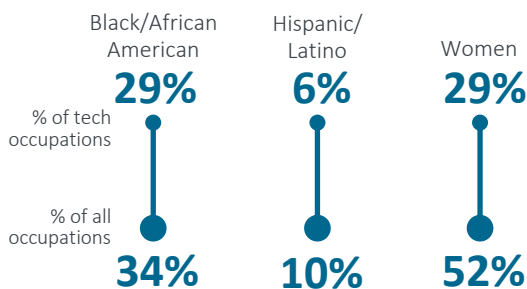
TECH INDUSTRY JOBS
379,834

TECH OCCUPATION JOBS
382,384

44% intersection =
595,156 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+3,623 jobs
+0.6%

Projected growth of +16,035 jobs and +2.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	84,477	+1.6%
IT Support Specialists	43,662	-0.3%
Cybersecurity and Systems Analysts and Engineers	35,834	+1.0%
Network Administrators, Architects and Support	35,565	-0.3%
Database, Data Scientists and Computer Scientists	10,054	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	142,711	+1.8%
R&D, Testing, and Engineering Services	85,839	+1.4%
Telecommunications and Internet Services	75,232	-0.8%
Tech Manufacturing	56,626	+1.7%
Software [packaged]	19,427	+2.8%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	11%	16%	26%
% of all occupations	16%	25%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $75,406 88% higher than median state wage

CompTIA.
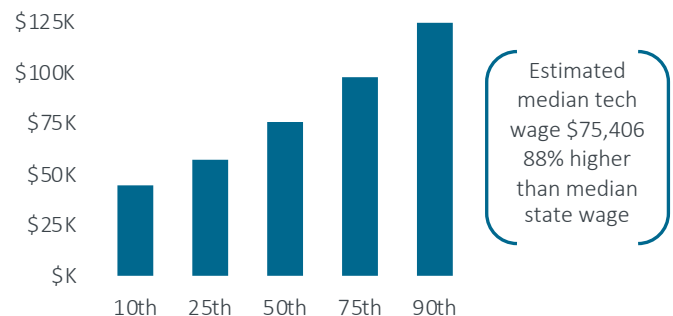
Georgia
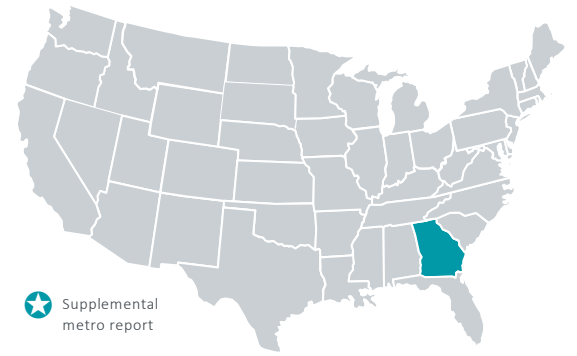
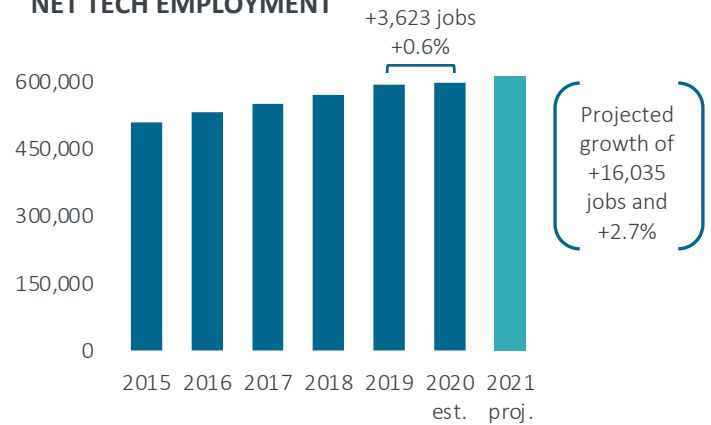## STATE OF TECHNOLOGY SUMMARY

370,068	NET TECH EMPLOYMENT[1]
7.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$55.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.1%	ECONOMIC IMPACT AS A % OF OVERALL
18,022	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
130,637	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

12th	NET TECH EMPLOYMENT RANK
14th	NET TECH EMPLOYMENT JOBS ADDED RANK
11th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
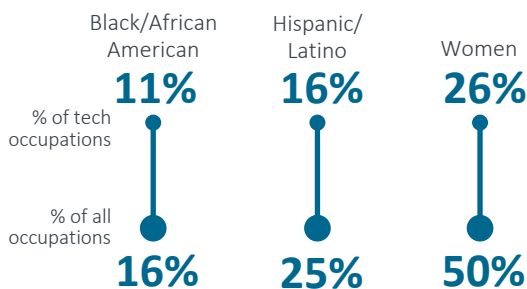

TECH INDUSTRY JOBS
224,006

TECH OCCUPATION JOBS
254,165

48% intersection = 370,068 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+917 jobs +0.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +8,766 jobs and +2.4%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	57,865	+1.5%
Cybersecurity and Systems Analysts and Engineers	24,616	+0.5%
IT Support Specialists	22,789	-0.2%
Network Administrators, Architects and Support	21,540	-0.4%
Database, Data Scientists and Computer Scientists	7,464	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	93,789	+0.4%
Telecommunications and Internet Services	58,199	+1.3%
R&D, Testing, and Engineering Services	41,932	+2.2%
Software [packaged]	19,410	+3.4%
Tech Manufacturing	10,677	-3.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	23%	4%	29%
% of all occupations	32%	8%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,052, 98% higher than median state wage

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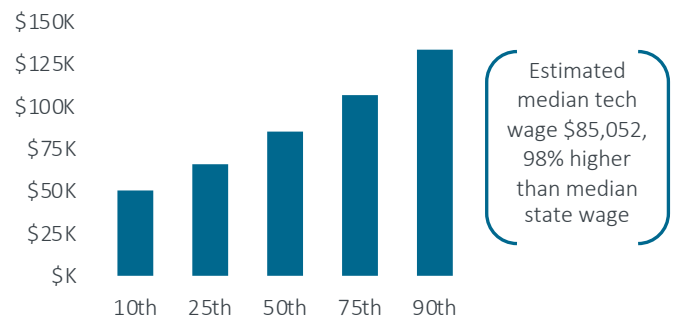
Hawaii
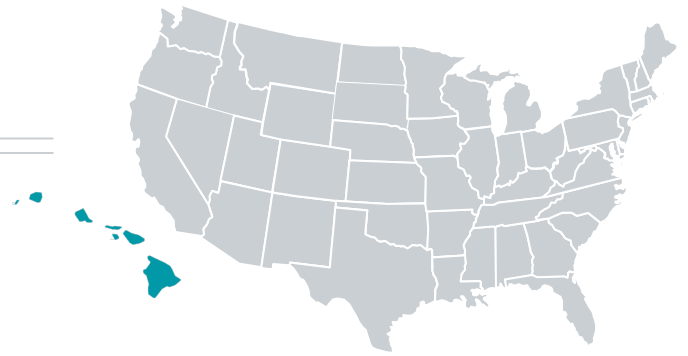
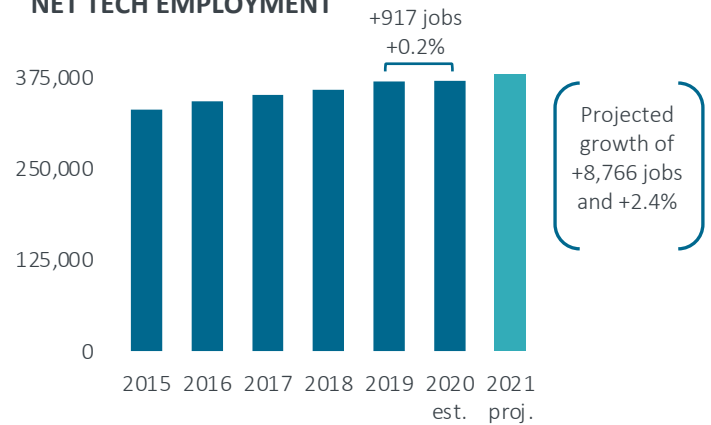## STATE OF TECHNOLOGY SUMMARY

30,465	NET TECH EMPLOYMENT[1]
4.5%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.4b	ECONOMIC IMPACT [estimated direct impact of tech sector]
4.1%	ECONOMIC IMPACT AS A % OF OVERALL
2,272	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
8,896	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
11.4%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

44th	NET TECH EMPLOYMENT RANK
34th	NET TECH EMPLOYMENT JOBS ADDED RANK
43rd	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
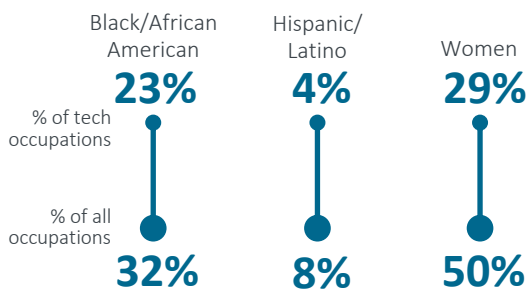

TECH INDUSTRY JOBS 15,672

TECH OCCUPATION JOBS 22,028

46% intersection = 30,465 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-416 jobs
-1.3%

Projected growth of -44 jobs and -0.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	3,095	-1.4%
Network Administrators, Architects and Support	2,494	-3.1%
Cybersecurity and Systems Analysts and Engineers	2,221	-2.1%
IT Support Specialists	1,265	-2.1%
Database, Data Scientists and Computer Scientists	444	-1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	5,638	+1.7%
IT Services and Custom Software Services	5,445	-2.8%
Telecommunications and Internet Services	4,158	-2.2%
Tech Manufacturing	230	+3.2%
Software [packaged]	201	+4.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	2%	4%	29%
% of all occupations	2%	10%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $81,726, 68% higher than median state wage
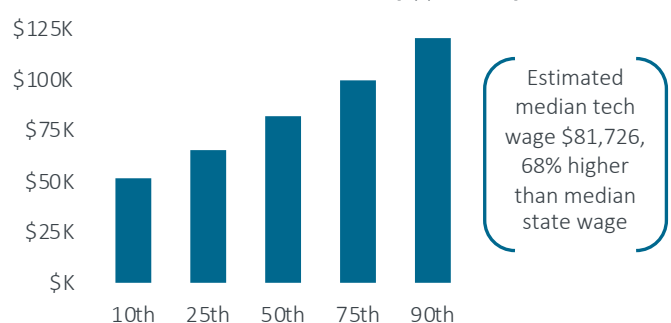
Idaho
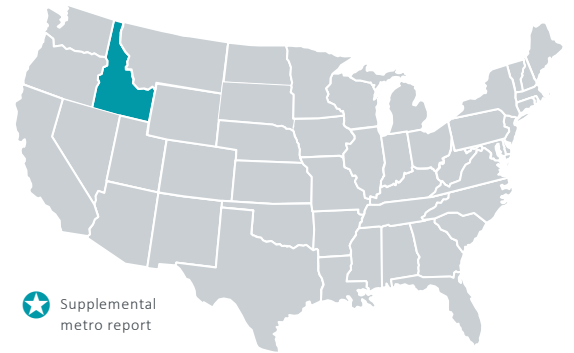
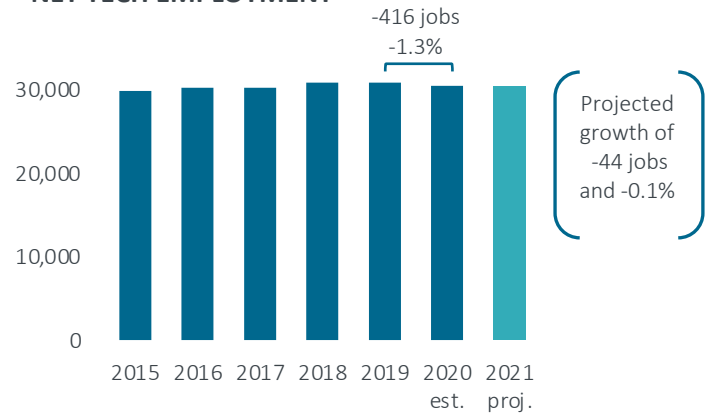## STATE OF TECHNOLOGY SUMMARY

53,803	NET TECH EMPLOYMENT[1]
6.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$7.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
9.5%	ECONOMIC IMPACT AS A % OF OVERALL
3,864	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
13,352	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

39th	NET TECH EMPLOYMENT RANK
21st	NET TECH EMPLOYMENT JOBS ADDED RANK
36th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
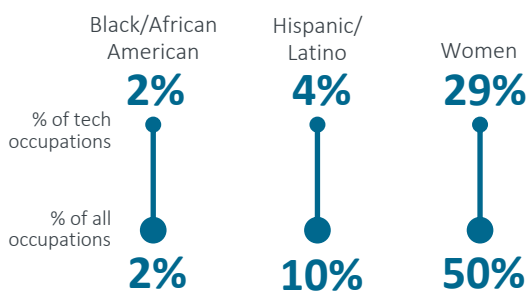

TECH INDUSTRY JOBS
37,780

TECH OCCUPATION JOBS
32,627

44% intersection =
53,803 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+24jobs +0.0%

Projected growth of +1,440 jobs and +2.7%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	6,545	+2.5%
IT Support Specialists	3,344	+0.2%
Network Administrators, Architects and Support	2,575	-1.2%
Cybersecurity and Systems Analysts and Engineers	2,323	+2.0%
Database, Data Scientists and Computer Scientists	746	+1.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	12,938	+3.2%
Tech Manufacturing	11,979	-3.4%
IT Services and Custom Software Services	8,548	+2.7%
Telecommunications and Internet Services	3,765	-12.2%
Software [packaged]	550	+47.9%

TECH WORKFORCE CHARACTERISTICS[2]
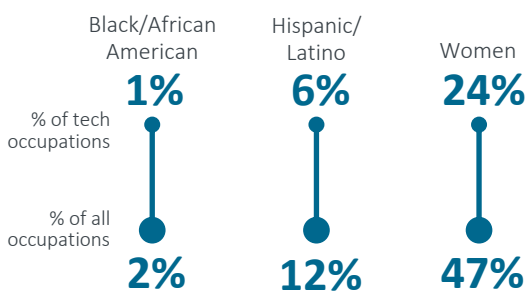
	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	6%	24%
% of all occupations	2%	12%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $76,764, 96% higher than median state wage

10th 25th 50th 75th 90th
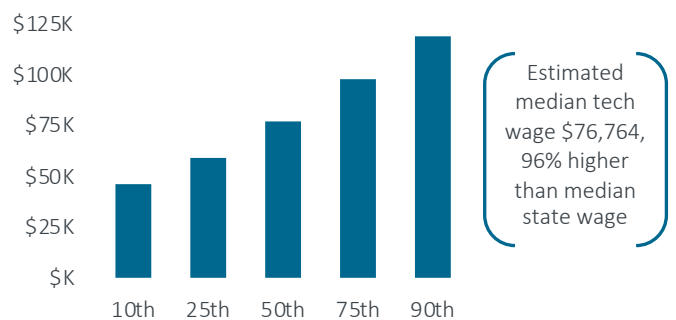
Illinois
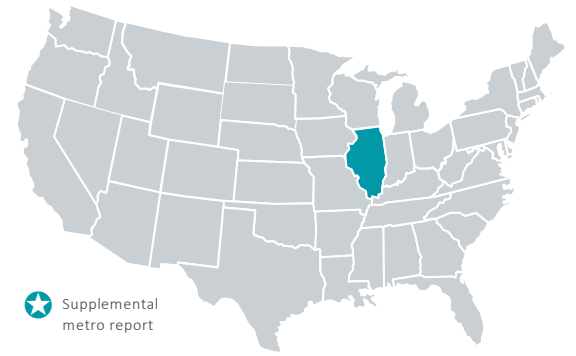
STATE OF TECHNOLOGY SUMMARY

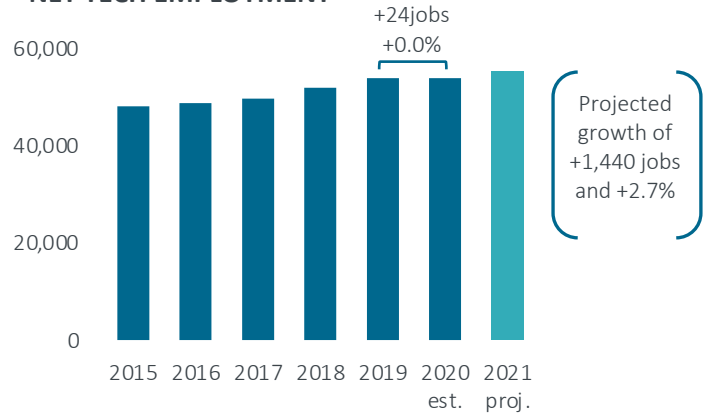|	
442,076	NET TECH EMPLOYMENT[1]
7.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$57.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.4%	ECONOMIC IMPACT AS A % OF OVERALL
22,794	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
147,977	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
21.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

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7th	NET TECH EMPLOYMENT RANK
49th	NET TECH EMPLOYMENT JOBS ADDED RANK
10th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
249,929

TECH OCCUPATION JOBS
307,402

46% intersection =
442,076 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-3,950 jobs
-0.9%

Projected growth of +3,519 jobs and +0.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	72,155	+0.2%
Cybersecurity and Systems Analysts and Engineers	34,867	-0.8%
Network Administrators, Architects and Support	27,186	-1.5%
IT Support Specialists	23,643	-1.0%
Database, Data Scientists and Computer Scientists	7,063	-0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	105,985	-0.1%
R&D, Testing, and Engineering Services	53,854	-0.4%
Telecommunications and Internet Services	49,404	-1.2%
Tech Manufacturing	30,703	-2.0%
Software [packaged]	9,983	+9.8%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	7%	7%	26%
% of all occupations	13%	15%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

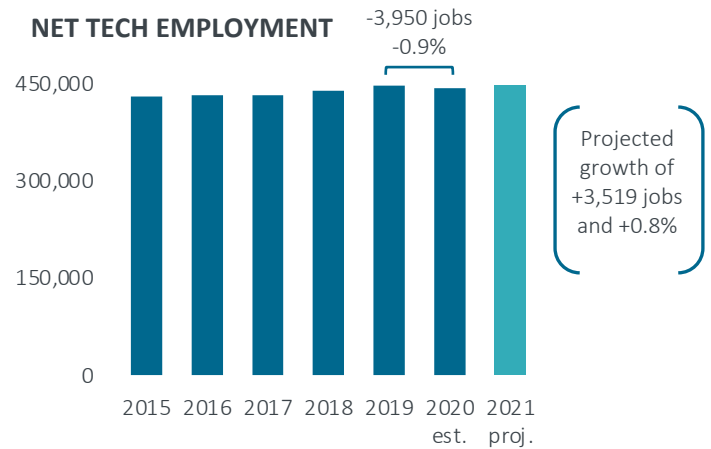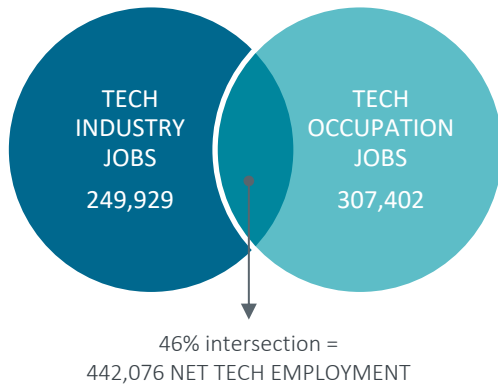Estimated median tech wage $85,296, 79% higher than median state wage
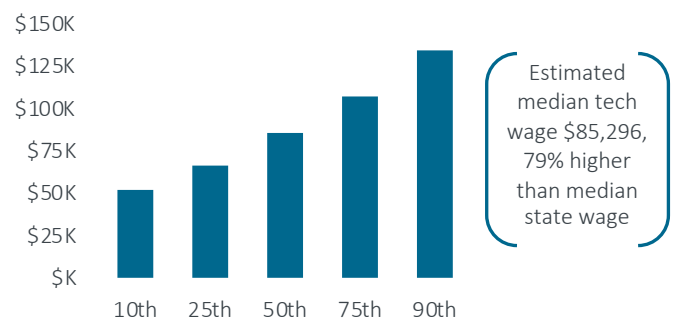
Indiana
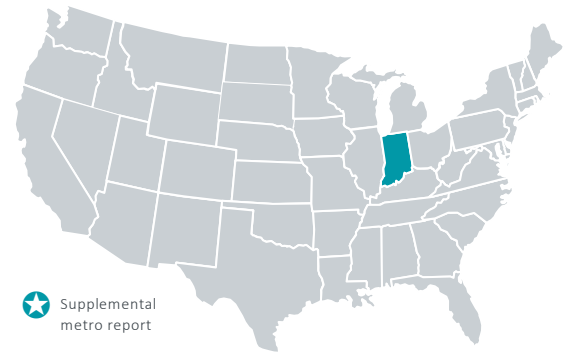
STATE OF TECHNOLOGY SUMMARY

184,274 NET TECH EMPLOYMENT[1]

5.8% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$16.2b ECONOMIC IMPACT [estimated direct impact of tech sector]

5.0% ECONOMIC IMPACT AS A % OF OVERALL

9,236 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

48,536 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.9% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

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21st NET TECH EMPLOYMENT RANK

45th NET TECH EMPLOYMENT JOBS ADDED RANK

25th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
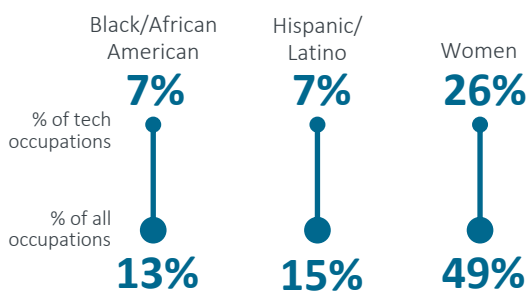
TECH INDUSTRY JOBS 87,009

TECH OCCUPATION JOBS 138,443

47% intersection = 184,274 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,908 jobs
-1.0%

Projected growth of +3,676 jobs and +2.0%

180,000

120,000

60,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	23,505	+0.6%
Network Administrators, Architects and Support	11,394	-1.4%
IT Support Specialists	10,684	-1.1%
Cybersecurity and Systems Analysts and Engineers	10,594	-0.1%
Database, Data Scientists and Computer Scientists	2,270	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	37,122	+1.5%
R&D, Testing, and Engineering Services	20,725	+0.6%
Telecommunications and Internet Services	14,194	+0.5%
Tech Manufacturing	12,858	-2.4%
Software [packaged]	2,110	-0.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	3%	28%
% of all occupations	10%	6%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th

Estimated median tech wage $69,813, 73% higher than median state wage
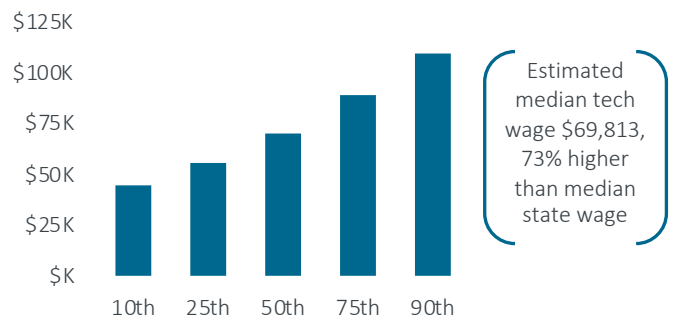
Iowa
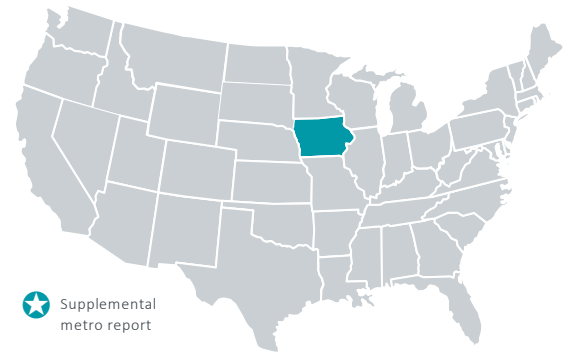
STATE OF TECHNOLOGY SUMMARY

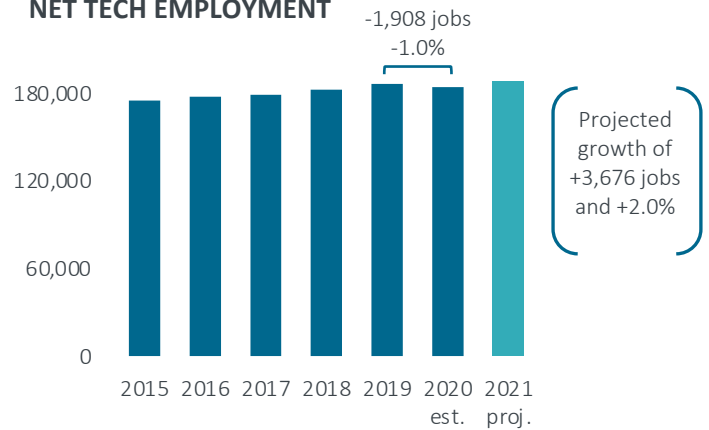|	
95,657	NET TECH EMPLOYMENT[1]
5.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$9.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.1%	ECONOMIC IMPACT AS A % OF OVERALL
4,914	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
25,082	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
13.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

30th	NET TECH EMPLOYMENT RANK
41st	NET TECH EMPLOYMENT JOBS ADDED RANK
30th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
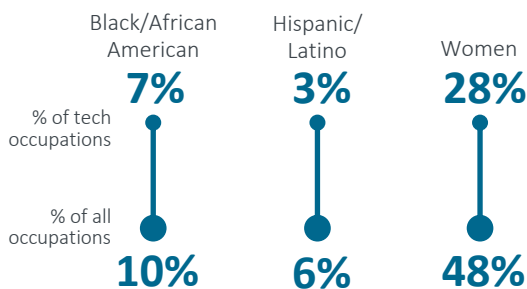
TECH INDUSTRY JOBS 47,720

TECH OCCUPATION JOBS 71,800

50% intersection = 95,657 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-910 jobs
-0.9%

Projected growth of +2,039 jobs and +2.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	14,370	+0.3%
Cybersecurity and Systems Analysts and Engineers	7,811	-0.5%
Network Administrators, Architects and Support	6,337	-1.8%
IT Support Specialists	4,711	-0.9%
Database, Data Scientists and Computer Scientists	1,185	+0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	14,117	-0.6%
Tech Manufacturing	13,146	-0.5%
Telecommunications and Internet Services	10,005	-2.5%
R&D, Testing, and Engineering Services	8,923	+1.0%
Software [packaged]	1,529	+7.4%

TECH WORKFORCE CHARACTERISTICS[2]
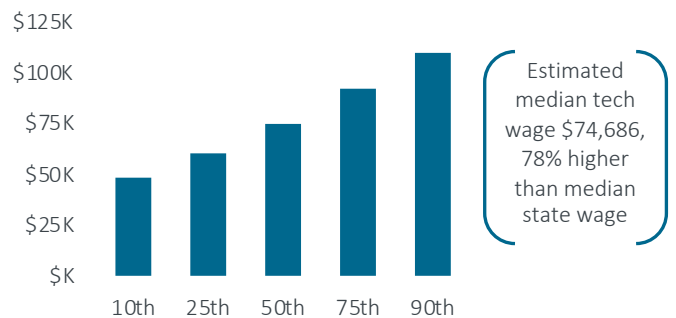
	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	2%	28%
% of all occupations	4%	6%	28%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $74,686, 78% higher than median state wage

Kansas
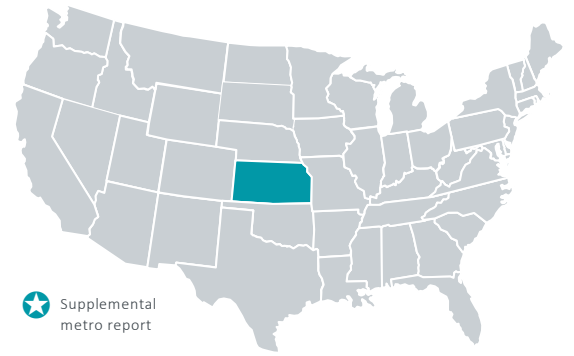
STATE OF TECHNOLOGY SUMMARY

98,811	NET TECH EMPLOYMENT[1]
6.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$10.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.9%	ECONOMIC IMPACT AS A % OF OVERALL
5,346	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
22,229	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
12.5%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

28th	NET TECH EMPLOYMENT RANK
12th	NET TECH EMPLOYMENT JOBS ADDED RANK
29th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
52,949

TECH OCCUPATION JOBS
70,402

46% intersection =
98,811 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+1,131 jobs
+1.2%

Projected growth of +1,205 jobs and +1.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	12,317	+3.0%
Network Administrators, Architects and Support	7,611	-1.5%
IT Support Specialists	6,962	-0.6%
Cybersecurity and Systems Analysts and Engineers	5,872	-0.1%
Database, Data Scientists and Computer Scientists	1,056	+1.1%

LEADING TECH INDUSTRY SECTORS [by employment]

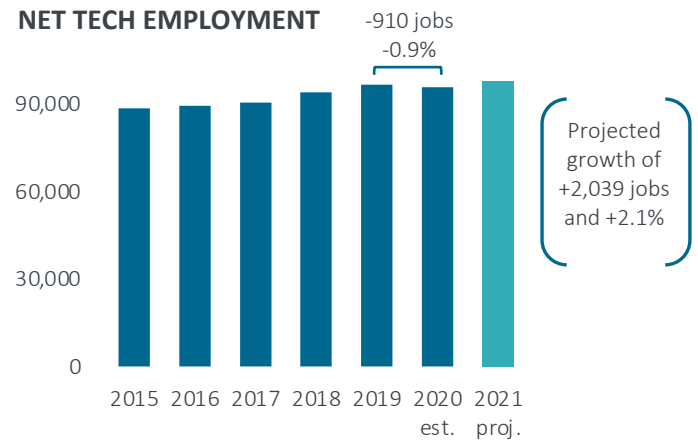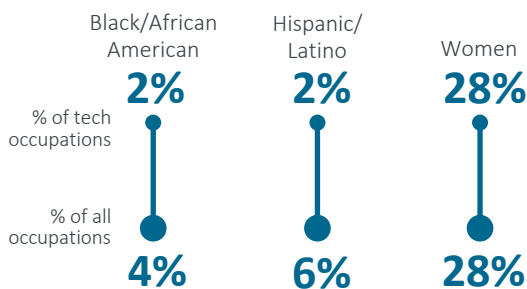|	2020	YoY % Change
IT Services and Custom Software Services	20,302	+2.7%
R&D, Testing, and Engineering Services	15,096	+1.0%
Telecommunications and Internet Services	10,464	+0.2%
Tech Manufacturing	5,782	+47.5%
Software [packaged]	1,305	+5.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	5%	4%	25%
% of all occupations	7%	10%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $73,015, 80% higher than median state wage

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th
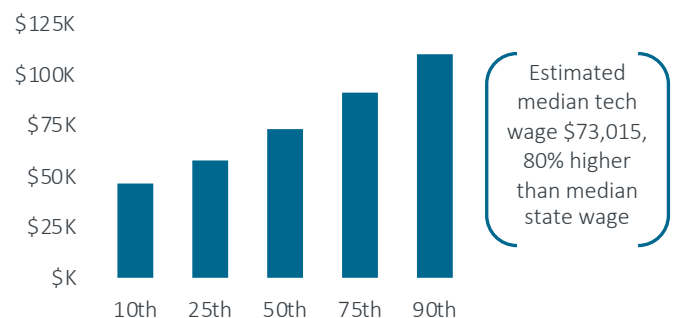
Kentucky
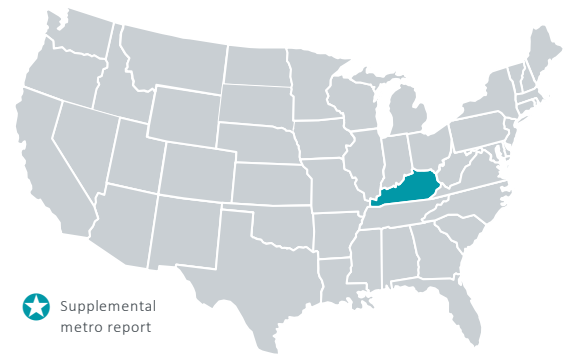
STATE OF TECHNOLOGY SUMMARY

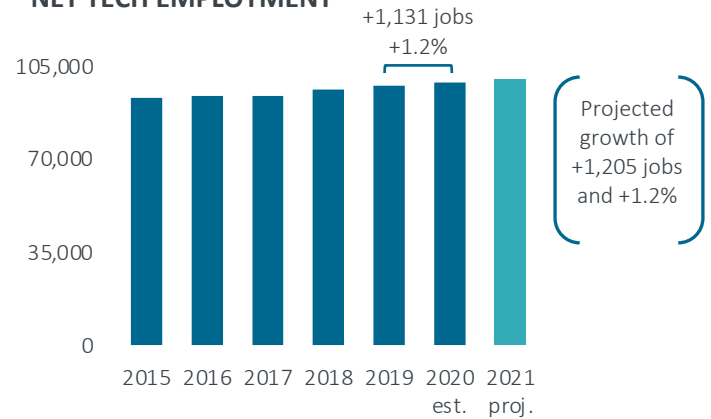|	
98,278	NET TECH EMPLOYMENT[1]
5.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$8.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
4.1%	ECONOMIC IMPACT AS A % OF OVERALL
6,380	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
28,104	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

29th	NET TECH EMPLOYMENT RANK
37th	NET TECH EMPLOYMENT JOBS ADDED RANK
33rd	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
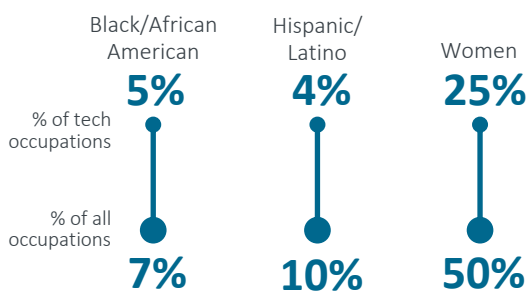

TECH INDUSTRY JOBS
50,301

TECH OCCUPATION JOBS
70,138

44% intersection =
98,278 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-623 jobs
-0.6%

Projected growth of +1,630 jobs and +1.7%

105,000
70,000
35,000
0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	11,501	+1.2%
Network Administrators, Architects and Support	6,215	-1.5%
IT Support Specialists	6,187	-0.7%
Cybersecurity and Systems Analysts and Engineers	5,836	+0.2%
Database, Data Scientists and Computer Scientists	1,363	+0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	19,678	+0.6%
Telecommunications and Internet Services	13,224	-0.4%
R&D, Testing, and Engineering Services	12,383	+3.2%
Tech Manufacturing	3,948	-3.6%
Software [packaged]	1,067	+10.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	6%	2%	28%
% of all occupations	9%	4%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $68,216, 76% higher than median state wage

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CompTIA
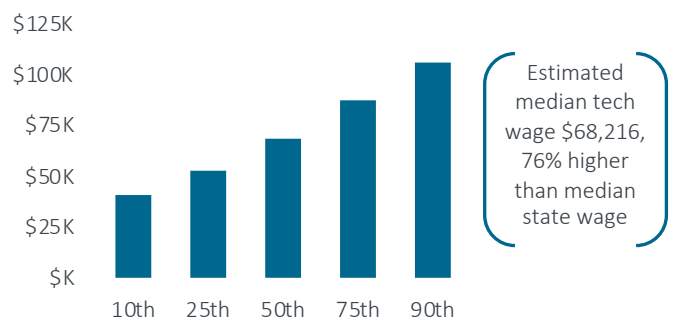
Louisiana
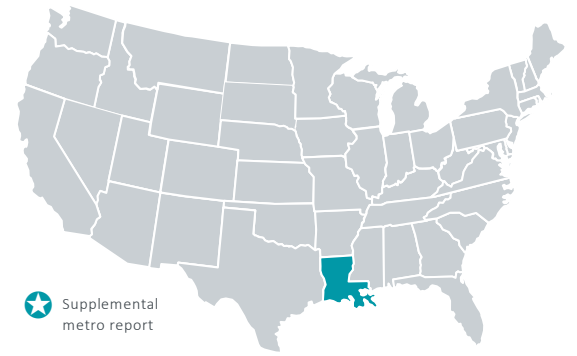
STATE OF TECHNOLOGY SUMMARY

83,863	NET TECH EMPLOYMENT[1]
4.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$7.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.5%	ECONOMIC IMPACT AS A % OF OVERALL
5,900	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
23,444	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
12.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

33rd	NET TECH EMPLOYMENT RANK
42nd	NET TECH EMPLOYMENT JOBS ADDED RANK
34th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
49,733

TECH OCCUPATION JOBS
53,105

38% intersection =
83,863 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,069 jobs
-1.3%

Projected growth of +1,258 jobs and +1.5%

(Bar chart years: 2015, 2016, 2017, 2018, 2019, 2020 est., 2021 proj.)

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	6,022	+2.3%
Network Administrators, Architects and Support	4,005	-1.1%
IT Support Specialists	3,690	-0.2%
Cybersecurity and Systems Analysts and Engineers	3,158	+1.8%
Database, Data Scientists and Computer Scientists	793	+0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

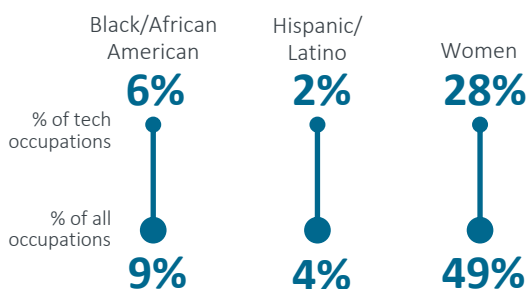|	2020	YoY % Change
R&D, Testing, and Engineering Services	20,873	-1.4%
IT Services and Custom Software Services	14,745	+0.5%
Telecommunications and Internet Services	10,369	-2.9%
Tech Manufacturing	2,708	-0.3%
Software [packaged]	1,039	-7.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	19%	3%	28%
% of all occupations	31%	5%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $71,008, 84% higher than median state wage

(Bar chart percentiles: 10th, 25th, 50th, 75th, 90th)

CompTIA.
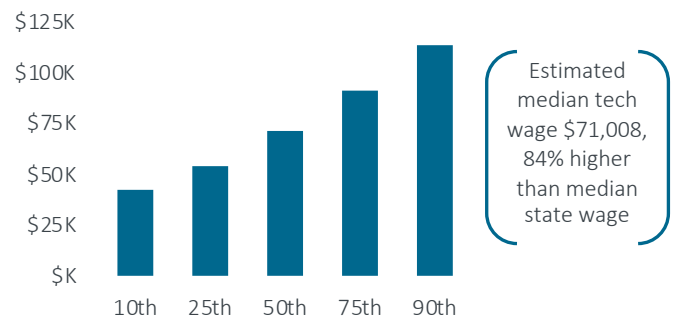
Maine
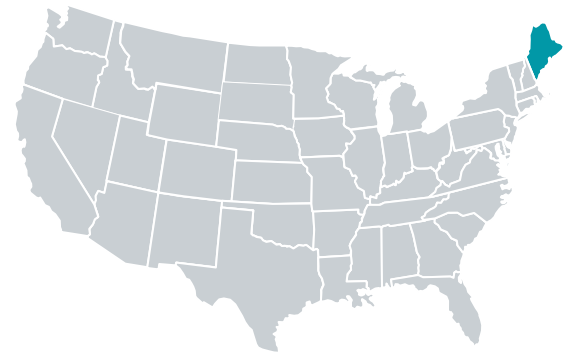
STATE OF TECHNOLOGY SUMMARY

35,935	NET TECH EMPLOYMENT[1]
5.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.4b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.5%	ECONOMIC IMPACT AS A % OF OVERALL
2,899	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
6,188	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

41st	NET TECH EMPLOYMENT RANK
24th	NET TECH EMPLOYMENT JOBS ADDED RANK
44th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
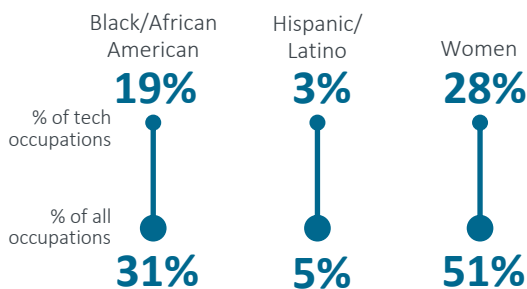
NET TECH EMPLOYMENT

TECH INDUSTRY JOBS 20,359

TECH OCCUPATION JOBS 24,559

44% intersection = 35,935 NET TECH EMPLOYMENT

-82 jobs -0.2%

Projected growth of +749 jobs and +2.1%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	4,587	+0.9%
Network Administrators, Architects and Support	2,469	-0.8%
Cybersecurity and Systems Analysts and Engineers	2,259	+0.4%
IT Support Specialists	1,981	-0.5%
Database, Data Scientists and Computer Scientists	592	+1.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	7,367	+1.2%
R&D, Testing, and Engineering Services	6,763	+1.2%
Tech Manufacturing	2,972	-2.1%
Telecommunications and Internet Services	2,937	-2.9%
Software [packaged]	320	+5.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	1%	29%
% of all occupations	2%	2%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $76,632, 80% higher than median state wage
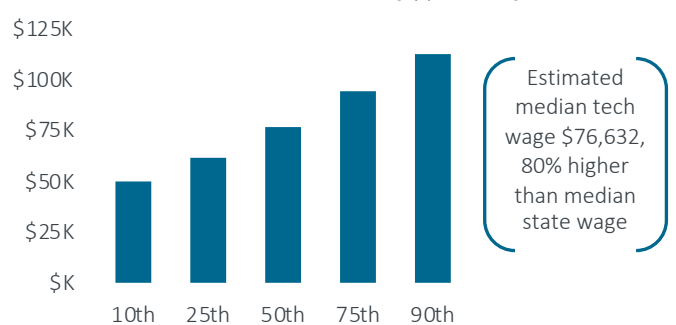
Maryland
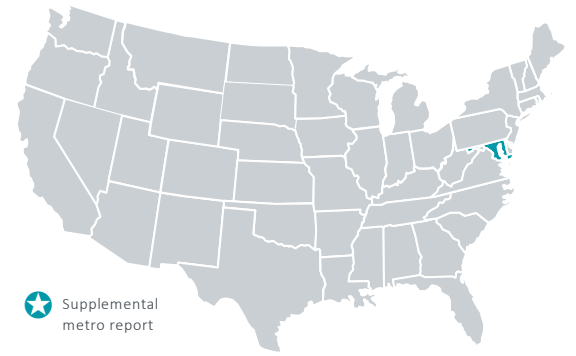
STATE OF TECHNOLOGY SUMMARY

297,993	NET TECH EMPLOYMENT[1]
10.7%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$44.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
12.2%	ECONOMIC IMPACT AS A % OF OVERALL
16,416	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
110,855	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

Supplemental metro report

16th	NET TECH EMPLOYMENT RANK
38th	NET TECH EMPLOYMENT JOBS ADDED RANK
14th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
201,104

TECH OCCUPATION JOBS
199,725

51% intersection =
297,993 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-645 jobs
-0.2%

Projected growth of +6,088 jobs and +2.0%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	40,640	+0.3%
Network Administrators, Architects and Support	28,851	-1.8%
Cybersecurity and Systems Analysts and Engineers	23,623	-0.4%
IT Support Specialists	11,402	-0.6%
Database, Data Scientists and Computer Scientists	7,497	+0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

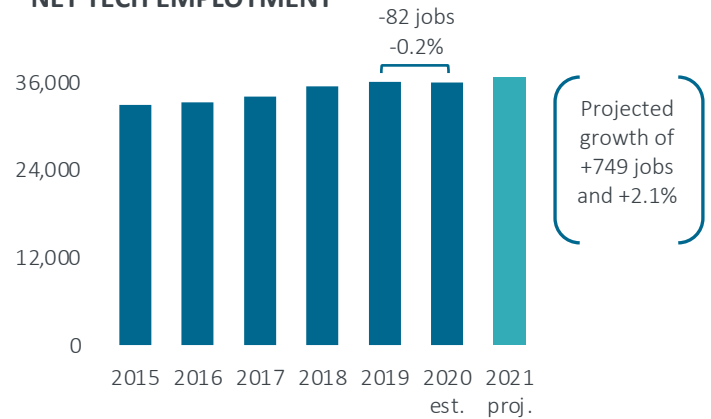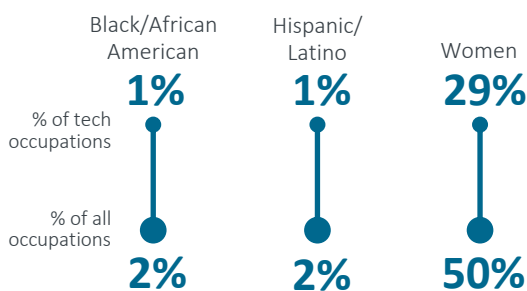|	2020	YoY % Change
IT Services and Custom Software Services	89,005	+0.0%
R&D, Testing, and Engineering Services	67,588	+1.5%
Tech Manufacturing	21,268	-1.7%
Telecommunications and Internet Services	17,157	-0.9%
Software [packaged]	6,086	+4.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	20%	4%	28%
% of all occupations	27%	8%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$175K
$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $100,865, 91% higher than median state wage

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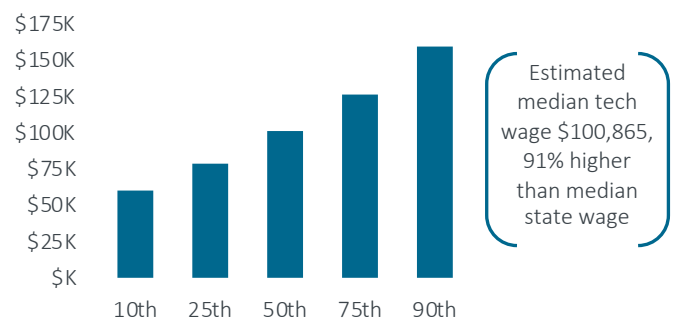
Massachusetts
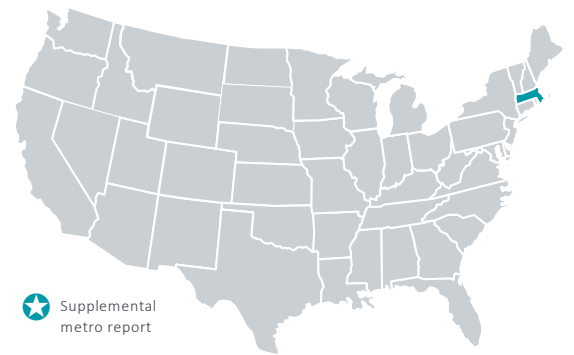
STATE OF TECHNOLOGY SUMMARY

450,548	NET TECH EMPLOYMENT[1]
12.1%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$97.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
18.1%	ECONOMIC IMPACT AS A % OF OVERALL
18,460	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
130,178	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
29.4%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

Supplemental metro report

6th	NET TECH EMPLOYMENT RANK
9th	NET TECH EMPLOYMENT JOBS ADDED RANK
5th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 347,196

TECH OCCUPATION JOBS 252,305

43% intersection = 450,548 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,456 jobs +0.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +8,657 jobs and +1.9%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	68,886	+1.1%
Cybersecurity and Systems Analysts and Engineers	21,931	+0.4%
IT Support Specialists	19,756	-0.4%
Network Administrators, Architects and Support	19,339	-0.6%
Database, Data Scientists and Computer Scientists	4,780	+0.8%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	111,761	+2.6%
IT Services and Custom Software Services	101,049	+0.8%
Tech Manufacturing	63,062	-0.8%
Telecommunications and Internet Services	35,945	+1.4%
Software [packaged]	35,378	+2.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	4%	25%
% of all occupations	8%	11%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

10th 25th 50th 75th 90th

Estimated median tech wage $97,649, 72% higher than median state wage

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CompTIA.
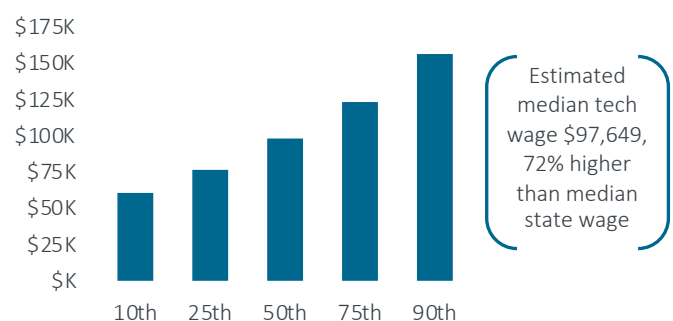
Michigan

STATE OF TECHNOLOGY SUMMARY

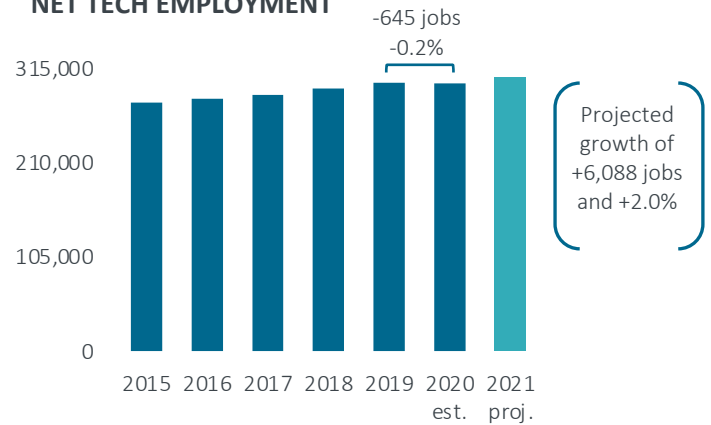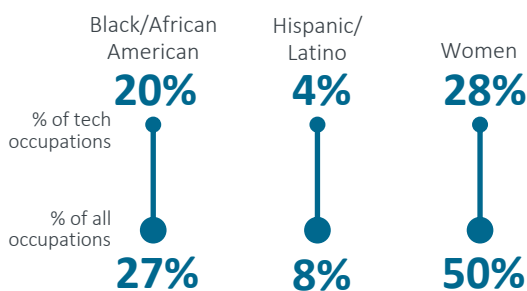|	
386,901	NET TECH EMPLOYMENT[1]
8.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$37.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.7%	ECONOMIC IMPACT AS A % OF OVERALL
13,212	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
95,736	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

11th	NET TECH EMPLOYMENT RANK
51st	NET TECH EMPLOYMENT JOBS ADDED RANK
15th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
213,923

TECH OCCUPATION JOBS
280,858

50% intersection =
386,901 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-14,023 jobs
-3.5%

Projected growth of +2,539 jobs and +0.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	47,898	-1.6%
IT Support Specialists	18,722	-2.9%
Cybersecurity and Systems Analysts and Engineers	16,595	-1.8%
Network Administrators, Architects and Support	12,391	-2.2%
Database, Data Scientists and Computer Scientists	3,803	-1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	100,676	-3.1%
IT Services and Custom Software Services	58,580	-2.2%
Telecommunications and Internet Services	26,253	-1.3%
Tech Manufacturing	21,497	-2.6%
Software [packaged]	6,918	+0.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	3%	26%
% of all occupations	13%	5%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $79,525, 80% higher than median state wage

CompTIA.
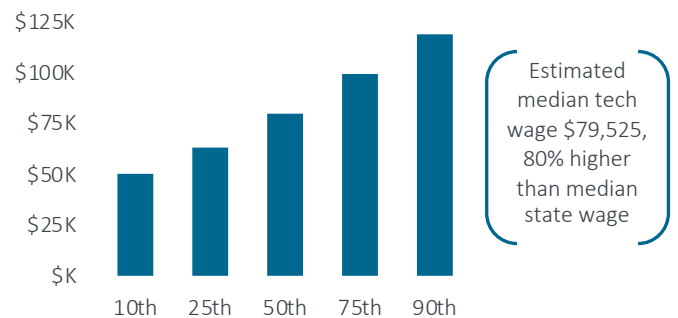
Minnesota
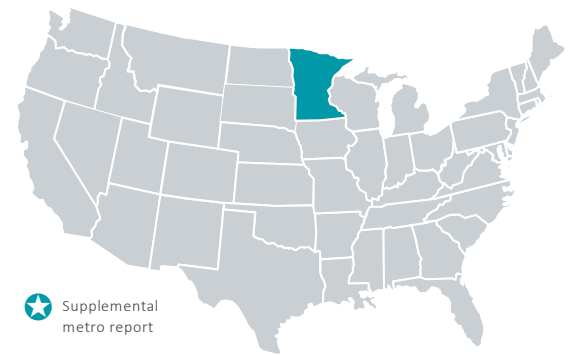
STATE OF TECHNOLOGY SUMMARY

245,587	NET TECH EMPLOYMENT[1]
8.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$31.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
9.3%	ECONOMIC IMPACT AS A % OF OVERALL
11,714	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
85,110	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
18.4%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

18th	NET TECH EMPLOYMENT RANK
47th	NET TECH EMPLOYMENT JOBS ADDED RANK
18th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
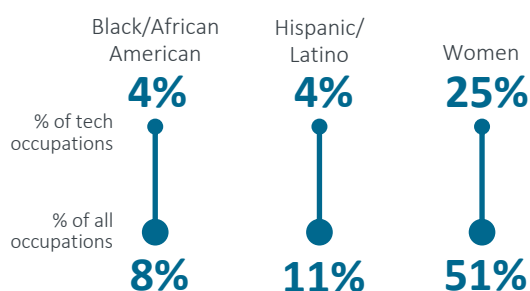

TECH INDUSTRY JOBS
143,035

TECH OCCUPATION JOBS
172,335

49% intersection =
245,587 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-2,207 jobs
-0.9%

Projected growth of +2,639 jobs and +1.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	38,618	-0.0%
Cybersecurity and Systems Analysts and Engineers	22,473	-1.4%
Network Administrators, Architects and Support	13,337	-1.8%
IT Support Specialists	12,238	-1.6%
Database, Data Scientists and Computer Scientists	3,523	-0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	45,721	-0.8%
IT Services and Custom Software Services	44,780	-0.8%
R&D, Testing, and Engineering Services	25,904	+0.2%
Telecommunications and Internet Services	17,927	-1.9%
Software [packaged]	8,704	+6.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	3%	2%	26%
% of all occupations	6%	5%	50%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,322, 73% higher than median state wage

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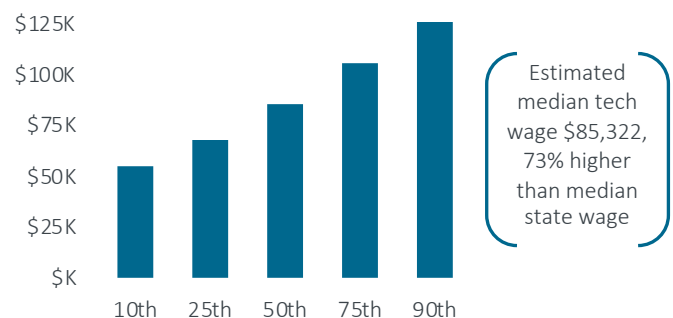
Mississippi
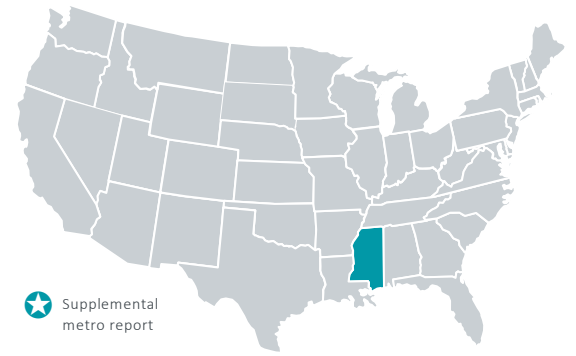
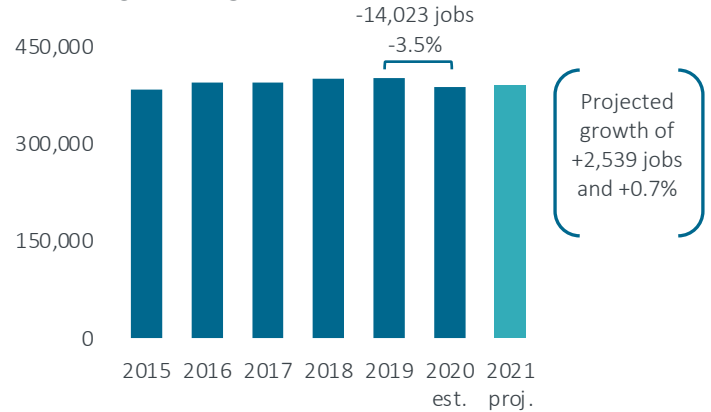## STATE OF TECHNOLOGY SUMMARY

45,410	NET TECH EMPLOYMENT[1]
3.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.7%	ECONOMIC IMPACT AS A % OF OVERALL
3,296	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
9,796	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
11.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

40th	NET TECH EMPLOYMENT RANK
28th	NET TECH EMPLOYMENT JOBS ADDED RANK
41st	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
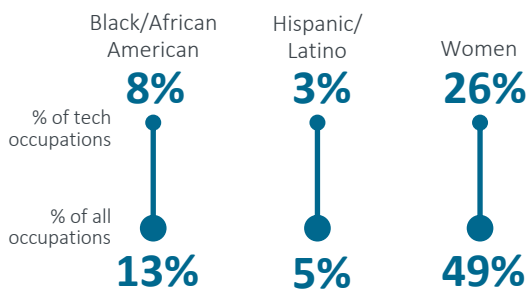
TECH INDUSTRY JOBS 21,162

TECH OCCUPATION JOBS 33,967

46% intersection = 45,410 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-211 jobs
-0.5%

Projected growth of +524 jobs and +1.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	3,825	+2.5%
Network Administrators, Architects and Support	2,878	-0.8%
Cybersecurity and Systems Analysts and Engineers	2,549	+0.8%
IT Support Specialists	2,370	+0.1%
Database, Data Scientists and Computer Scientists	761	+0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	7,085	+2.3%
Telecommunications and Internet Services	6,381	-1.8%
R&D, Testing, and Engineering Services	5,209	+2.3%
Tech Manufacturing	2,290	-0.0%
Software [packaged]	196	+2.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	25%	2%	30%
% of all occupations	38%	3%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $64,688, 86% higher than median state wage

CompTIA.
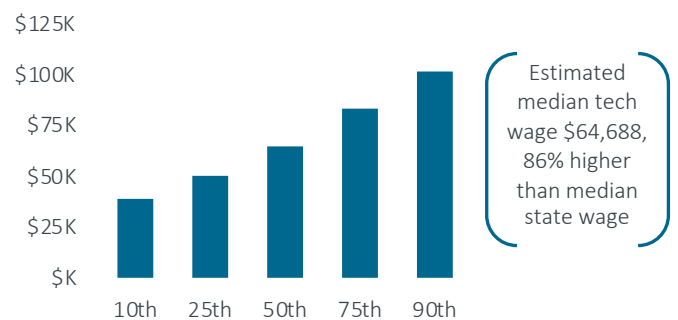
Missouri
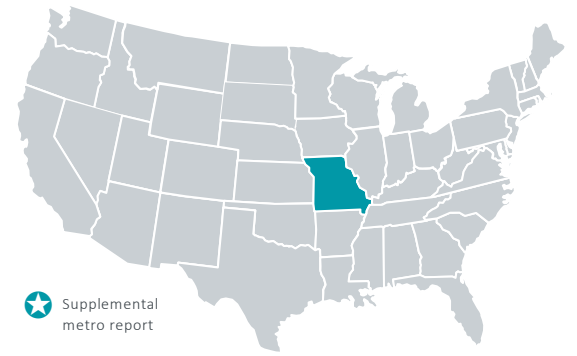
STATE OF TECHNOLOGY SUMMARY

208,690	NET TECH EMPLOYMENT[1]
7.1%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$22.4b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.6%	ECONOMIC IMPACT AS A % OF OVERALL
10,293	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
63,746	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
18.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

20th	NET TECH EMPLOYMENT RANK
22nd	NET TECH EMPLOYMENT JOBS ADDED RANK
21st	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
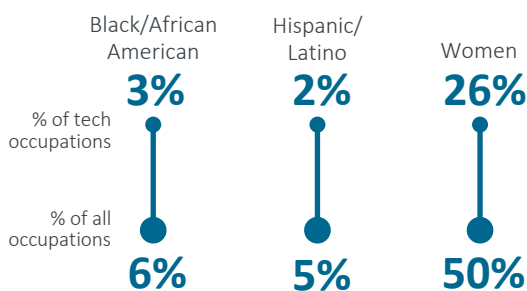

TECH INDUSTRY JOBS
122,418

TECH OCCUPATION JOBS
144,982

48% intersection =
208,690 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-14 jobs
-0.0%

225,000

150,000

75,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +4,121 jobs and +2.0%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	32,948	+0.8%
Network Administrators, Architects and Support	16,456	-1.5%
Cybersecurity and Systems Analysts and Engineers	14,120	+0.3%
IT Support Specialists	12,027	-0.6%
Database, Data Scientists and Computer Scientists	4,233	-0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	51,902	+1.1%
Telecommunications and Internet Services	28,435	+1.0%
R&D, Testing, and Engineering Services	25,531	+1.3%
Tech Manufacturing	12,935	+0.7%
Software [packaged]	3,615	+5.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	8%	2%	27%
% of all occupations	12%	4%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th

Estimated median tech wage $75,639, 83% higher than median state wage

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CompTIA
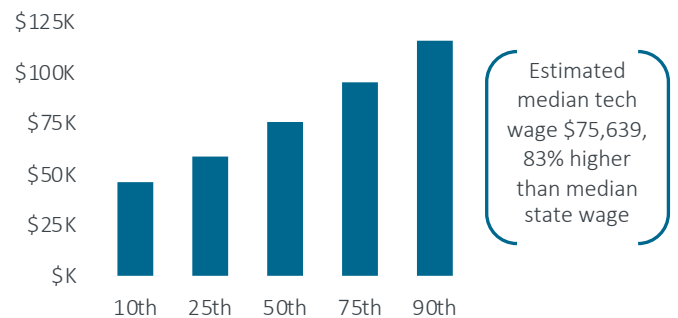
Montana
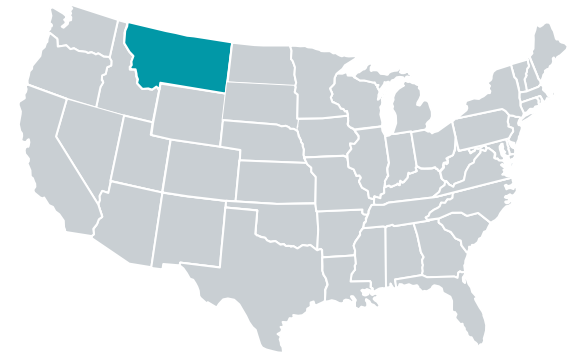
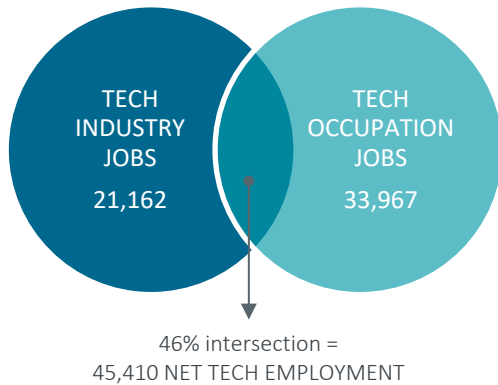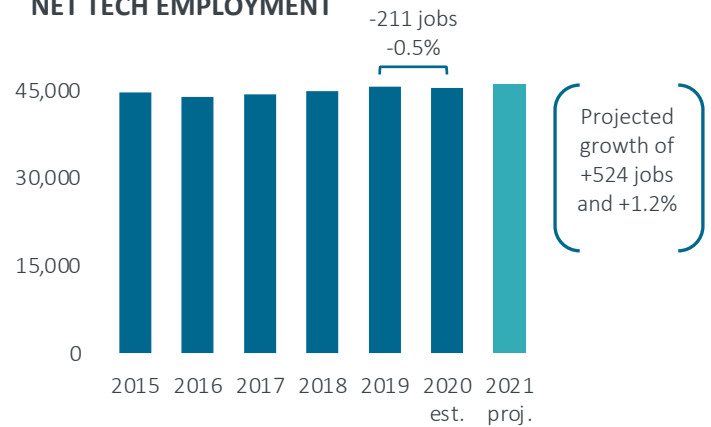## STATE OF TECHNOLOGY SUMMARY

22,853   NET TECH EMPLOYMENT[1]

4.4%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$2.3b   ECONOMIC IMPACT [estimated direct impact of tech sector]

4.8%   ECONOMIC IMPACT AS A % OF OVERALL

2,669   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

4,223   EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.0%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

46th   NET TECH EMPLOYMENT RANK

19th   NET TECH EMPLOYMENT JOBS ADDED RANK

47th   ECONOMIC IMPACT RANK

4th   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
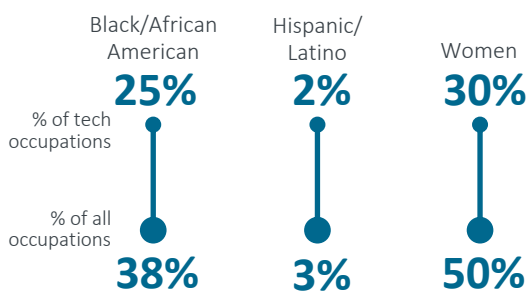

TECH INDUSTRY JOBS
14,288

TECH OCCUPATION JOBS
14,966

45% intersection =
22,853 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+169 jobs
+0.7%

Projected growth of +590 jobs and +2.6%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

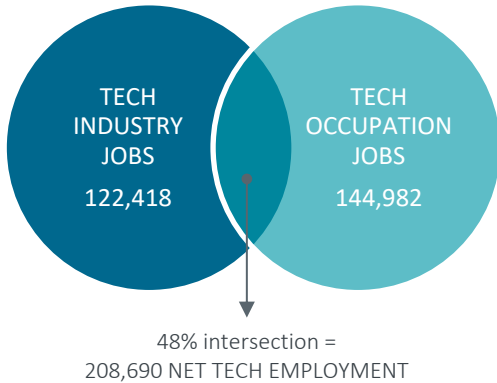|	2020	YoY % Change
Software, Programmers, Web and QA	3,133	+1.6%
IT Support Specialists	2,298	-0.7%
Network Administrators, Architects and Support	1,353	-0.0%
Cybersecurity and Systems Analysts and Engineers	828	+1.9%
Database, Data Scientists and Computer Scientists	318	+2.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,351	+2.0%
R&D, Testing, and Engineering Services	4,626	+2.4%
Telecommunications and Internet Services	2,712	-1.8%
Tech Manufacturing	1,155	+0.5%
Software [packaged]	444	+9.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	1%	3%	28%
% of all occupations	1%	4%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $65,692, 65% higher than median state wage

CompTIA.
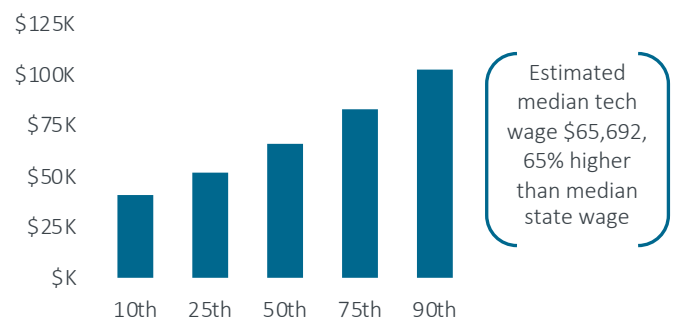
Nebraska
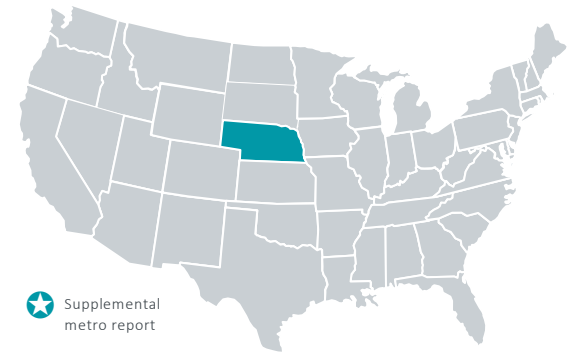
STATE OF TECHNOLOGY SUMMARY
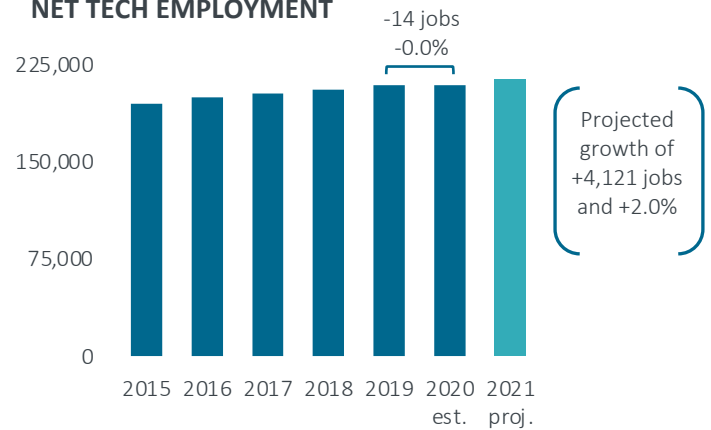
64,048	NET TECH EMPLOYMENT[1]
6.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$6.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.5%	ECONOMIC IMPACT AS A % OF OVERALL
3,576	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
19,907	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
12.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

37th	NET TECH EMPLOYMENT RANK
17th	NET TECH EMPLOYMENT JOBS ADDED RANK
37th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
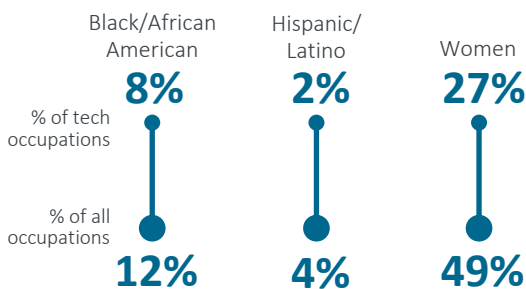

TECH INDUSTRY JOBS
36,895

TECH OCCUPATION JOBS
45,494

50% intersection =
64,048 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+351 jobs
+0.6%

Projected growth of +1,120 jobs and +1.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	11,229	+2.2%
Network Administrators, Architects and Support	5,701	-0.8%
Cybersecurity and Systems Analysts and Engineers	4,481	+1.2%
IT Support Specialists	3,474	+1.1%
Database, Data Scientists and Computer Scientists	1,282	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	15,353	+4.4%
Telecommunications and Internet Services	8,464	-3.6%
R&D, Testing, and Engineering Services	6,633	+1.9%
Tech Manufacturing	4,199	-6.4%
Software [packaged]	2,247	+19.5%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	4%	26%
% of all occupations	5%	10%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $75,751, 79% higher than median state wage

10th 25th 50th 75th 90th
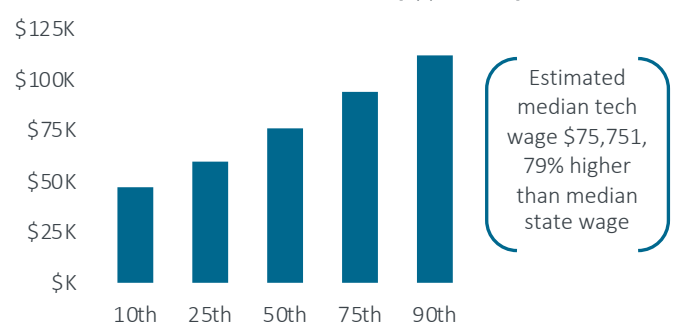
Nevada
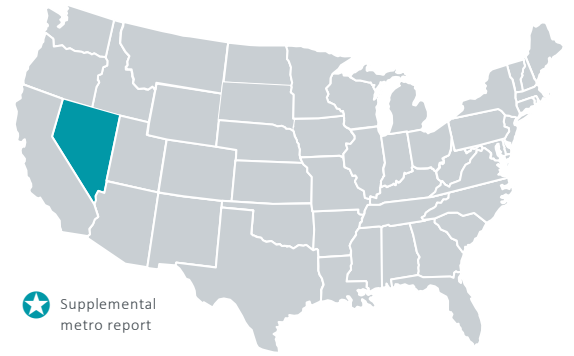
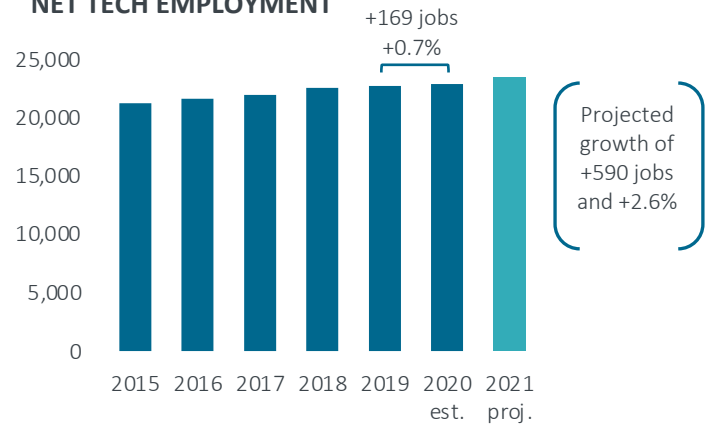## STATE OF TECHNOLOGY SUMMARY

69,874	NET TECH EMPLOYMENT[1]
4.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$7.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
4.7%	ECONOMIC IMPACT AS A % OF OVERALL
5,327	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
25,258	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
13.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

36th	NET TECH EMPLOYMENT RANK
39th	NET TECH EMPLOYMENT JOBS ADDED RANK
35th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
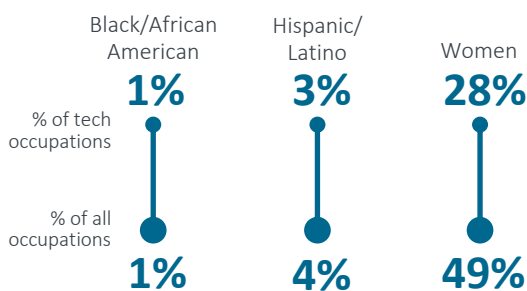
TECH INDUSTRY JOBS
38,920

TECH OCCUPATION JOBS
46,315

39% intersection =
69,874 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-763 jobs
-1.1%

Projected growth of +2,425 jobs and +3.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	8,163	+0.5%
IT Support Specialists	5,196	-2.6%
Network Administrators, Architects and Support	3,732	-1.7%
Cybersecurity and Systems Analysts and Engineers	2,505	+0.6%
Database, Data Scientists and Computer Scientists	875	-1.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	13,881	+2.1%
IT Services and Custom Software Services	11,722	+0.8%
Telecommunications and Internet Services	8,023	-2.5%
Tech Manufacturing	3,521	-2.8%
Software [packaged]	1,774	+4.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	12%	25%
% of all occupations	9%	26%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $70,352 69% higher than median state wage
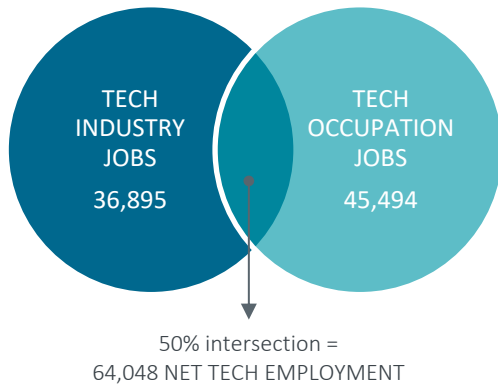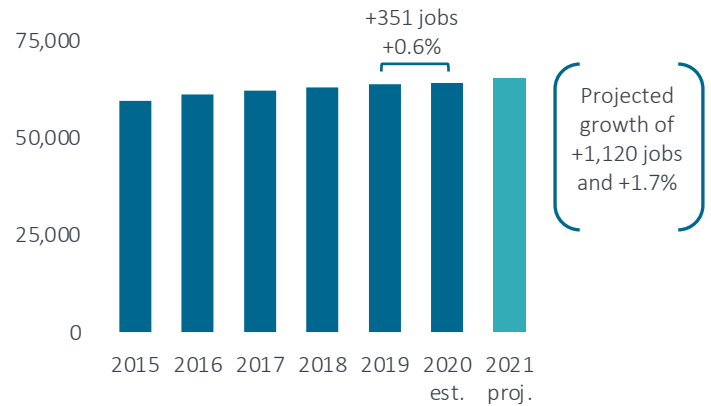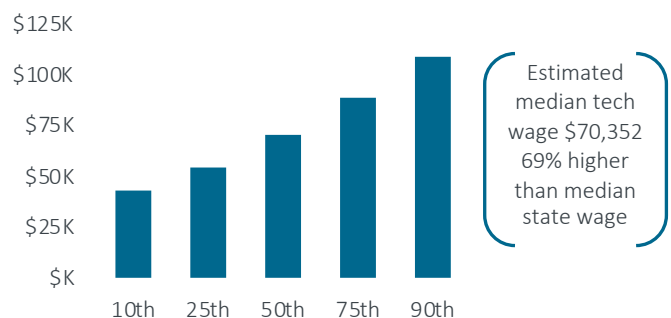
New Hampshire
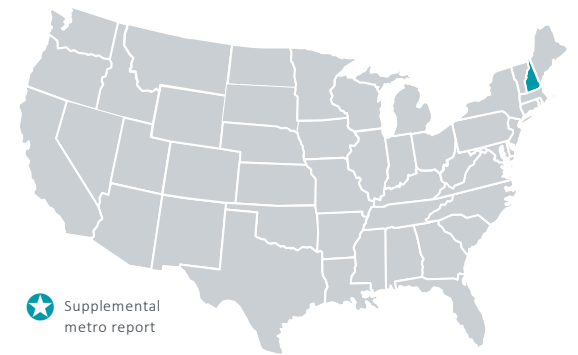
STATE OF TECHNOLOGY SUMMARY

71,912   NET TECH EMPLOYMENT[1]

10.3%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$11.2b   ECONOMIC IMPACT [estimated direct impact of tech sector]

13.8%   ECONOMIC IMPACT AS A % OF OVERALL

5,050   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

14,408   EMPLOYER JOB POSTINGS [2020 total for tech occupations]

18.9%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

34th   NET TECH EMPLOYMENT RANK

30th   NET TECH EMPLOYMENT JOBS ADDED RANK

28th   ECONOMIC IMPACT RANK

4th   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
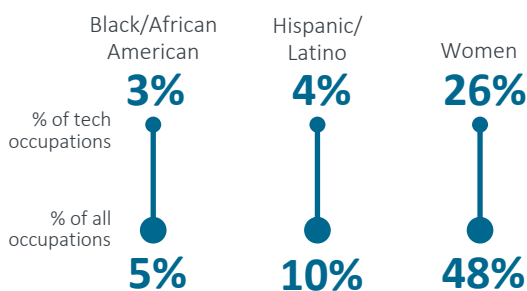
TECH INDUSTRY JOBS
48,697

TECH OCCUPATION JOBS
48,090

51% intersection =
71,912 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-219 jobs
-0.3%

Projected growth of +1,406 jobs and +2.0%

75,000

50,000

25,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	11,558	+0.5%
Cybersecurity and Systems Analysts and Engineers	3,470	+0.1%
Network Administrators, Architects and Support	3,278	-0.7%
IT Support Specialists	3,186	-0.3%
Database, Data Scientists and Computer Scientists	642	+0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

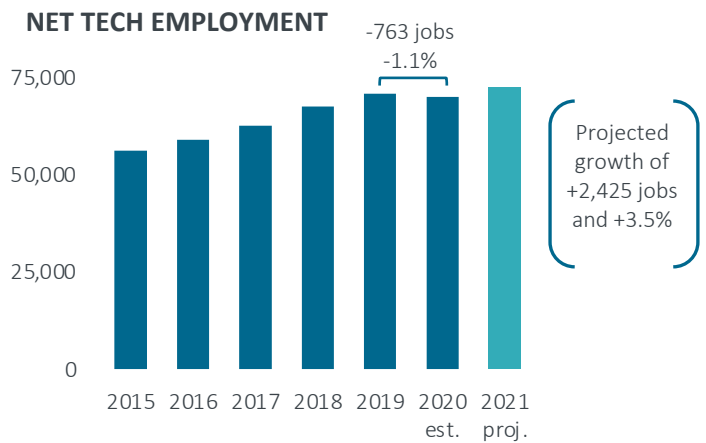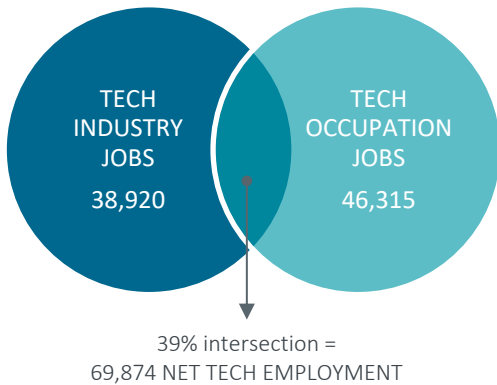|	2020	YoY % Change
Tech Manufacturing	16,403	-1.5%
IT Services and Custom Software Services	14,862	+1.8%
R&D, Testing, and Engineering Services	7,990	+1.6%
Telecommunications and Internet Services	5,669	-0.1%
Software [packaged]	3,773	+3.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	2%	26%
% of all occupations	2%	5%	50%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,935, 82% higher than median state wage

CompTIA.
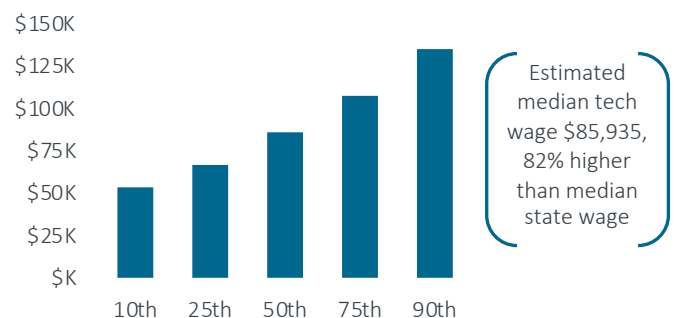
New Jersey
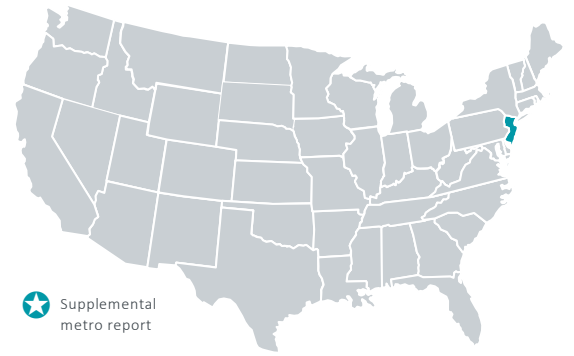
STATE OF TECHNOLOGY SUMMARY

339,951	NET TECH EMPLOYMENT[1]
8.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$58.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.0%	ECONOMIC IMPACT AS A % OF OVERALL
15,802	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
118,304	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

14th	NET TECH EMPLOYMENT RANK
44th	NET TECH EMPLOYMENT JOBS ADDED RANK
9th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
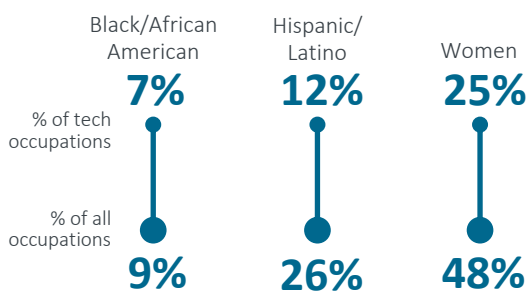
TECH INDUSTRY JOBS
221,807

TECH OCCUPATION JOBS
219,709

46% intersection =
339,951 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,578 jobs
-0.5%

Projected growth of +2,867 jobs and +0.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	65,372	-0.4%
Cybersecurity and Systems Analysts and Engineers	22,910	-0.6%
Network Administrators, Architects and Support	21,050	-1.1%
IT Support Specialists	14,443	-0.7%
Database, Data Scientists and Computer Scientists	6,139	-0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	87,760	-1.0%
R&D, Testing, and Engineering Services	63,869	+0.1%
Telecommunications and Internet Services	38,790	+4.2%
Tech Manufacturing	24,023	-1.9%
Software [packaged]	7,366	+3.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	7%	25%
% of all occupations	14%	18%	50%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$175K
$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $97,851, 85% higher than median state wage
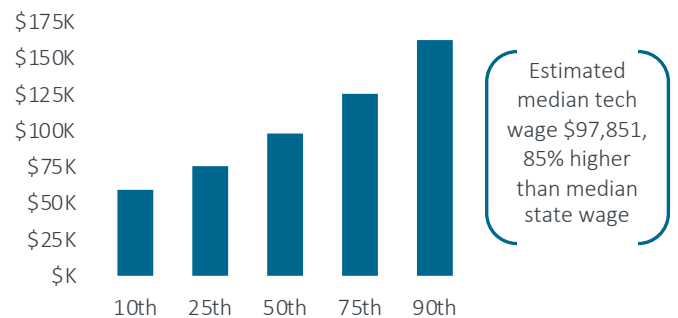
New Mexico
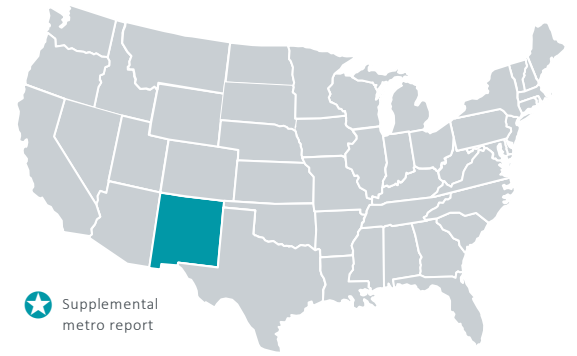
STATE OF TECHNOLOGY SUMMARY

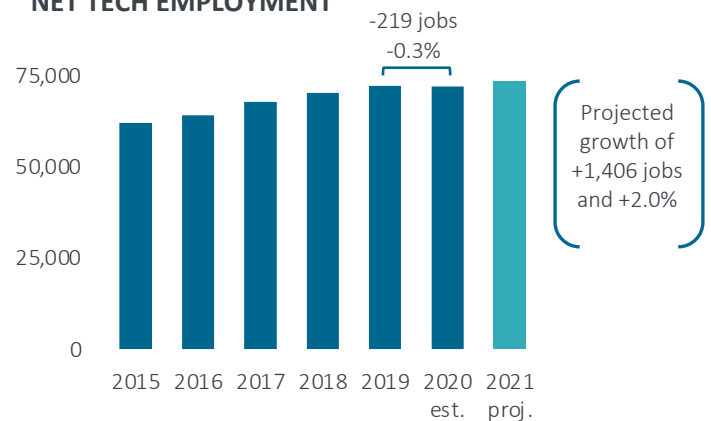|	
71,178	NET TECH EMPLOYMENT[1]
8.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$9.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.1%	ECONOMIC IMPACT AS A % OF OVERALL
3,551	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
15,214	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

35th	NET TECH EMPLOYMENT RANK
15th	NET TECH EMPLOYMENT JOBS ADDED RANK
31st	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
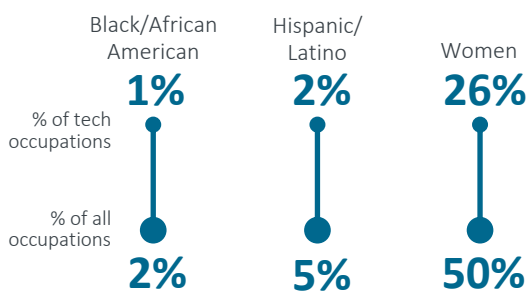
TECH INDUSTRY JOBS **53,324**

TECH OCCUPATION JOBS **38,169**

38% intersection = 71,178 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+887 jobs +1.3%

Projected growth of +937 jobs and +1.3%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	5,273	+2.2%
Network Administrators, Architects and Support	3,303	-0.7%
IT Support Specialists	2,836	-0.5%
Cybersecurity and Systems Analysts and Engineers	2,746	+1.3%
Database, Data Scientists and Computer Scientists	1,342	+1.9%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	34,171	+2.4%
IT Services and Custom Software Services	8,281	+2.1%
Tech Manufacturing	5,572	+2.7%
Telecommunications and Internet Services	4,943	-0.7%
Software [packaged]	358	+10.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
	3%	**31%**	**24%**
% of tech occupations			
% of all occupations			
	3%	**45%**	**48%**

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $83,970, 106% higher than median state wage
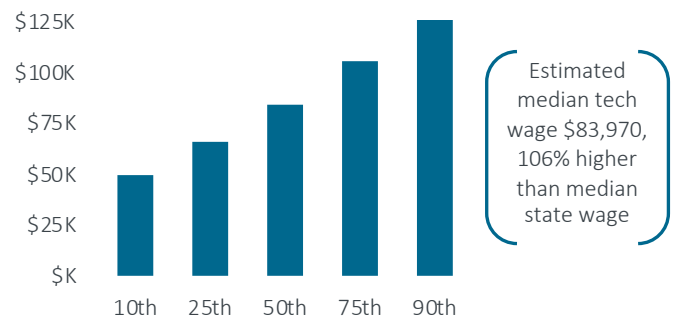
New York
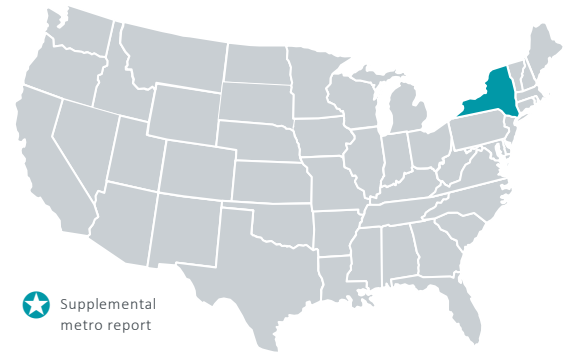
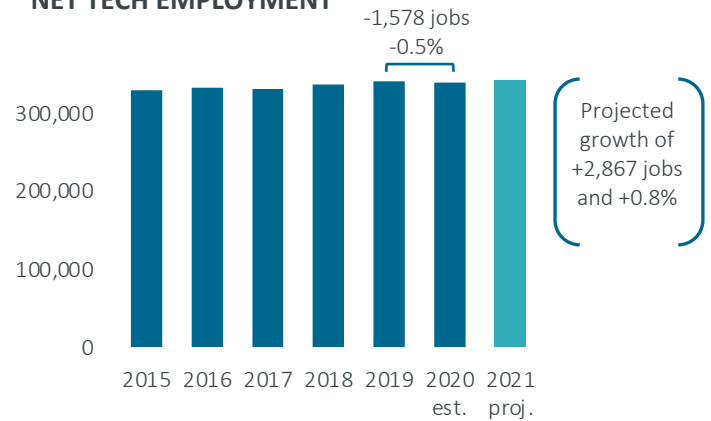## STATE OF TECHNOLOGY SUMMARY

670,806	NET TECH EMPLOYMENT [1]
6.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$135.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
8.8%	ECONOMIC IMPACT AS A % OF OVERALL
27,478	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
190,720	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
22.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

3rd	NET TECH EMPLOYMENT RANK
11th	NET TECH EMPLOYMENT JOBS ADDED RANK
3rd	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
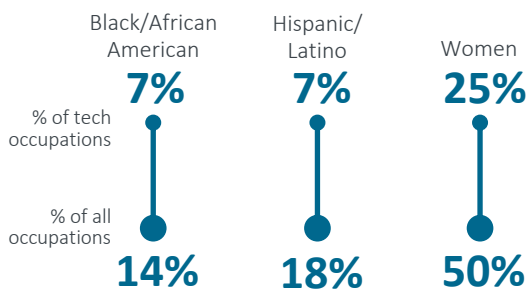

TECH INDUSTRY JOBS
420,583

TECH OCCUPATION JOBS
427,347

42% intersection =
670,806 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,002 jobs
+0.3%

Projected growth of +13,868 jobs and +2.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	112,299	+1.5%
Cybersecurity and Systems Analysts and Engineers	47,946	-0.3%
Network Administrators, Architects and Support	47,318	-1.4%
IT Support Specialists	45,750	-0.8%
Database, Data Scientists and Computer Scientists	11,319	+0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	140,650	+0.9%
Telecommunications and Internet Services	109,317	+2.2%
R&D, Testing, and Engineering Services	91,947	+0.1%
Tech Manufacturing	56,305	-1.3%
Software [packaged]	22,364	+31.8%

TECH WORKFORCE CHARACTERISTICS [2]
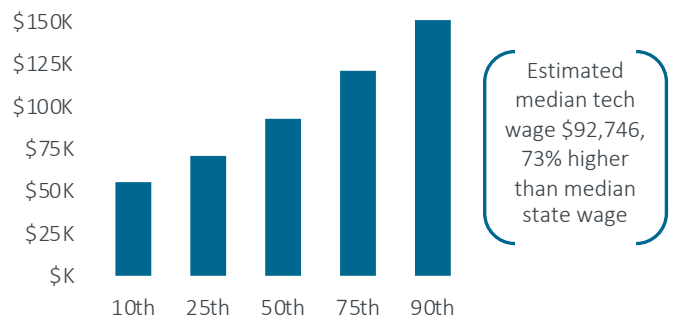
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	8%	25%
% of all occupations	14%	16%	51%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $92,746, 73% higher than median state wage

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North Carolina
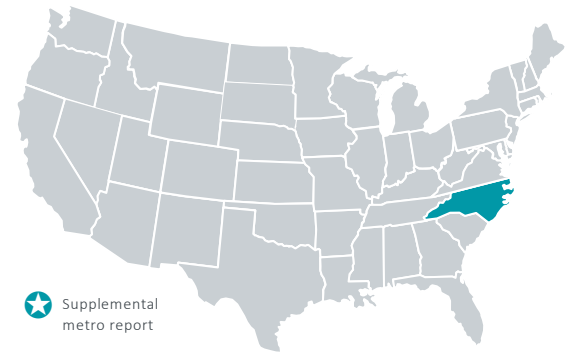
STATE OF TECHNOLOGY SUMMARY

362,686	NET TECH EMPLOYMENT[1]
7.7%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$48.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]
9.4%	ECONOMIC IMPACT AS A % OF OVERALL
19,823	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
169,891	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
21.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

Supplemental metro report

13th	NET TECH EMPLOYMENT RANK
7th	NET TECH EMPLOYMENT JOBS ADDED RANK
13th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
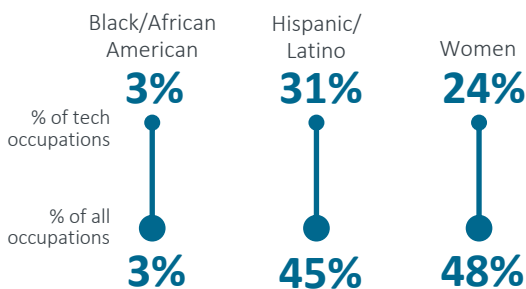
TECH INDUSTRY JOBS
226,594

TECH OCCUPATION JOBS
241,295

46% intersection =
362,686 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,609 jobs +0.7%

Projected growth of +10,036 jobs and +2.8%

375,000

250,000

125,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	55,199	+1.8%
Cybersecurity and Systems Analysts and Engineers	32,708	+0.3%
IT Support Specialists	22,676	-0.2%
Network Administrators, Architects and Support	22,182	-0.3%
Database, Data Scientists and Computer Scientists	5,497	+1.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	75,738	+1.1%
R&D, Testing, and Engineering Services	59,165	+1.8%
Telecommunications and Internet Services	38,728	+1.2%
Tech Manufacturing	33,326	-0.2%
Software [packaged]	19,637	+6.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	14%	4%	27%
% of all occupations	22%	7%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $82,717, 97% higher than median state wage
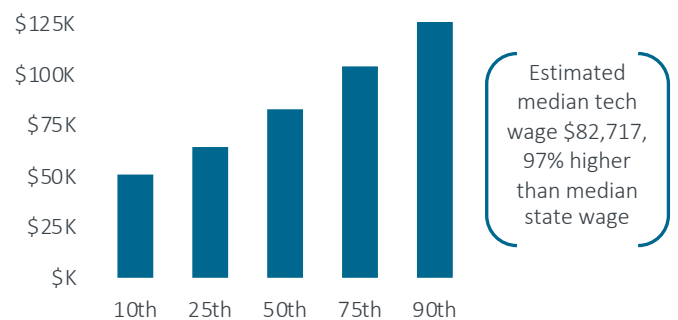
North Dakota
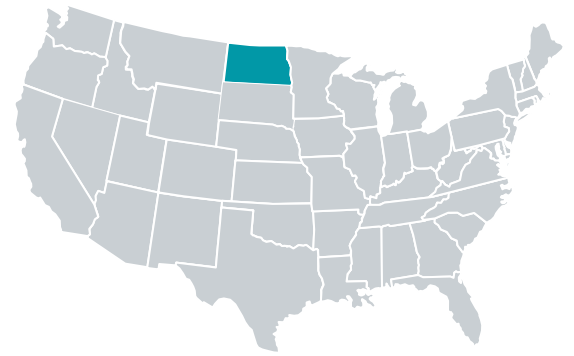
STATE OF TECHNOLOGY SUMMARY

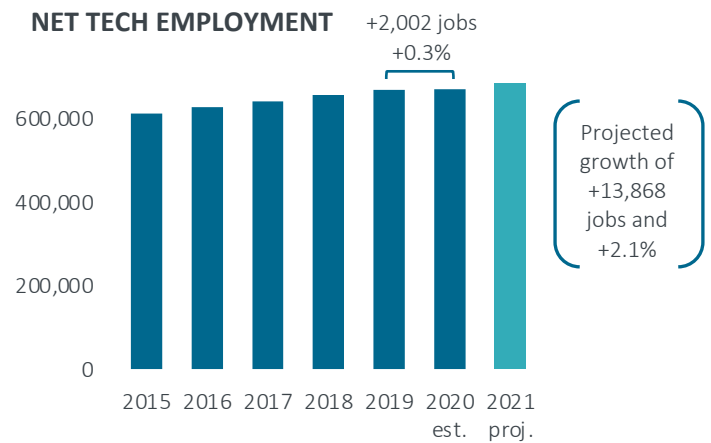|	
21,443	NET TECH EMPLOYMENT[1]
4.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.0%	ECONOMIC IMPACT AS A % OF OVERALL
1,382	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
4,654	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
15.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

49th	NET TECH EMPLOYMENT RANK
23rd	NET TECH EMPLOYMENT JOBS ADDED RANK
49th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
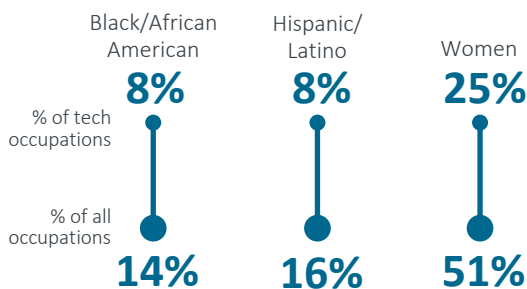

TECH INDUSTRY JOBS 12,699

TECH OCCUPATION JOBS 14,216

43% intersection = 21,443 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-75 jobs
-0.3%

Projected growth of +315 jobs and +1.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	2,251	+1.3%
IT Support Specialists	1,783	-0.8%
Network Administrators, Architects and Support	1,322	-0.5%
Cybersecurity and Systems Analysts and Engineers	632	+2.7%
Database, Data Scientists and Computer Scientists	165	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	4,253	+0.1%
IT Services and Custom Software Services	3,449	+2.4%
Telecommunications and Internet Services	2,272	-0.8%
Tech Manufacturing	1,411	-4.8%
Software [packaged]	1,314	+1.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	2%	25%
% of all occupations	3%	5%	45%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $68,886, 52% higher than median state wage

10th 25th 50th 75th 90th
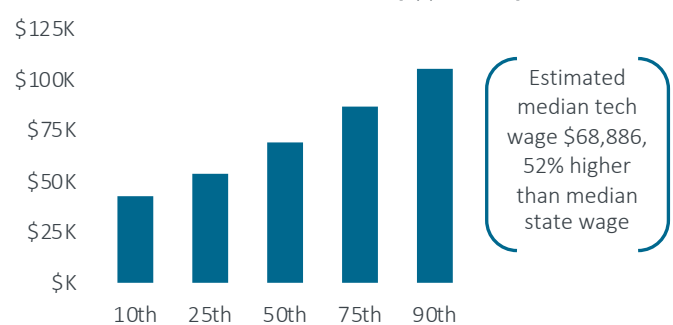
Ohio
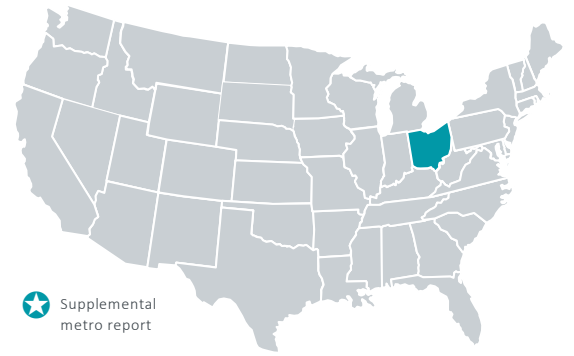
STATE OF TECHNOLOGY SUMMARY

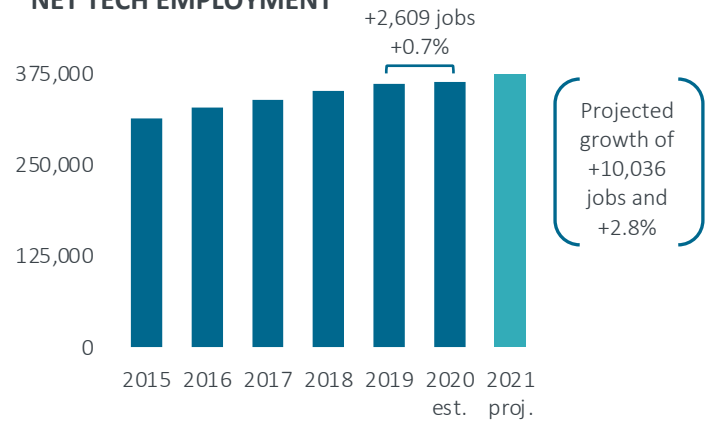|	
391,539	NET TECH EMPLOYMENT[1]
7.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$34.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.8%	ECONOMIC IMPACT AS A % OF OVERALL
17,835	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
122,194	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
16.4%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

10th	NET TECH EMPLOYMENT RANK
50th	NET TECH EMPLOYMENT JOBS ADDED RANK
16th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
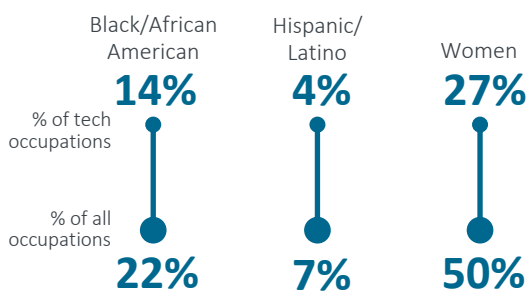
TECH INDUSTRY JOBS
199,018

TECH OCCUPATION JOBS
287,691

48% intersection =
391,539 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-4,677 jobs
-1.2%

Projected growth of +5,840 jobs and +1.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	56,259	+0.0%
Cybersecurity and Systems Analysts and Engineers	30,893	-1.0%
Network Administrators, Architects and Support	23,234	-1.7%
IT Support Specialists	22,172	-1.4%
Database, Data Scientists and Computer Scientists	5,558	-0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	78,956	-0.2%
R&D, Testing, and Engineering Services	53,810	-0.0%
Telecommunications and Internet Services	36,914	-0.5%
Tech Manufacturing	21,339	-1.1%
Software [packaged]	7,999	+3.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	8%	2%	27%
% of all occupations	12%	4%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $76,583, 77% higher than median state wage

CompTIA.
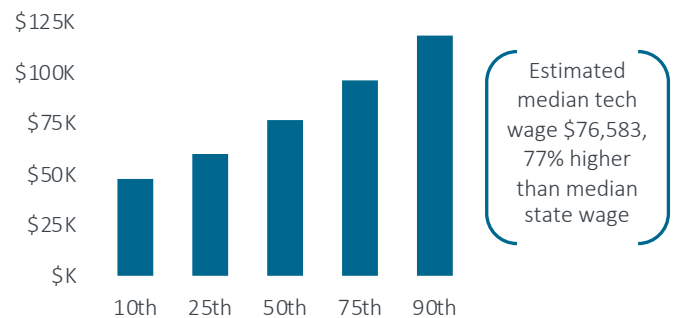
Oklahoma
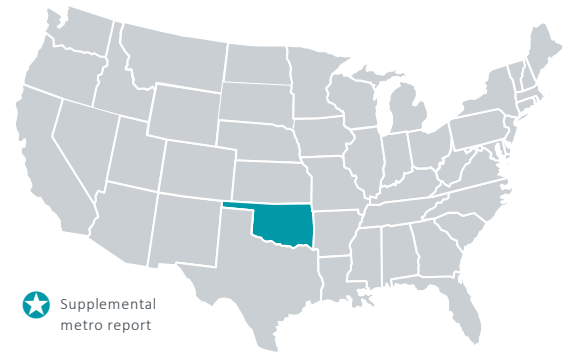
STATE OF TECHNOLOGY SUMMARY

93,136	NET TECH EMPLOYMENT[1]
5.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$6.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.8%	ECONOMIC IMPACT AS A % OF OVERALL
4,580	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
25,010	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
8.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

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31st	NET TECH EMPLOYMENT RANK
40th	NET TECH EMPLOYMENT JOBS ADDED RANK
38th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 39,606

TECH OCCUPATION JOBS 71,380

45% intersection = 93,136 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-824 jobs
-0.9%

Projected growth of +1,050 jobs and +1.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	10,130	+0.6%
IT Support Specialists	6,460	-1.5%
Network Administrators, Architects and Support	5,817	-1.0%
Cybersecurity and Systems Analysts and Engineers	4,359	+0.3%
Database, Data Scientists and Computer Scientists	2,438	-1.2%

LEADING TECH INDUSTRY SECTORS [by employment]

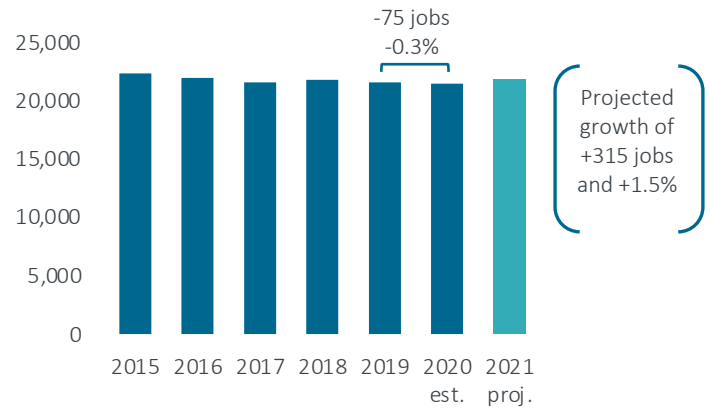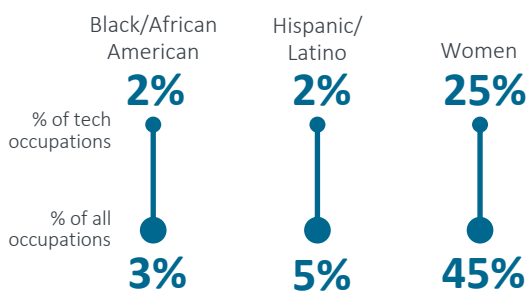|	2020	YoY % Change
IT Services and Custom Software Services	12,839	-0.4%
Telecommunications and Internet Services	11,357	+2.0%
R&D, Testing, and Engineering Services	10,669	-0.2%
Tech Manufacturing	3,947	-1.8%
Software [packaged]	794	+2.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	6%	5%	26%
% of all occupations	8%	9%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $70,826, 80% higher than median state wage

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th
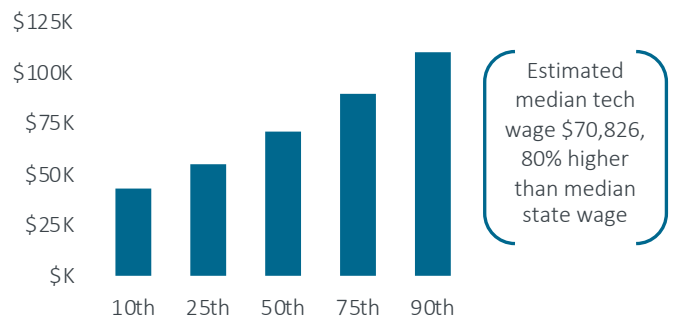
Oregon
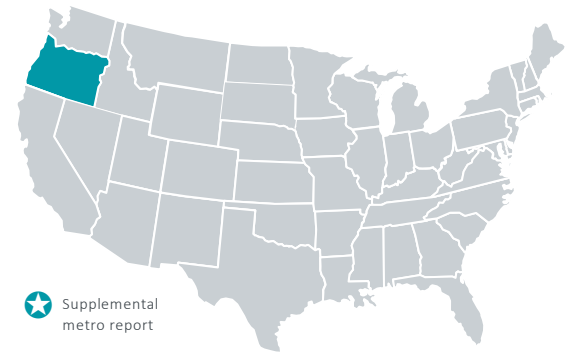
STATE OF TECHNOLOGY SUMMARY

166,862	NET TECH EMPLOYMENT[1]
8.1%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$27.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
12.1%	ECONOMIC IMPACT AS A % OF OVERALL
8,509	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
45,003	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

23rd	NET TECH EMPLOYMENT RANK
29th	NET TECH EMPLOYMENT JOBS ADDED RANK
19th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
110,630

TECH OCCUPATION JOBS
110,180

49% intersection =
166,862 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-216 jobs
-0.1%

Projected growth of +3,396 jobs and +2.0%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	24,711	+0.6%
IT Support Specialists	8,541	-0.8%
Cybersecurity and Systems Analysts and Engineers	7,694	-0.1%
Network Administrators, Architects and Support	7,339	-1.2%
Database, Data Scientists and Computer Scientists	2,023	+0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	41,995	-0.2%
IT Services and Custom Software Services	24,829	+0.3%
R&D, Testing, and Engineering Services	18,225	+1.5%
Telecommunications and Internet Services	13,197	+3.1%
Software [packaged]	12,384	+1.2%

TECH WORKFORCE CHARACTERISTICS[2]

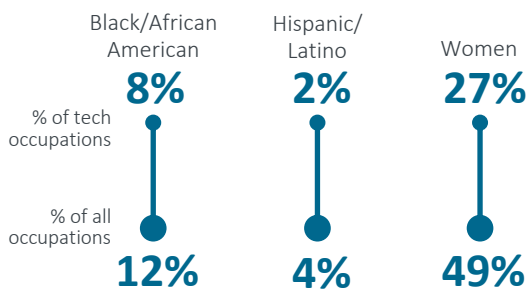|	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	5%	24%
% of all occupations	3%	12%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $82,397, 75% higher than median state wage

CompTIA.
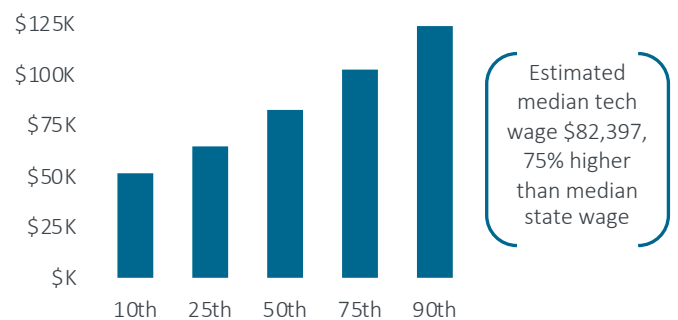
Pennsylvania
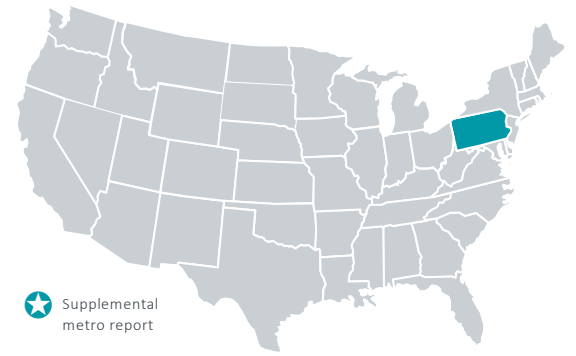
STATE OF TECHNOLOGY SUMMARY

441,162	NET TECH EMPLOYMENT[1]
7.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$58.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
8.3%	ECONOMIC IMPACT AS A % OF OVERALL
18,743	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
127,758	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
19.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

8th	NET TECH EMPLOYMENT RANK
48th	NET TECH EMPLOYMENT JOBS ADDED RANK
8th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
262,148

TECH OCCUPATION JOBS
293,799

44% intersection =
441,162 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-2,389 jobs
-0.5%

Projected growth of +7,044 jobs and +1.6%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	55,726	+0.7%
Network Administrators, Architects and Support	26,476	-1.4%
Cybersecurity and Systems Analysts and Engineers	25,547	-0.4%
IT Support Specialists	22,926	-1.0%
Database, Data Scientists and Computer Scientists	7,572	-0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

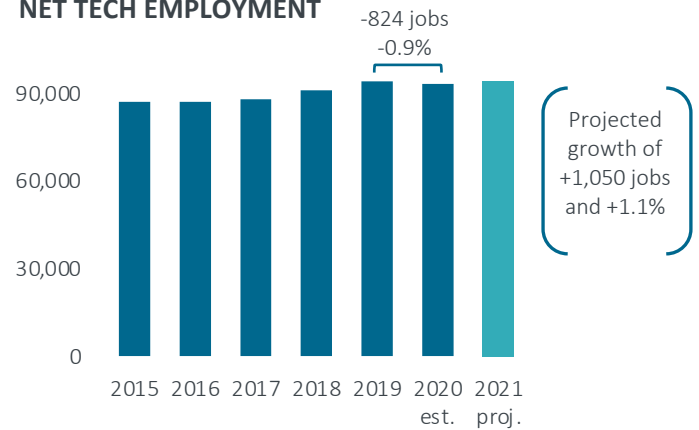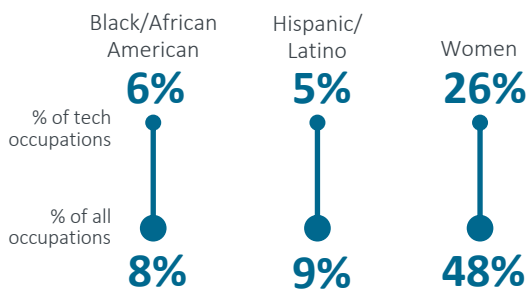|	2020	YoY % Change
R&D, Testing, and Engineering Services	90,156	+1.1%
IT Services and Custom Software Services	86,378	-0.2%
Telecommunications and Internet Services	42,880	+1.2%
Tech Manufacturing	30,795	-1.5%
Software [packaged]	11,939	+7.5%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	6%	3%	25%
% of all occupations	11%	6%	49%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $80,010, 77% higher than median state wage

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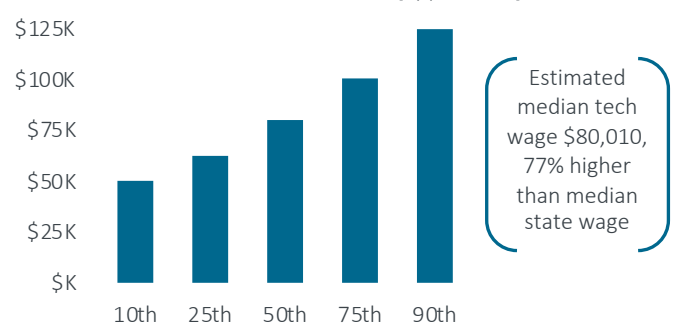
Rhode Island
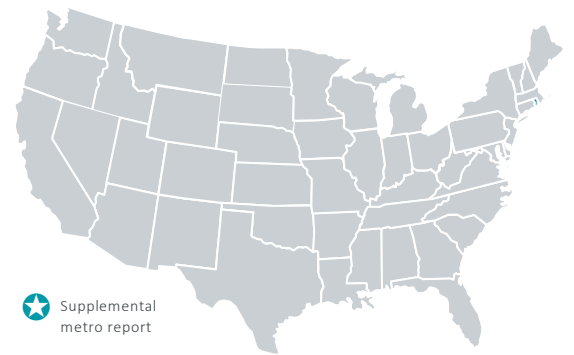
STATE OF TECHNOLOGY SUMMARY

35,426	NET TECH EMPLOYMENT[1]
7.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.9%	ECONOMIC IMPACT AS A % OF OVERALL
3,051	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
12,955	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
19.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

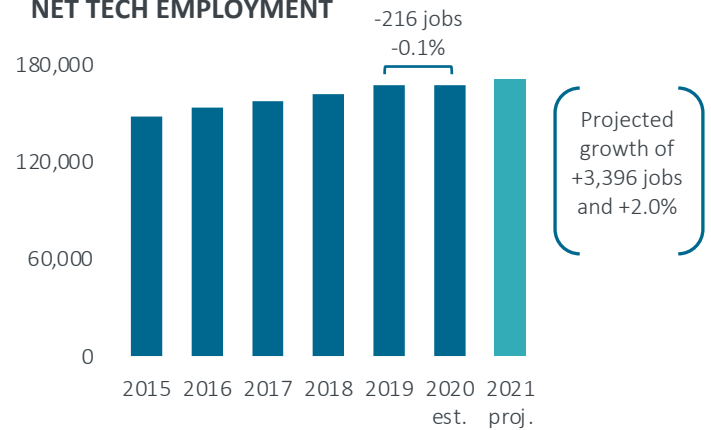Supplemental metro report

42nd	NET TECH EMPLOYMENT RANK
33rd	NET TECH EMPLOYMENT JOBS ADDED RANK
42nd	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
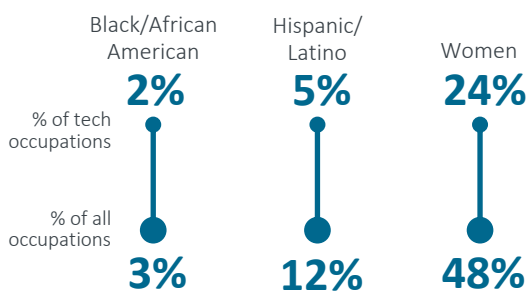
TECH INDUSTRY JOBS 20,201

TECH OCCUPATION JOBS 26,093

54% intersection = 35,426 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-349 jobs
-1.0%

Projected growth of +457 jobs and +1.3%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	4,570	-0.4%
Network Administrators, Architects and Support	3,012	-1.6%
Cybersecurity and Systems Analysts and Engineers	2,310	-0.3%
IT Support Specialists	1,680	-1.2%
Database, Data Scientists and Computer Scientists	1,072	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	8,724	+0.1%
R&D, Testing, and Engineering Services	4,385	+0.1%
Tech Manufacturing	3,823	-0.4%
Telecommunications and Internet Services	2,526	-1.5%
Software [packaged]	743	-1.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	3%	6%	27%
% of all occupations	6%	12%	52%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $88,804, 74% higher than median state wage

CompTIA
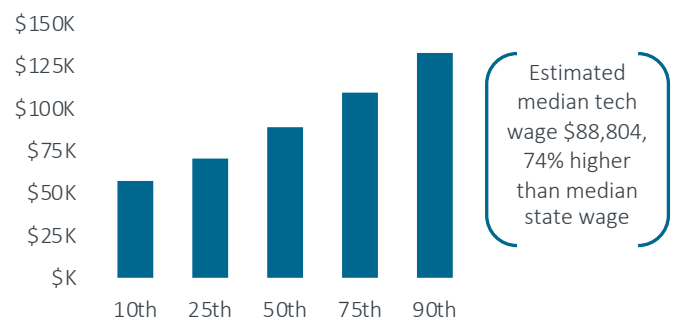
South Carolina
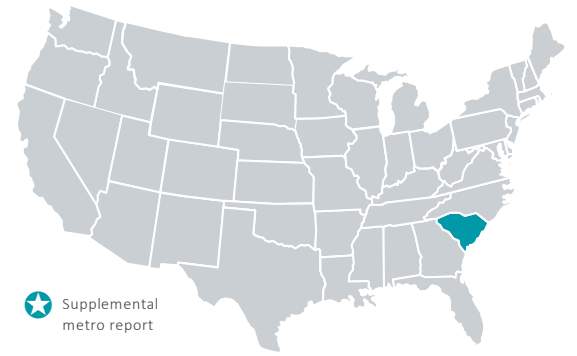
STATE OF TECHNOLOGY SUMMARY

130,042	NET TECH EMPLOYMENT[1]
5.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$12.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.8%	ECONOMIC IMPACT AS A % OF OVERALL
8,663	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
29,274	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
12.4%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

27th	NET TECH EMPLOYMENT RANK
35th	NET TECH EMPLOYMENT JOBS ADDED RANK
27th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 67,957

TECH OCCUPATION JOBS 93,392

46% intersection = 130,042 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-437 jobs
-0.3%

Projected growth of +3,734 jobs and +2.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	13,527	+1.7%
Cybersecurity and Systems Analysts and Engineers	9,353	-0.0%
Network Administrators, Architects and Support	9,073	-1.4%
IT Support Specialists	8,202	-0.9%
Database, Data Scientists and Computer Scientists	1,544	+1.0%

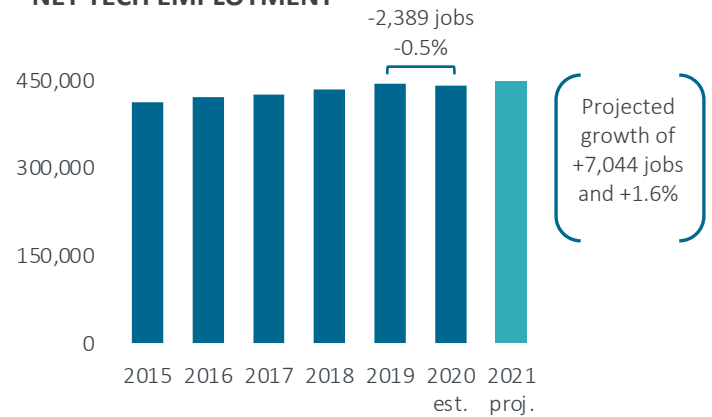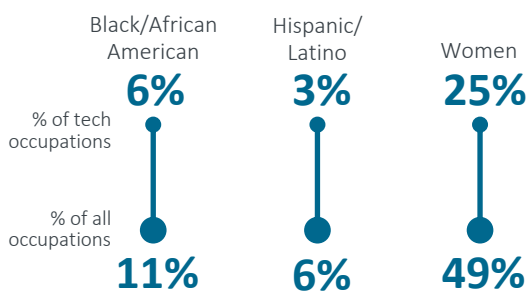## LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	23,547	+2.7%
R&D, Testing, and Engineering Services	18,882	-0.8%
Telecommunications and Internet Services	15,621	-1.1%
Tech Manufacturing	7,168	+2.3%
Software [packaged]	2,739	+0.8%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	17%	3%	29%
% of all occupations	27%	5%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $73,508, 89% higher than median state wage
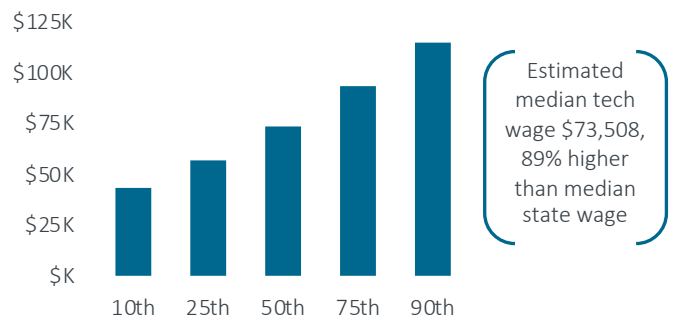
South Dakota
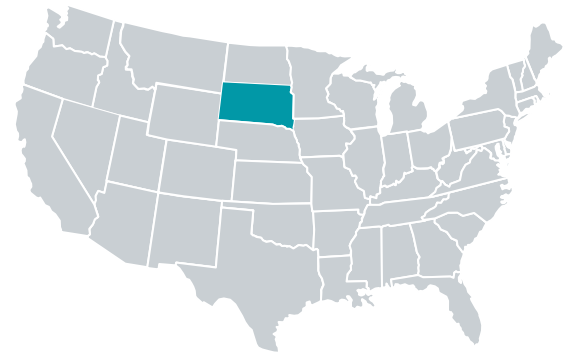
STATE OF TECHNOLOGY SUMMARY

22,158	NET TECH EMPLOYMENT[1]
4.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.3%	ECONOMIC IMPACT AS A % OF OVERALL
1,668	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
4,100	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

48th	NET TECH EMPLOYMENT RANK
20th	NET TECH EMPLOYMENT JOBS ADDED RANK
48th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 12,084

TECH OCCUPATION JOBS 15,518

45% intersection = 22,158 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+156 jobs +0.7%

Projected growth of +635 jobs and +2.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Network Administrators, Architects and Support	2,889	-0.9%
Software, Programmers, Web and QA	2,623	+1.3%
IT Support Specialists	1,172	+0.4%
Cybersecurity and Systems Analysts and Engineers	1,064	+1.7%
Database, Data Scientists and Computer Scientists	256	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	3,622	+2.6%
R&D, Testing, and Engineering Services	3,334	+3.5%
Telecommunications and Internet Services	2,900	+1.1%
Tech Manufacturing	2,081	-0.3%
Software [packaged]	147	+7.2%

TECH WORKFORCE CHARACTERISTICS[2]
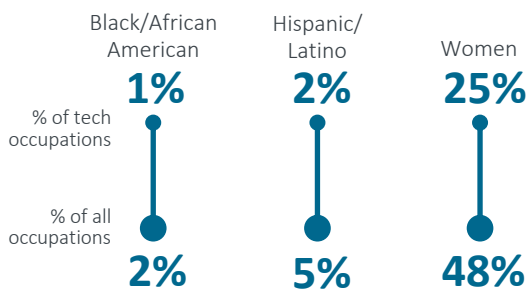
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	1%	2%	25%
% of all occupations	2%	5%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $61,866, 60% higher than median state wage

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

CompTIA.
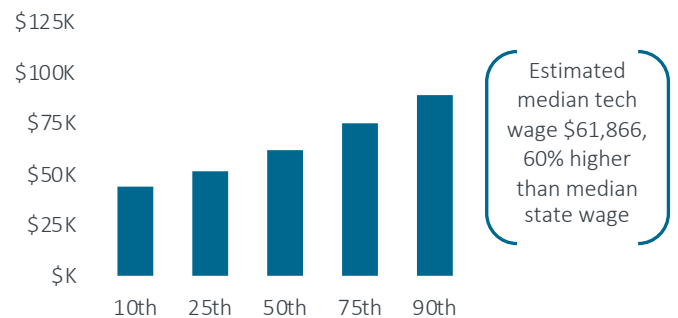
Tennessee
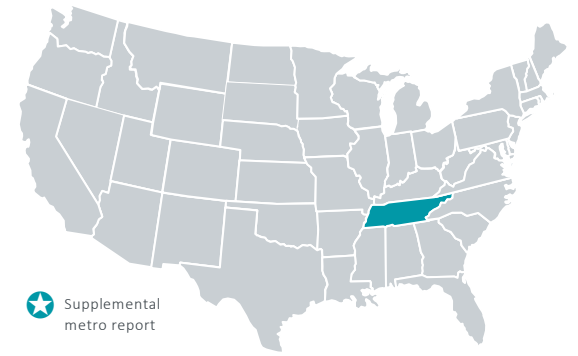
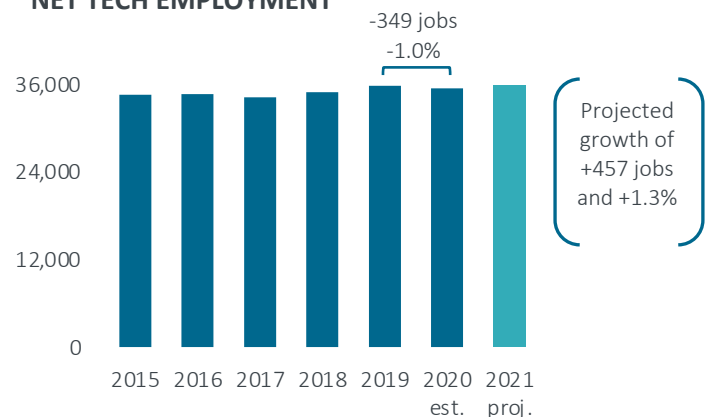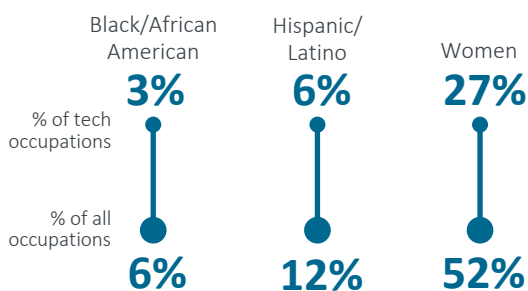## STATE OF TECHNOLOGY SUMMARY

174,067	NET TECH EMPLOYMENT[1]
5.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$18.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.3%	ECONOMIC IMPACT AS A % OF OVERALL
10,432	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
57,274	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
16.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

22nd	NET TECH EMPLOYMENT RANK
16th	NET TECH EMPLOYMENT JOBS ADDED RANK
24th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 88,077

TECH OCCUPATION JOBS 123,762

43% intersection = 174,067 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+826 jobs +0.5%

Projected growth of +4,312 jobs and +2.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	19,192	+2.7%
Cybersecurity and Systems Analysts and Engineers	11,789	+0.6%
Network Administrators, Architects and Support	11,077	-0.4%
IT Support Specialists	9,942	+0.3%
Database, Data Scientists and Computer Scientists	2,454	+1.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	30,673	+1.6%
R&D, Testing, and Engineering Services	27,367	+1.5%
Telecommunications and Internet Services	18,578	+0.8%
Tech Manufacturing	5,955	+2.2%
Software [packaged]	5,504	+10.5%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	12%	2%	28%
% of all occupations	18%	5%	49%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $70,780, 78% higher than median state wage

CompTIA.
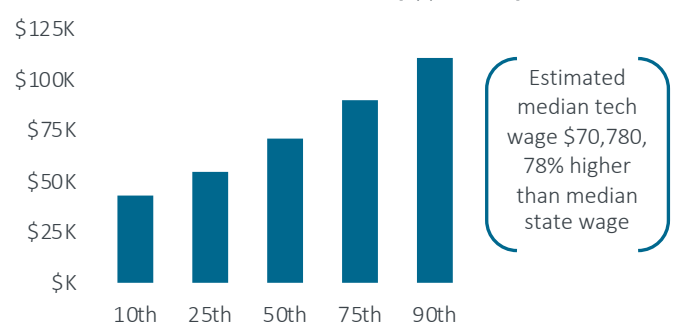
Texas
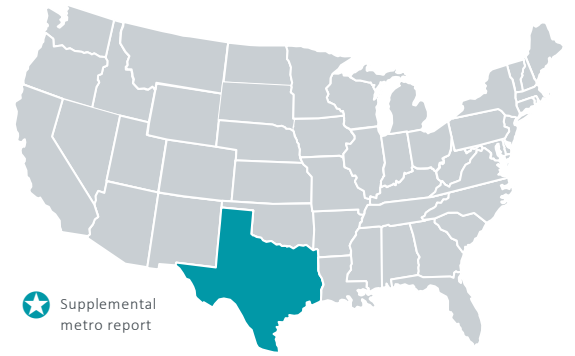
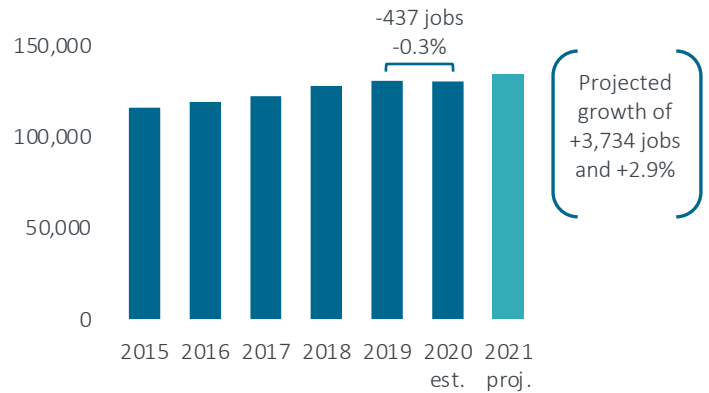## STATE OF TECHNOLOGY SUMMARY

1,060,588	NET TECH EMPLOYMENT[1]
7.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$152.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
8.9%	ECONOMIC IMPACT AS A % OF OVERALL
44,727	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
363,642	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

2nd	NET TECH EMPLOYMENT RANK
1st	NET TECH EMPLOYMENT JOBS ADDED RANK
2nd	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
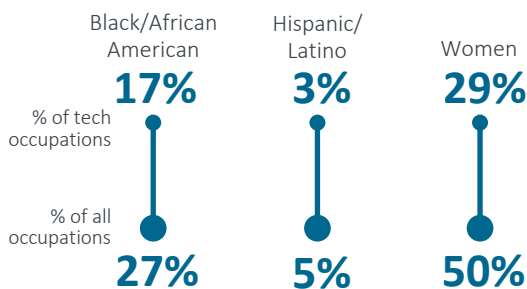
TECH INDUSTRY JOBS **689,034**

TECH OCCUPATION JOBS **678,214**

45% intersection = 1,060,588 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+11,862 jobs +1.1%

Projected growth of +29,171 jobs and +2.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	152,409	+2.1%
Cybersecurity and Systems Analysts and Engineers	67,833	+1.0%
Network Administrators, Architects and Support	66,024	+0.0%
IT Support Specialists	63,137	+0.5%
Database, Data Scientists and Computer Scientists	16,170	+1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	281,199	+2.1%
R&D, Testing, and Engineering Services	155,467	+2.5%
Telecommunications and Internet Services	130,112	+1.4%
Tech Manufacturing	98,111	+1.1%
Software [packaged]	24,145	+7.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	9%	16%	25%
% of all occupations	13%	34%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,813, 96% higher than median state wage

CompTIA.
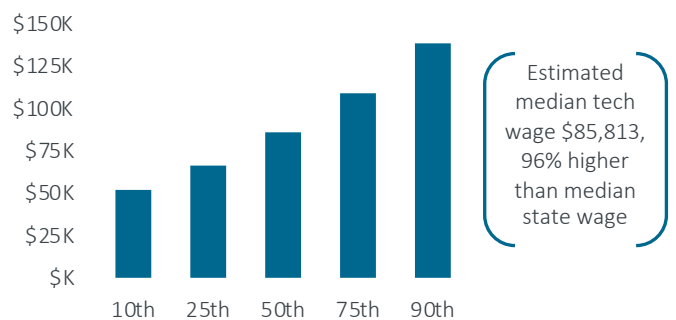
Utah
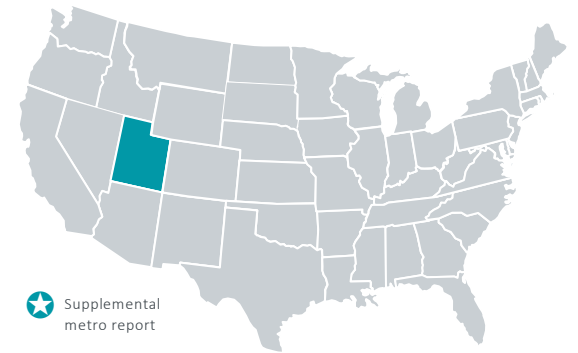
STATE OF TECHNOLOGY SUMMARY

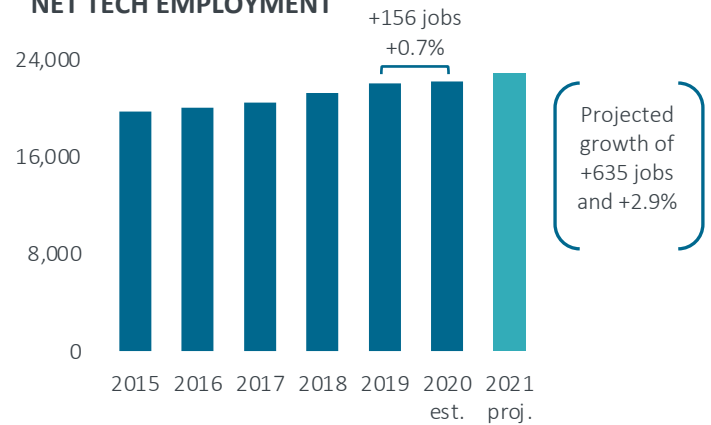|	
152,687	NET TECH EMPLOYMENT[1]
9.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$20.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
11.5%	ECONOMIC IMPACT AS A % OF OVERALL
8,197	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
35,035	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
15.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

24th	NET TECH EMPLOYMENT RANK
10th	NET TECH EMPLOYMENT JOBS ADDED RANK
22nd	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
103,898

TECH OCCUPATION JOBS
96,938

46% intersection =
152,687 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,275 jobs
+1.5%

Projected growth of +6,375 jobs and +4.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	25,437	+2.1%
IT Support Specialists	10,381	+0.4%
Network Administrators, Architects and Support	6,378	+0.8%
Cybersecurity and Systems Analysts and Engineers	5,016	+2.6%
Database, Data Scientists and Computer Scientists	2,863	+1.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	35,573	+1.3%
R&D, Testing, and Engineering Services	21,716	+4.8%
Tech Manufacturing	17,404	+1.3%
Telecommunications and Internet Services	16,488	-0.9%
Software [packaged]	12,716	+5.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	1%	7%	21%
% of all occupations	2%	13%	46%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $77,492, 82% higher than median state wage
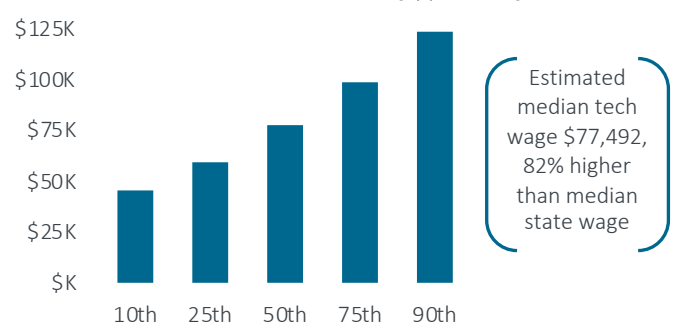
Vermont
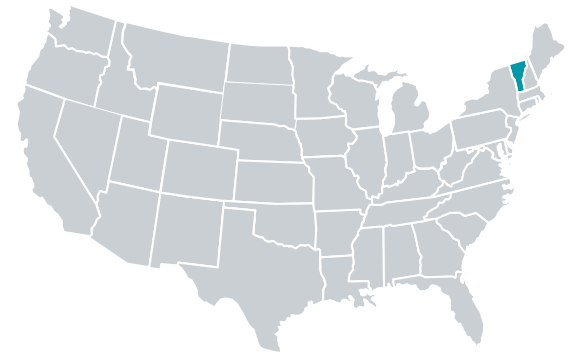
STATE OF TECHNOLOGY SUMMARY

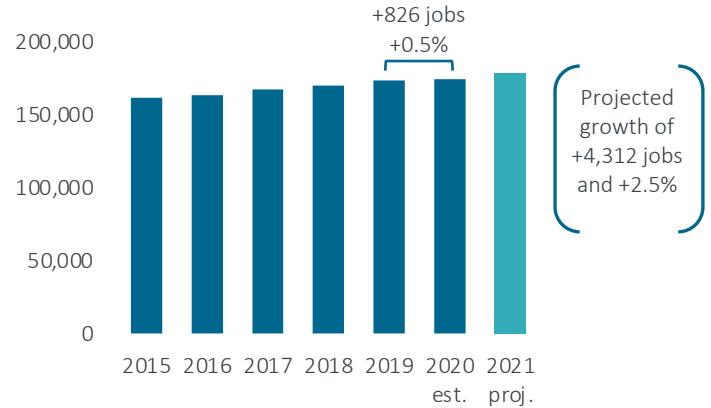|	
22,509	NET TECH EMPLOYMENT[1]
6.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
8.3%	ECONOMIC IMPACT AS A % OF OVERALL
2,024	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
3,415	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.5%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

47th	NET TECH EMPLOYMENT RANK
31st	NET TECH EMPLOYMENT JOBS ADDED RANK
45th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
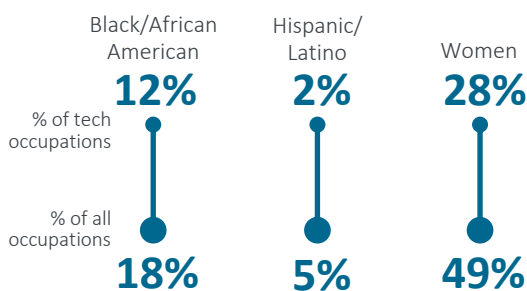

TECH INDUSTRY JOBS
14,231

TECH OCCUPATION JOBS
15,375

50% intersection =
22,509 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-220 jobs
-1.0%

Projected growth of +187 jobs and +0.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	2,753	+0.3%
Network Administrators, Architects and Support	1,509	-1.6%
IT Support Specialists	1,272	-1.3%
Cybersecurity and Systems Analysts and Engineers	780	+0.5%
Database, Data Scientists and Computer Scientists	280	+1.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,115	+0.2%
Tech Manufacturing	4,585	-4.1%
R&D, Testing, and Engineering Services	2,301	+7.9%
Telecommunications and Internet Services	1,488	-0.4%
Software [packaged]	742	-3.6%

TECH WORKFORCE CHARACTERISTICS[2]
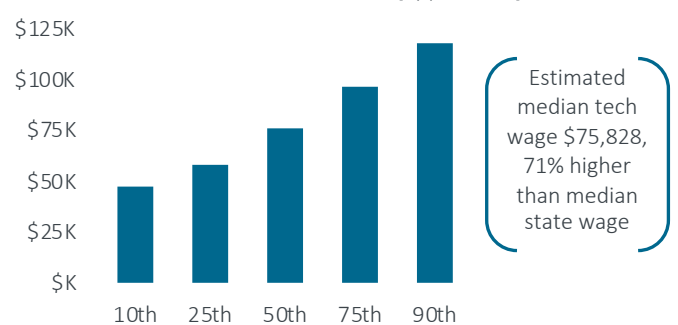
	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	1%	25%
% of all occupations	2%	3%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $75,828, 71% higher than median state wage

10th 25th 50th 75th 90th

Virginia

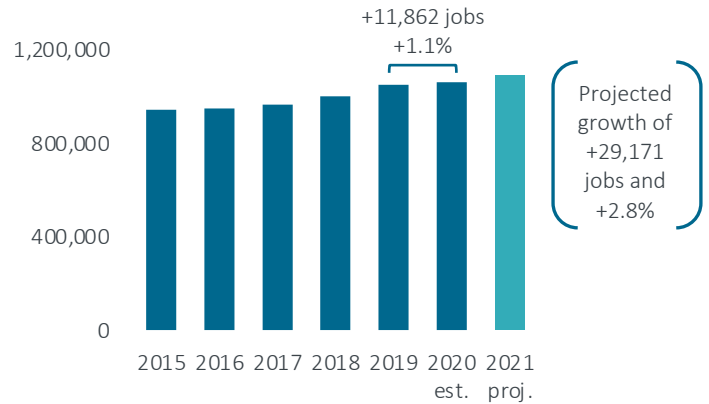## STATE OF TECHNOLOGY SUMMARY

451,268	NET TECH EMPLOYMENT[1]
11.1%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$66.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
13.5%	ECONOMIC IMPACT AS A % OF OVERALL
23,233	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
211,856	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
22.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

★ Supplemental metro report

5th	NET TECH EMPLOYMENT RANK
6th	NET TECH EMPLOYMENT JOBS ADDED RANK
7th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
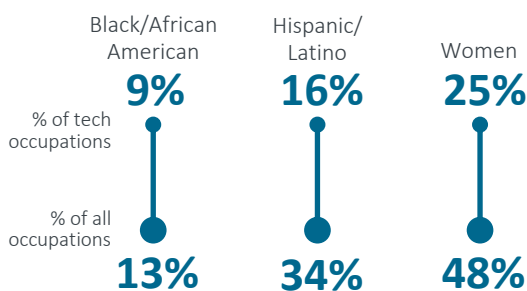

TECH INDUSTRY JOBS **316,339**

TECH OCCUPATION JOBS **305,597**

54% intersection = 451,268 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+3,032 jobs +0.7%

Projected growth of +8,523 jobs and +1.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	89,919	+1.2%
Cybersecurity and Systems Analysts and Engineers	42,646	+1.0%
Network Administrators, Architects and Support	33,292	-0.3%
IT Support Specialists	20,411	+0.5%
Database, Data Scientists and Computer Scientists	10,850	+0.9%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	184,768	+0.8%
R&D, Testing, and Engineering Services	72,330	+1.7%
Telecommunications and Internet Services	39,410	+0.9%
Tech Manufacturing	13,548	+1.1%
Software [packaged]	6,284	+2.9%

TECH WORKFORCE CHARACTERISTICS[2]
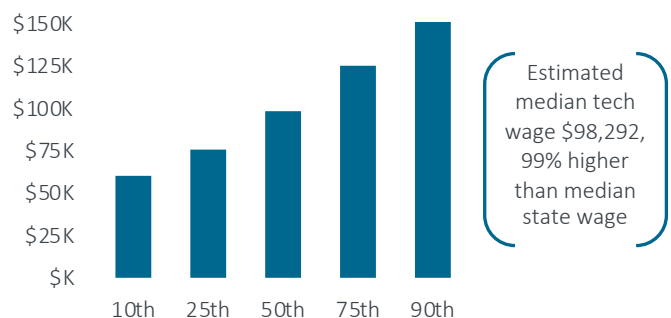
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	**13%**	**5%**	**26%**
% of all occupations	**21%**	**8%**	**50%**

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $98,292, 99% higher than median state wage

10th 25th 50th 75th 90th

Washington
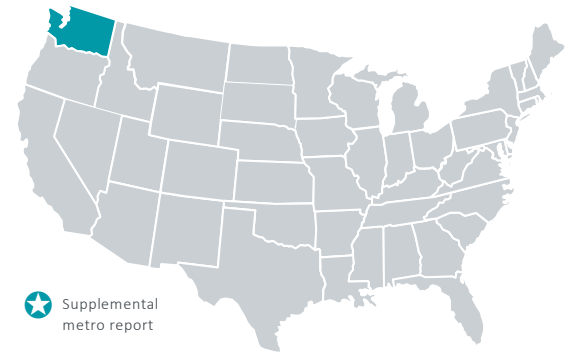
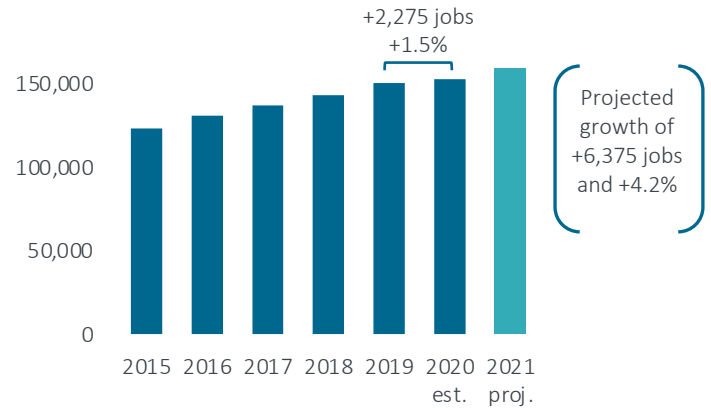## STATE OF TECHNOLOGY SUMMARY

405,816	NET TECH EMPLOYMENT[1]
11.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$121.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
22.5%	ECONOMIC IMPACT AS A % OF OVERALL
16,547	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
113,728	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
28.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

9th	NET TECH EMPLOYMENT RANK
3rd	NET TECH EMPLOYMENT JOBS ADDED RANK
4th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
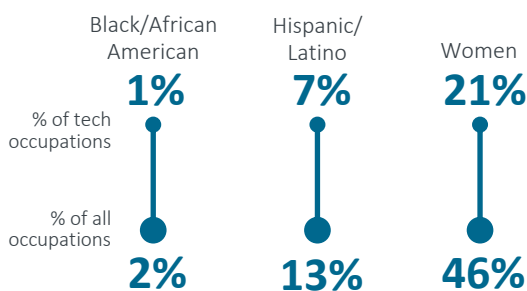

TECH INDUSTRY JOBS
277,733

TECH OCCUPATION JOBS
271,522

52% intersection = 405,816 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+5,222 jobs
+1.3%

Projected growth of +11,011 jobs and +2.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	103,464	+2.3%
Cybersecurity and Systems Analysts and Engineers	20,874	+0.8%
IT Support Specialists	18,924	+0.8%
Network Administrators, Architects and Support	16,489	-0.1%
Database, Data Scientists and Computer Scientists	6,319	+2.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Software [packaged]	73,148	+4.6%
IT Services and Custom Software Services	72,569	+1.2%
Telecommunications and Internet Services	61,336	+1.9%
R&D, Testing, and Engineering Services	47,346	+2.2%
Tech Manufacturing	23,335	-1.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	4%	24%
% of all occupations	5%	11%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

10th 25th 50th 75th 90th

Estimated median tech wage $110,020, 102% higher than median state wage
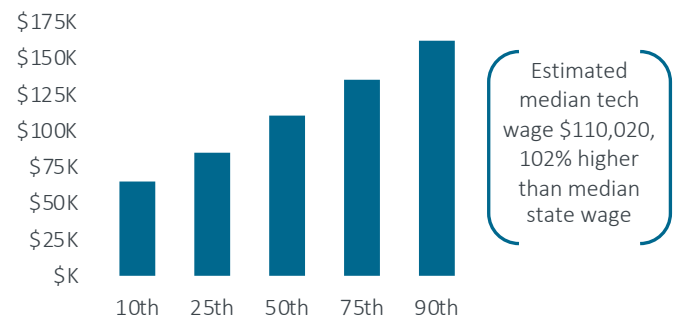
West Virginia
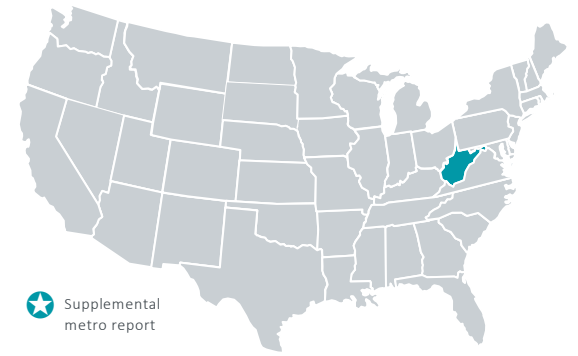
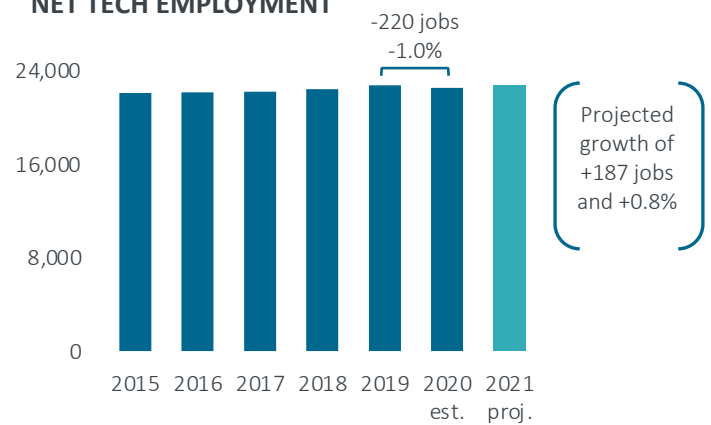## STATE OF TECHNOLOGY SUMMARY

30,130	NET TECH EMPLOYMENT[1]
4.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.6%	ECONOMIC IMPACT AS A % OF OVERALL
2,367	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
5,638	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

45th	NET TECH EMPLOYMENT RANK
25th	NET TECH EMPLOYMENT JOBS ADDED RANK
46th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
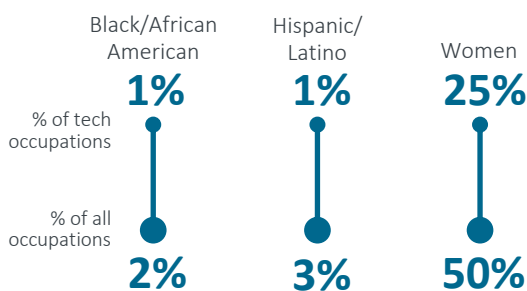
TECH INDUSTRY JOBS
16,317

TECH OCCUPATION JOBS
20,270

40% intersection =
30,130 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-103 jobs
-0.3%

Projected growth of +451 jobs and +1.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	3,055	+1.9%
IT Support Specialists	2,138	-0.8%
Network Administrators, Architects and Support	1,985	-1.3%
Cybersecurity and Systems Analysts and Engineers	1,370	+1.2%
Database, Data Scientists and Computer Scientists	614	+0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,360	+1.9%
R&D, Testing, and Engineering Services	4,911	-1.4%
Telecommunications and Internet Services	3,917	+0.8%
Tech Manufacturing	1,984	+0.0%
Software [packaged]	146	+0.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	1%	26%
% of all occupations	4%	2%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

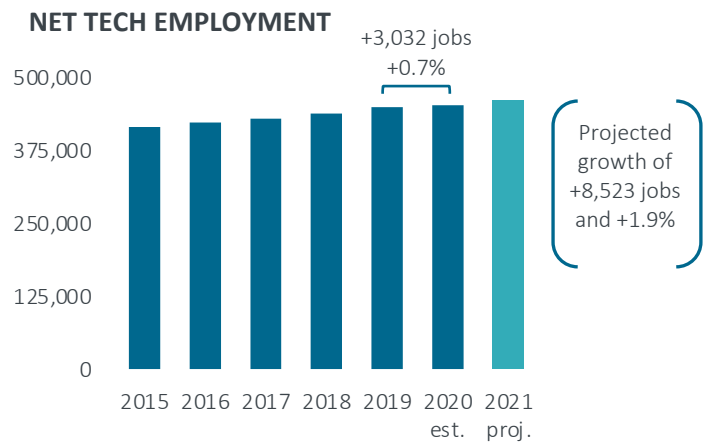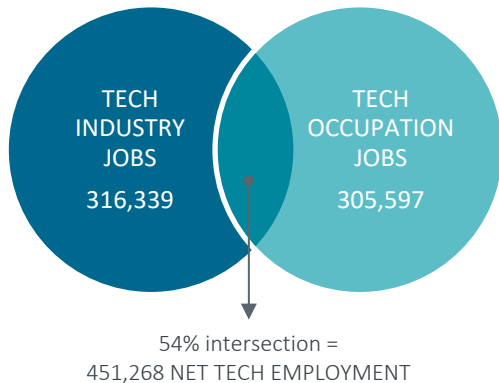Estimated median tech wage $71,626, 90% higher than median state wage
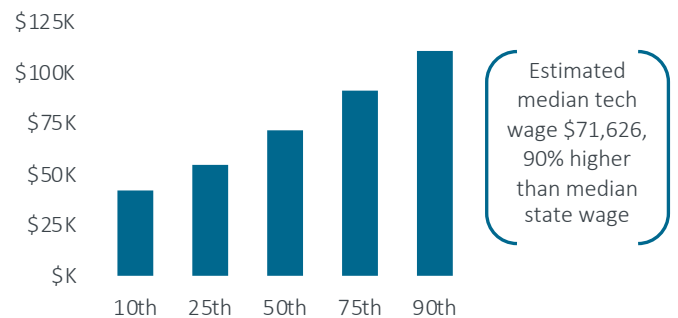
Wisconsin
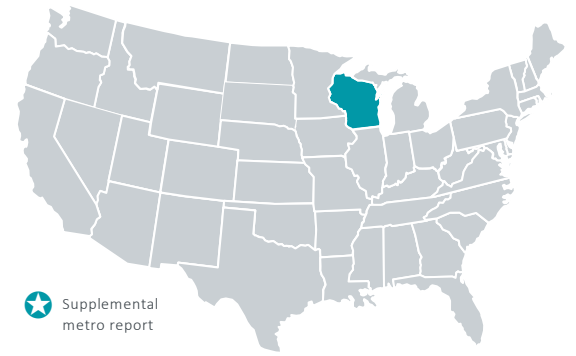
STATE OF TECHNOLOGY SUMMARY

216,210 NET TECH EMPLOYMENT[1]

7.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$22.5b ECONOMIC IMPACT [estimated direct impact of tech sector]

7.3% ECONOMIC IMPACT AS A % OF OVERALL

9,022 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

65,706 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.3% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

⭐ Supplemental metro report

19th NET TECH EMPLOYMENT RANK

46th NET TECH EMPLOYMENT JOBS ADDED RANK

20th ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
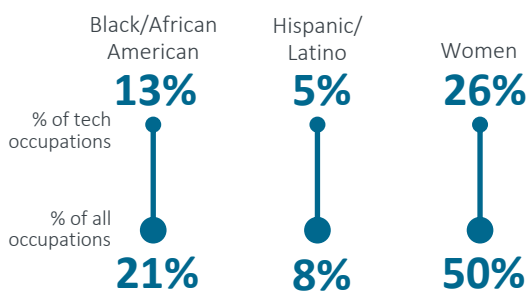
TECH INDUSTRY JOBS
109,521

TECH OCCUPATION JOBS
158,971

48% intersection =
216,210 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,965 jobs
-0.9%

Projected growth of +3,150 jobs and +1.5%

225,000

150,000

75,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	32,518	-0.1%
Cybersecurity and Systems Analysts and Engineers	15,210	-0.9%
Network Administrators, Architects and Support	11,884	-1.7%
IT Support Specialists	9,905	-1.1%
Database, Data Scientists and Computer Scientists	3,030	-0.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	32,471	-0.1%
R&D, Testing, and Engineering Services	24,276	+1.6%
Telecommunications and Internet Services	19,635	+0.2%
Tech Manufacturing	19,116	-0.3%
Software [packaged]	14,022	+2.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	3%	3%	28%
% of all occupations	6%	6%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $71,024, 63% higher than median state wage

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th
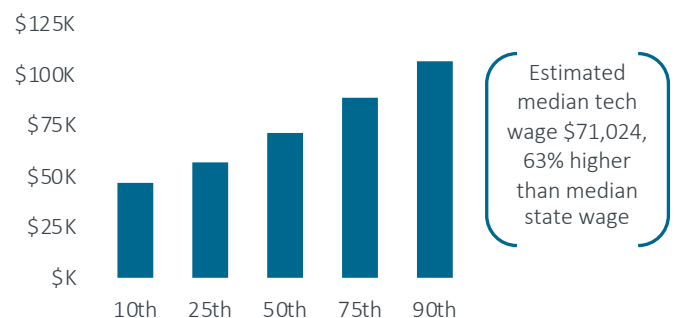
Wyoming
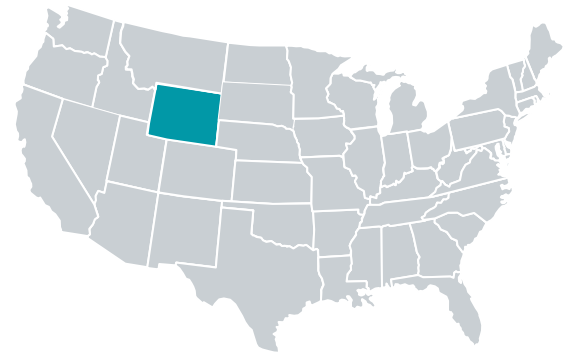
STATE OF TECHNOLOGY SUMMARY

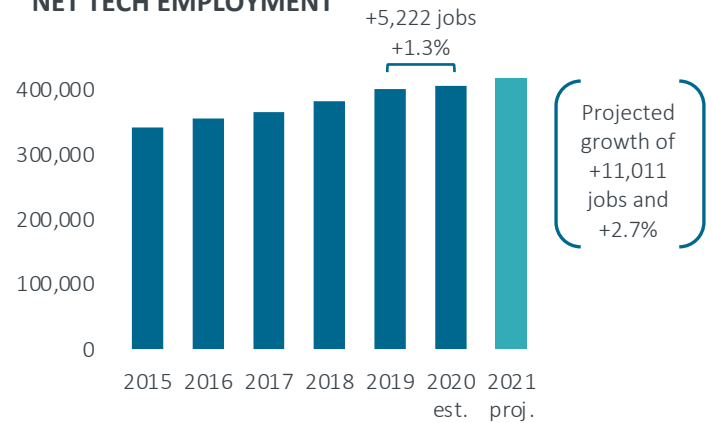9,621 NET TECH EMPLOYMENT[1]

3.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$1.0b ECONOMIC IMPACT [estimated direct impact of tech sector]

2.8% ECONOMIC IMPACT AS A % OF OVERALL

1,199 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

2,343 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

12.5% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

51st NET TECH EMPLOYMENT RANK

26th NET TECH EMPLOYMENT JOBS ADDED RANK

51st ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
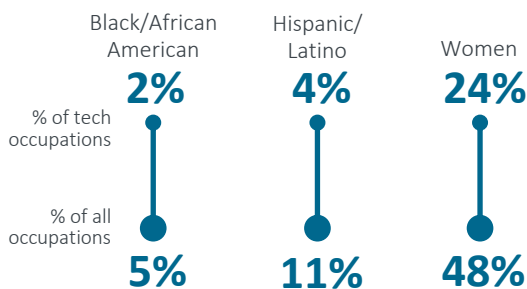
TECH INDUSTRY JOBS 5,222

TECH OCCUPATION JOBS 6,516

41% intersection = 9,621 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-122 jobs -1.3%

Projected growth of +161 jobs and +1.7%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Network Administrators, Architects and Support	946	-2.7%
Software, Programmers, Web and QA	817	-0.2%
IT Support Specialists	710	-1.7%
Cybersecurity and Systems Analysts and Engineers	346	+0.1%
Database, Data Scientists and Computer Scientists	219	-1.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	2,024	+0.1%
Telecommunications and Internet Services	1,721	-2.4%
IT Services and Custom Software Services	1,129	+1.3%
Tech Manufacturing	308	-9.8%
Software [packaged]	40	+9.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	5%	26%
% of all occupations	2%	10%	46%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $69,528, 57% higher than median state wage
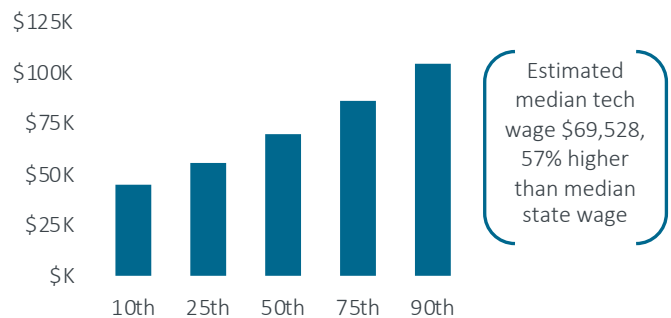
METRO AREA SNAPSHOTS
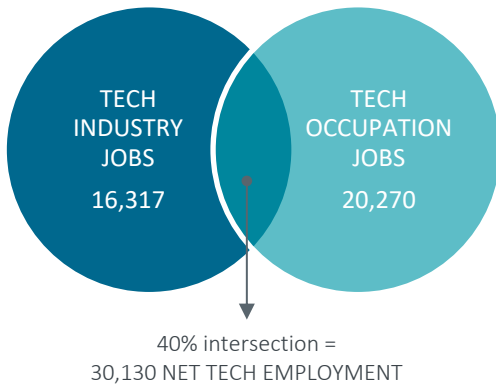
Albuquerque

Full MSA name: Albuquerque, NM
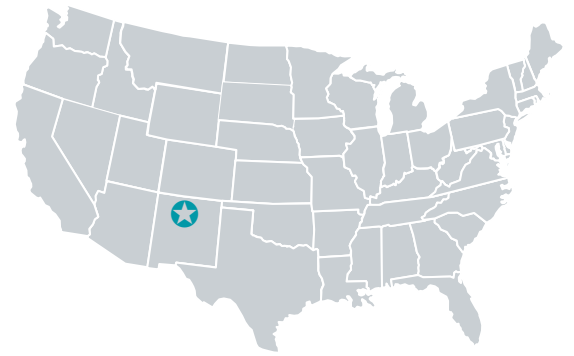
STATE OF TECHNOLOGY SUMMARY

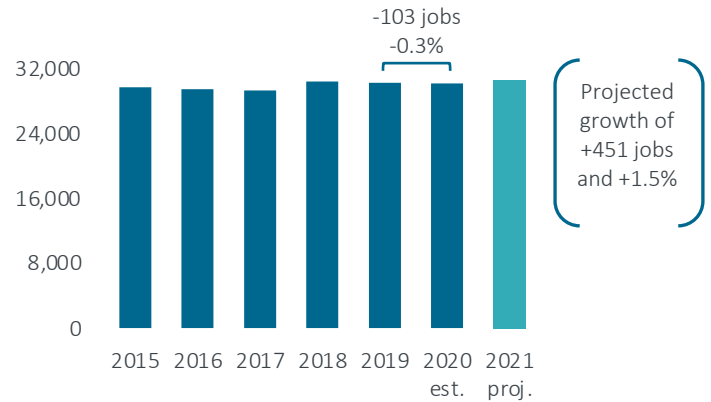40,554 NET TECH EMPLOYMENT[1]

10.0% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$6.1b ECONOMIC IMPACT [estimated direct impact of tech sector]

15.0% ECONOMIC IMPACT AS A % OF OVERALL

1,506 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

10,806 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

13.3% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

41st NET TECH EMPLOYMENT RANK

17th NET TECH EMPLOYMENT JOBS ADDED RANK

38th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
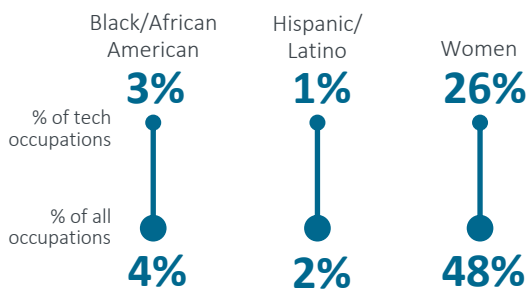
TECH INDUSTRY JOBS 31,371

TECH OCCUPATION JOBS 21,757

40% intersection =
40,554 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+640 jobs
+1.6%

Projected growth of +195 jobs and +0.5%

	2015	2016	2017	2018	2019	2020 est.	2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	2,859	+2.3%
IT Support Specialists	1,655	-0.5%
Network Administrators, Architects and Support	1,611	-0.5%
Cybersecurity Analysts and Systems Engineers	1,562	+1.3%
Database, Data Scientists and Computer Scientists	702	+2.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	18,266	+3.0%
IT Services and Custom Software Services	4,826	+1.7%
Tech Manufacturing	4,789	+3.2%
Telecommunications and Internet Services	3,314	-1.7%
Software [packaged]	175	+16.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	3%	30%	24%
% of all occupations	3%	45%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K					
$100K					
$75K					
$50K					
$25K					
$K					
	10th	25th	50th	75th	90th

Estimated median tech wage $88,131, 109% higher than median metro wage

CompTIA.
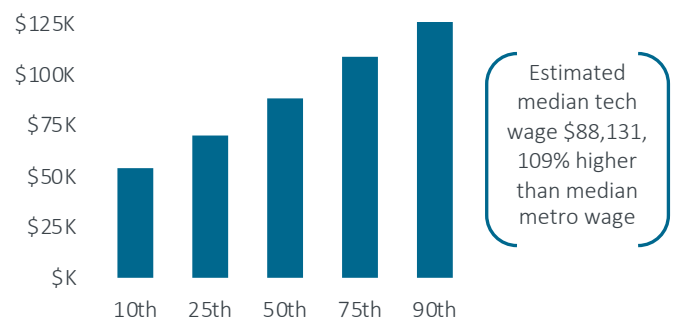
Atlanta
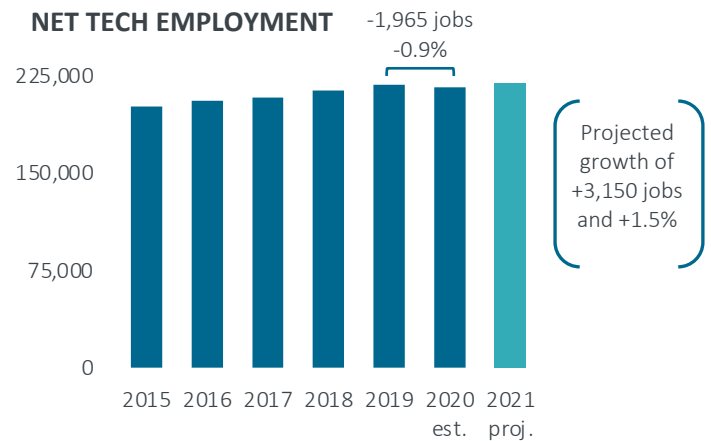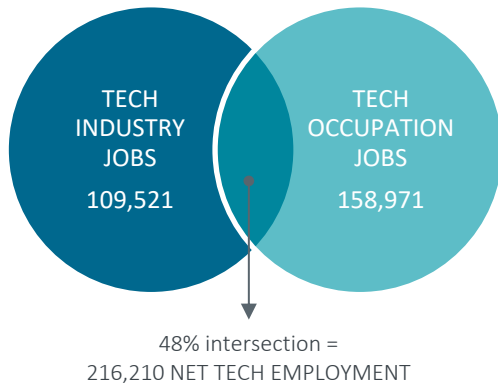
Full MSA name: Atlanta-Sandy Springs-Alpharetta, GA
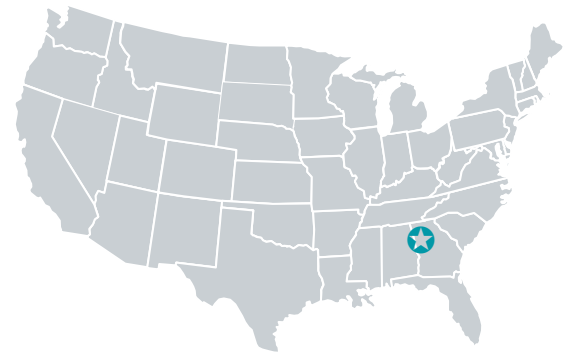
STATE OF TECHNOLOGY SUMMARY

272,869 NET TECH EMPLOYMENT[1]

9.7% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$50.7b ECONOMIC IMPACT [estimated direct impact of tech sector]

13.6% ECONOMIC IMPACT AS A % OF OVERALL

10,696 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

109,263 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

21.4% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

10th NET TECH EMPLOYMENT RANK

35th NET TECH EMPLOYMENT JOBS ADDED RANK

10th ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
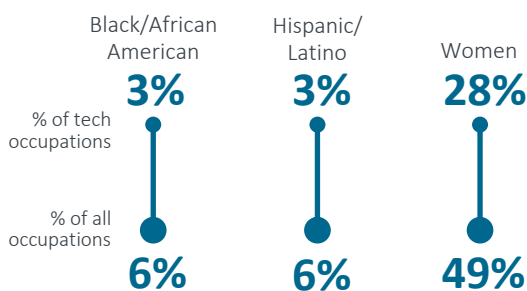
TECH INDUSTRY JOBS
173,645

TECH OCCUPATION JOBS
184,194

49% intersection =
272,869 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-221 jobs
-0.1%

Projected growth of +6,006 jobs and +2.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	46,637	+1.1%
Cybersecurity Analysts and Systems Engineers	19,284	+0.1%
IT Support Specialists	19,238	-0.6%
Network Administrators, Architects and Support	17,069	-0.8%
Database, Data Scientists and Computer Scientists	5,339	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	70,654	+0.4%
Telecommunications and Internet Services	48,239	+1.0%
R&D, Testing, and Engineering Services	29,220	+0.3%
Software [packaged]	16,541	+3.0%
Tech Manufacturing	8,992	-4.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	23%	4%	28%
% of all occupations	33%	8%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $88,914, 90% higher than median metro wage
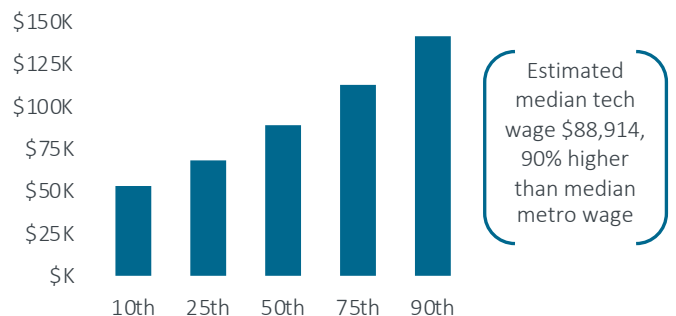
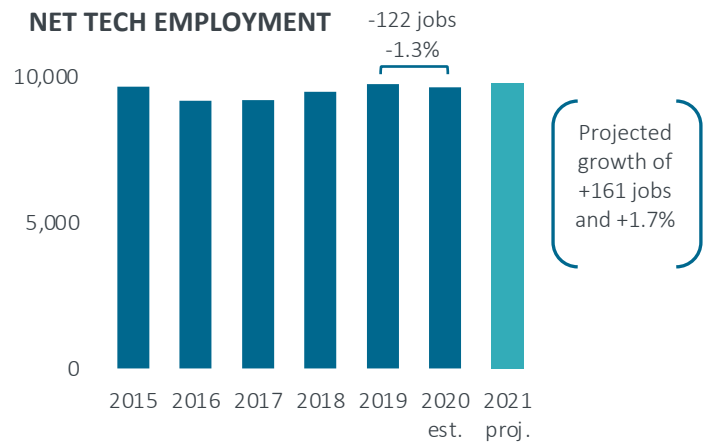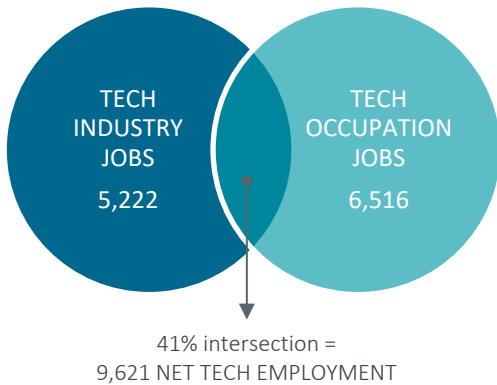# Austin

Full MSA name: Austin-Round Rock-Georgetown, TX

STATE OF TECHNOLOGY SUMMARY

172,961 NET TECH EMPLOYMENT[1]

15.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$37.9b ECONOMIC IMPACT [estimated direct impact of tech sector]

25.3% ECONOMIC IMPACT AS A % OF OVERALL

6,524 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

71,059 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

23.0% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

18th NET TECH EMPLOYMENT RANK

5th NET TECH EMPLOYMENT JOBS ADDED RANK

13th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
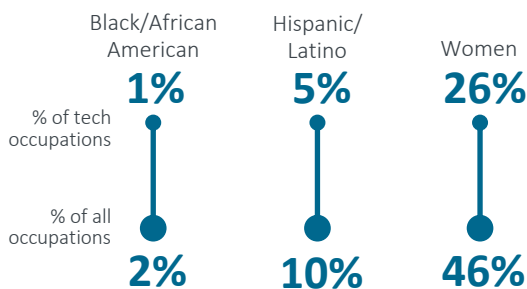

TECH INDUSTRY JOBS
139,732

TECH OCCUPATION JOBS
96,433

45% intersection =
172,961 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+3,364 jobs
+2.0%

Projected growth of +6,718 jobs and +3.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	29,138	+2.4%
Cybersecurity Analysts and Systems Engineers	10,403	+1.0%
Network Administrators, Architects and Support	10,192	+0.7%
IT Support Specialists	9,425	+1.6%
Database, Data Scientists and Computer Scientists	2,641	+1.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	65,190	+1.5%
Tech Manufacturing	28,761	+0.8%
Telecommunications and Internet Services	21,898	+4.0%
R&D, Testing, and Engineering Services	16,941	+4.0%
Software [packaged]	6,942	+11.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	6%	14%	24%
% of all occupations	10%	30%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $89,042, 86% higher than median metro wage
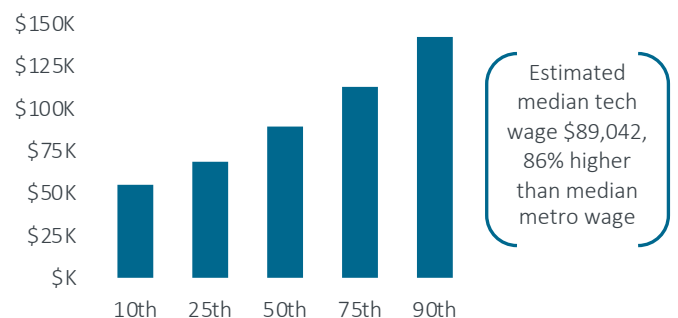
Baltimore

Full MSA name: Baltimore-Columbia-Towson, MD
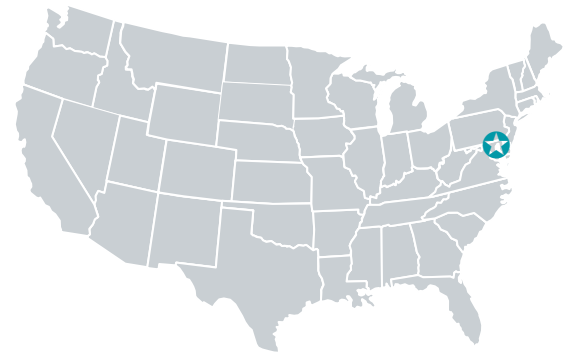
STATE OF TECHNOLOGY SUMMARY

140,903 NET TECH EMPLOYMENT[1]

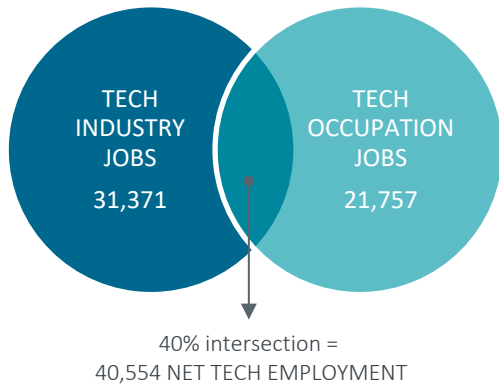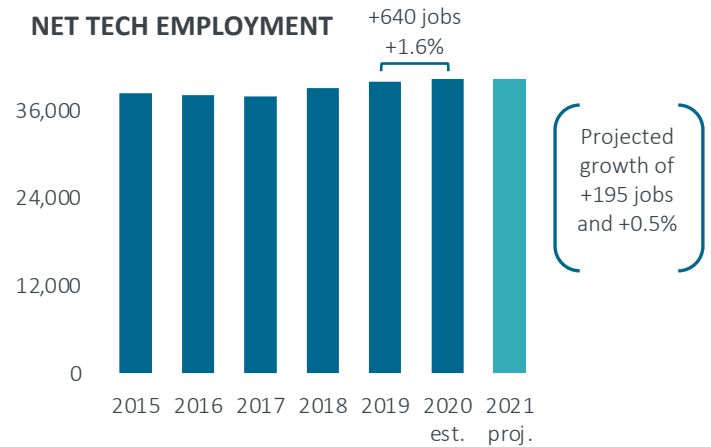10.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$23.9b ECONOMIC IMPACT [estimated direct impact of tech sector]

12.7% ECONOMIC IMPACT AS A % OF OVERALL

5,051 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

68,266 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

19.4% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

20th NET TECH EMPLOYMENT RANK

20th NET TECH EMPLOYMENT JOBS ADDED RANK

20th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
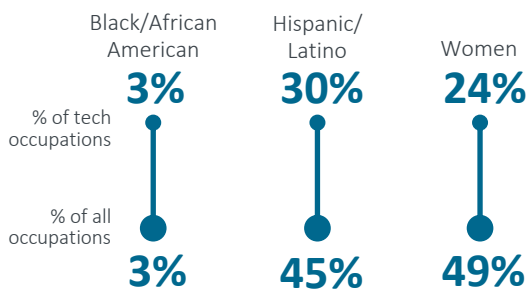

TECH INDUSTRY JOBS
93,434

TECH OCCUPATION JOBS
94,860

51% intersection =
140,903 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+186 jobs
+0.1%

Projected growth of +3,098 jobs and +2.2%

(bar chart years: 2015, 2016, 2017, 2018, 2019, 2020 est., 2021 proj.)

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	20,589	+0.6%
Network Administrators, Architects and Support	14,503	-1.3%
Cybersecurity Analysts and Systems Engineers	11,023	-0.0%
IT Support Specialists	5,930	-0.6%
Database, Data Scientists and Computer Scientists	3,793	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	39,183	-0.0%
R&D, Testing, and Engineering Services	30,880	+1.8%
Tech Manufacturing	13,343	-2.1%
Telecommunications and Internet Services	7,190	+1.8%
Software [packaged]	2,838	+7.2%

TECH WORKFORCE CHARACTERISTICS[2]
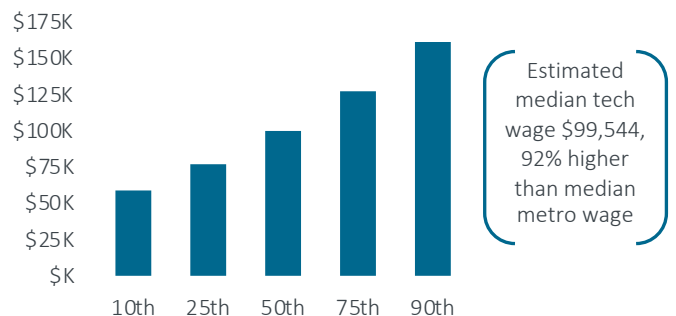
	Black/African American	Hispanic/Latino	Women
% of tech occupations	20%	3%	27%
% of all occupations	29%	7%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

(bar chart percentiles: 10th, 25th, 50th, 75th, 90th)

Estimated median tech wage $99,544, 92% higher than median metro wage

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Boise

Full MSA name: Boise City - Nampa, ID
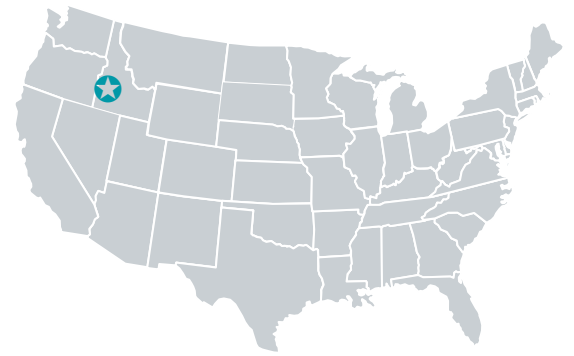
STATE OF TECHNOLOGY SUMMARY

29,623 NET TECH EMPLOYMENT[1]

8.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$4.7b ECONOMIC IMPACT [estimated direct impact of tech sector]

13.2% ECONOMIC IMPACT AS A % OF OVERALL

1,213 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

9,714 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

15.4% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

47th NET TECH EMPLOYMENT RANK

32nd NET TECH EMPLOYMENT JOBS ADDED RANK

42nd ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 20,808

TECH OCCUPATION JOBS 18,648

47% intersection = 29,623 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-130 jobs -0.4%

Projected growth of +673 jobs and +2.3%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	3,839	+1.3%
IT Support Specialists	2,298	-0.1%
Network Administrators, Architects and Support	1,624	-2.1%
Cybersecurity Analysts and Systems Engineers	1,272	+1.3%
Database, Data Scientists and Computer Scientists	423	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

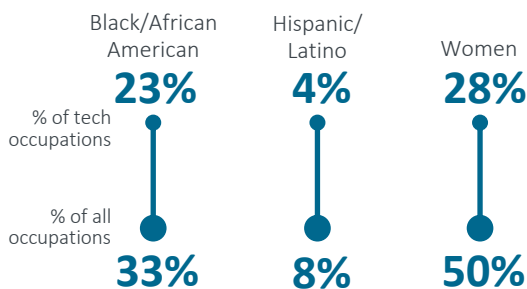|	2020	YoY % Change
Tech Manufacturing	10,199	-2.6%
IT Services and Custom Software Services	5,033	+1.2%
R&D, Testing, and Engineering Services	3,674	+7.4%
Telecommunications and Internet Services	1,624	-19.4%
Software [packaged]	277	+112.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	1%	6%	24%
% of all occupations	2%	13%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $78,964, 92% higher than median metro wage
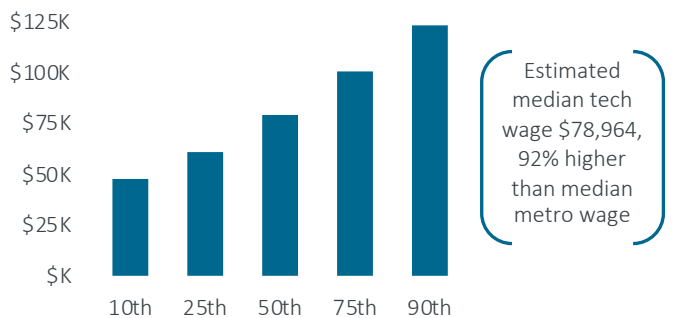
Boston

Full MSA name: Boston-Cambridge-Newton, MA-NH
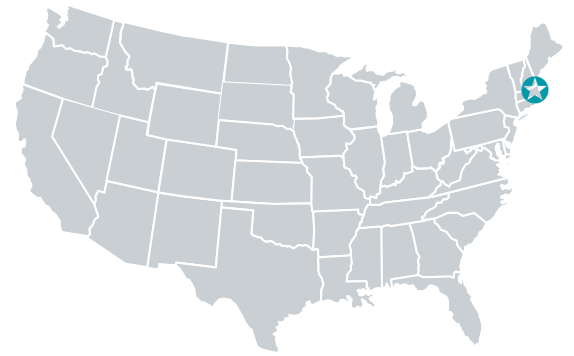
STATE OF TECHNOLOGY SUMMARY

392,781 NET TECH EMPLOYMENT[1]

14.1% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$91.6b ECONOMIC IMPACT [estimated direct impact of tech sector]

20.6% ECONOMIC IMPACT AS A % OF OVERALL

12,841 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

118,736 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

29.0% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

6th NET TECH EMPLOYMENT RANK

6th NET TECH EMPLOYMENT JOBS ADDED RANK

6th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
312,790

TECH OCCUPATION JOBS
215,153

43% intersection =
392,781 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,882 jobs
+0.7%

Projected growth of +8,374 jobs and +2.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

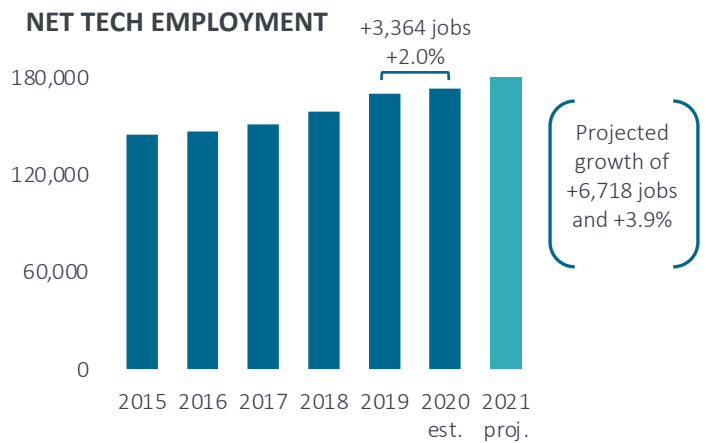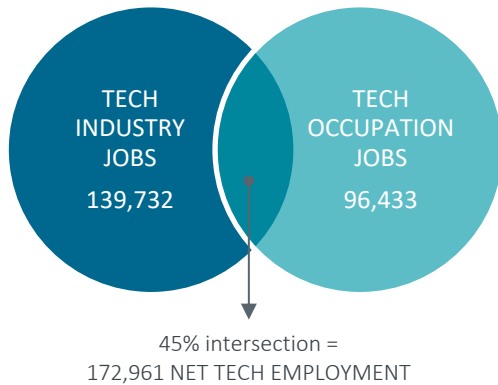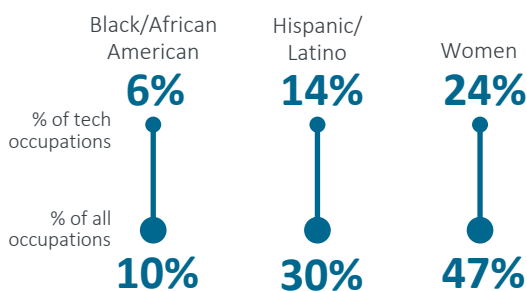|	2020	YoY % Change
Software, Programmers, Web and QA	61,654	+1.2%
Cybersecurity Analysts and Systems Engineers	18,895	+0.5%
IT Support Specialists	18,646	-0.5%
Network Administrators, Architects and Support	16,302	-0.4%
Database, Data Scientists and Computer Scientists	4,056	+1.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	101,320	+2.8%
IT Services and Custom Software Services	90,100	+0.5%
Tech Manufacturing	56,413	-0.6%
Software [packaged]	34,565	+2.5%
Telecommunications and Internet Services	30,392	+2.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	4%	24%
% of all occupations	8%	10%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$175K
$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $100,972, 70% higher than median metro wage
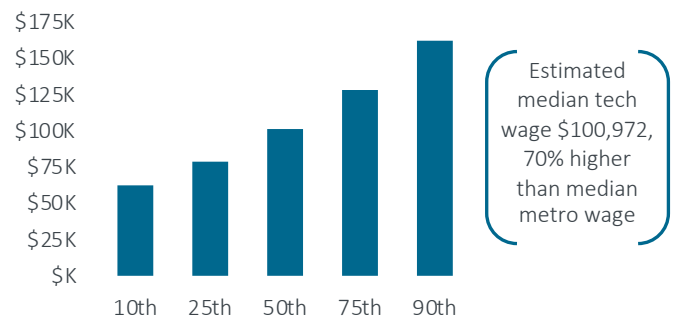
Buffalo

Full MSA name: Buffalo-Cheektowaga, NY
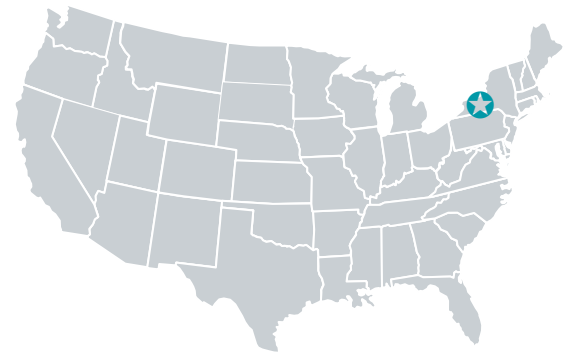
STATE OF TECHNOLOGY SUMMARY

37,348	NET TECH EMPLOYMENT[1]
6.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.3%	ECONOMIC IMPACT AS A % OF OVERALL
1,005	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
11,033	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

43rd	NET TECH EMPLOYMENT RANK
41st	NET TECH EMPLOYMENT JOBS ADDED RANK
46th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 22,388

TECH OCCUPATION JOBS 23,982

40% intersection = 37,348 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-632 jobs
-1.7%

Projected growth of +348 jobs and +0.9%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	4,658	-1.7%
IT Support Specialists	3,377	-3.3%
Cybersecurity Analysts and Systems Engineers	2,465	-2.1%
Network Administrators, Architects and Support	2,387	-3.0%
Database, Data Scientists and Computer Scientists	490	-2.1%

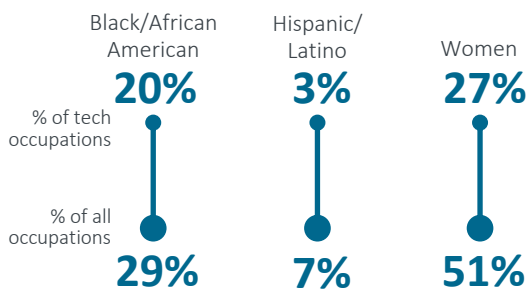## LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	7,778	-2.0%
R&D, Testing, and Engineering Services	6,886	-1.1%
Tech Manufacturing	3,832	+3.4%
Telecommunications and Internet Services	3,104	-2.9%
Software [packaged]	788	+4.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	4%	26%
% of all occupations	12%	7%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $71,441, 60% higher than median metro wage
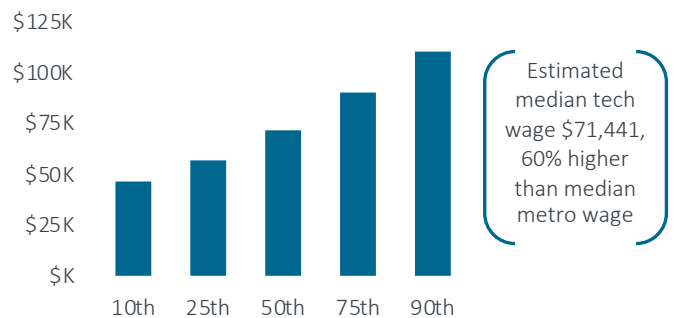
Charleston

Full MSA name: Charleston-North Charleston, SC
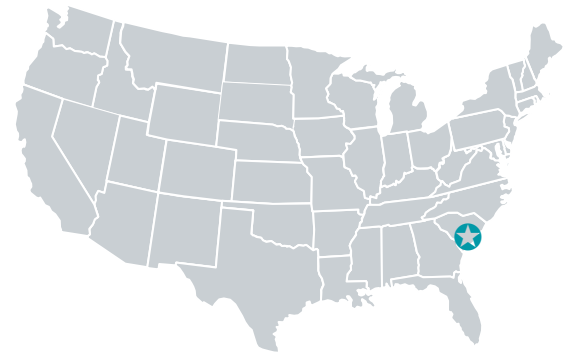
STATE OF TECHNOLOGY SUMMARY

27,987	NET TECH EMPLOYMENT[1]
7.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$3.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.5%	ECONOMIC IMPACT AS A % OF OVERALL
1,397	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
7,148	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
15.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

49th	NET TECH EMPLOYMENT RANK
18th	NET TECH EMPLOYMENT JOBS ADDED RANK
47th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 16,615

TECH OCCUPATION JOBS 19,351

48% intersection = 27,987 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+421 jobs +1.5%

Projected growth of +963 jobs and +3.4%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	3,334	+1.3%
Cybersecurity Analysts and Systems Engineers	2,411	-0.3%
Network Administrators, Architects and Support	1,944	-0.8%
IT Support Specialists	1,878	-0.4%
Database, Data Scientists and Computer Scientists	412	+3.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	7,582	+0.3%
R&D, Testing, and Engineering Services	5,540	+5.7%
Telecommunications and Internet Services	2,622	+8.9%
Tech Manufacturing	468	+10.3%
Software [packaged]	403	+11.8%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	15%	3%	30%
% of all occupations	26%	5%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $79,735, 90% higher than median metro wage

10th 25th 50th 75th 90th

CompTIA.
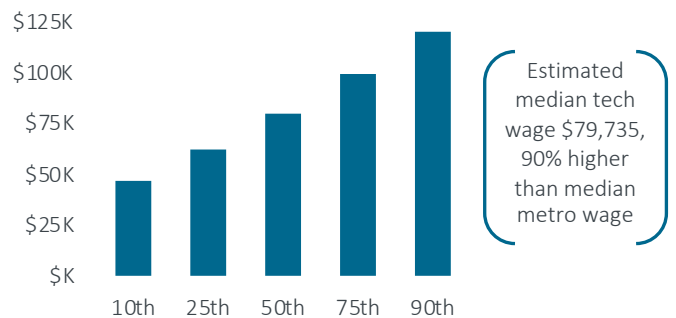
Charlotte

Full MSA name: Charlotte-Concord-Gastonia, NC-SC
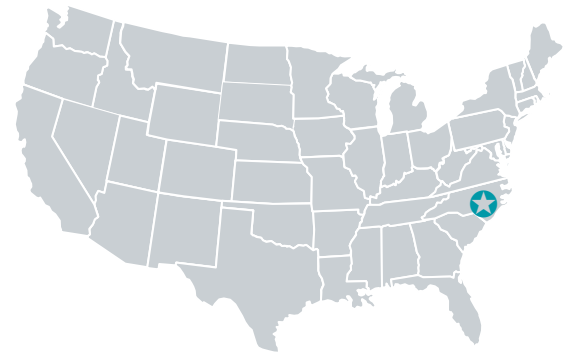
STATE OF TECHNOLOGY SUMMARY

99,705	NET TECH EMPLOYMENT[1]
7.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$12.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.7%	ECONOMIC IMPACT AS A % OF OVERALL
4,625	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
75,836	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
23.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

25th	NET TECH EMPLOYMENT RANK
12th	NET TECH EMPLOYMENT JOBS ADDED RANK
28th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
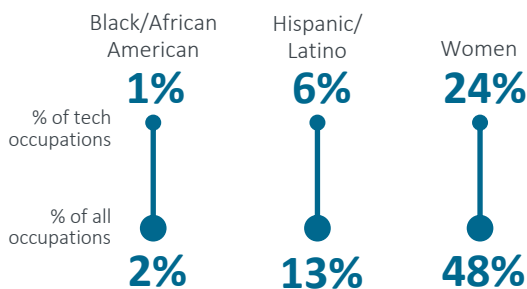
TECH INDUSTRY JOBS 51,958

TECH OCCUPATION JOBS 73,287

49% intersection = 99,705 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+1,426 jobs
+1.5%

Projected growth of +2,906 jobs and +2.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	16,230	+2.3%
Cybersecurity Analysts and Systems Engineers	13,509	+1.1%
IT Support Specialists	7,585	+0.7%
Network Administrators, Architects and Support	7,219	+0.8%
Database, Data Scientists and Computer Scientists	1,988	+1.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	21,805	+4.6%
Telecommunications and Internet Services	13,071	+5.2%
R&D, Testing, and Engineering Services	10,079	-0.4%
Software [packaged]	4,608	+5.3%
Tech Manufacturing	2,395	-2.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	16%	4%	27%
% of all occupations	23%	7%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $87,617, 94% higher than median metro wage

CompTIA.
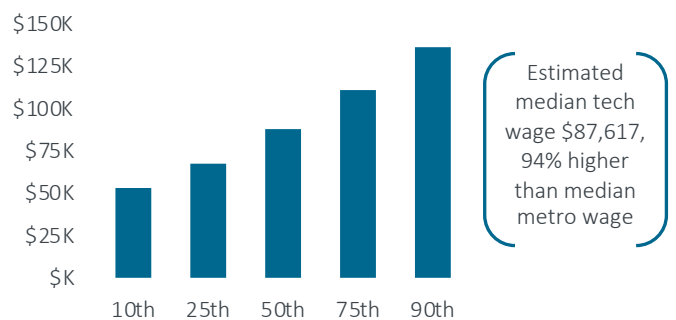
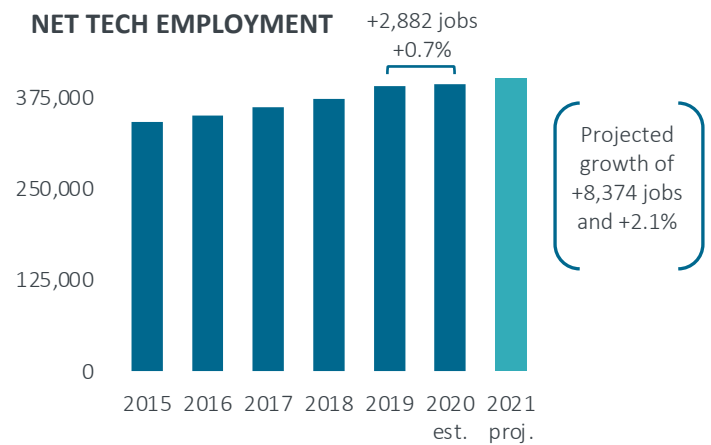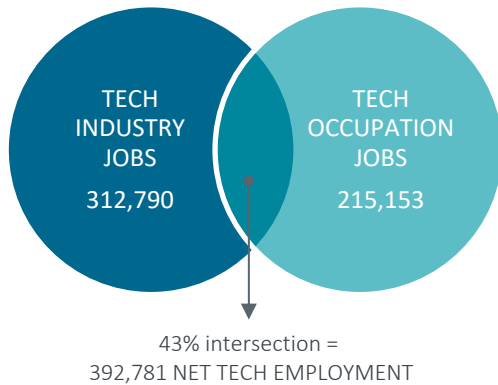# Chicago

Full MSA name: Chicago-Naperville-Elgin, IL-IN-WI
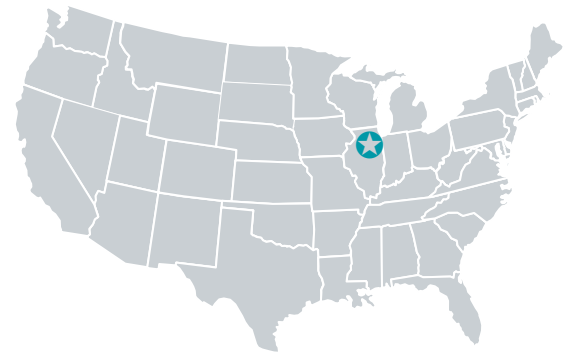
STATE OF TECHNOLOGY SUMMARY

339,000 NET TECH EMPLOYMENT[1]

7.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$51.8b ECONOMIC IMPACT [estimated direct impact of tech sector]

8.2% ECONOMIC IMPACT AS A % OF OVERALL

12,566 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

129,875 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

21.7% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

8th NET TECH EMPLOYMENT RANK

50th NET TECH EMPLOYMENT JOBS ADDED RANK

9th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
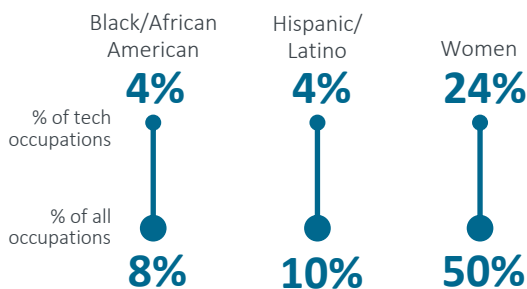

TECH INDUSTRY JOBS
198,445

TECH OCCUPATION JOBS
229,380

45% intersection =
339,000 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-3,379 jobs
-1.0%

Projected growth of +1,460 jobs and +0.4%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	57,003	-0.1%
Cybersecurity Analysts and Systems Engineers	23,812	-0.9%
IT Support Specialists	22,261	-1.3%
Network Administrators, Architects and Support	21,168	-1.7%
Database, Data Scientists and Computer Scientists	5,480	-0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	82,589	-0.4%
R&D, Testing, and Engineering Services	42,933	-0.3%
Telecommunications and Internet Services	40,940	-1.4%
Tech Manufacturing	25,082	-2.3%
Software [packaged]	6,900	+13.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	8%	25%
% of all occupations	14%	18%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $87,090, 76% higher than median metro wage

10th 25th 50th 75th 90th
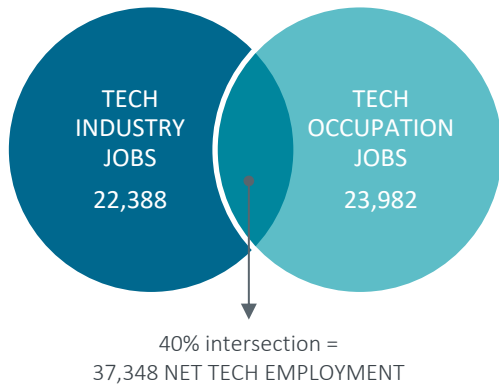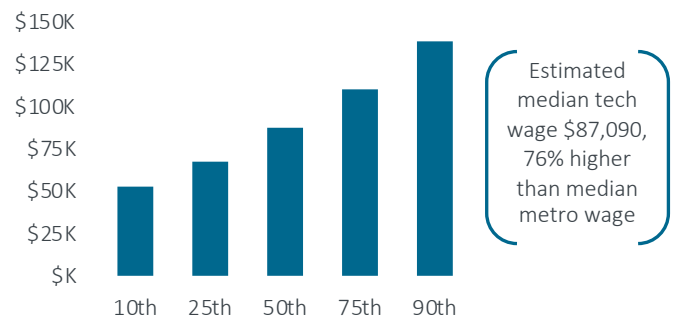
Cincinnati

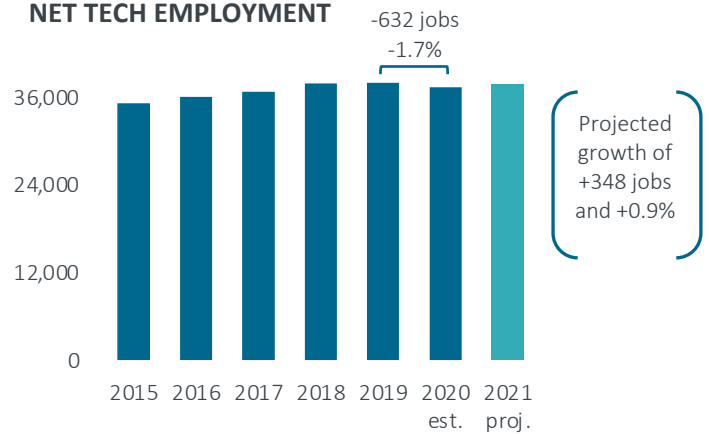Full MSA name: Cincinnati, OH-KY-IN
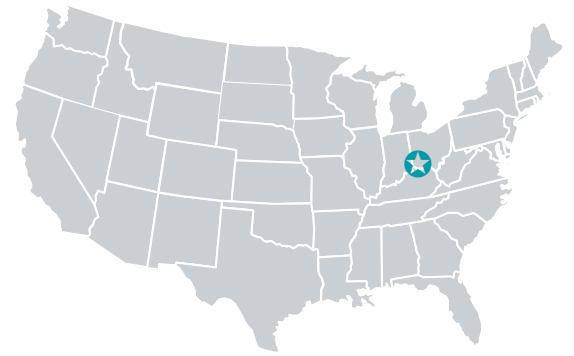
STATE OF TECHNOLOGY SUMMARY

81,118 NET TECH EMPLOYMENT[1]

7.4% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$8.0b ECONOMIC IMPACT [estimated direct impact of tech sector]

6.0% ECONOMIC IMPACT AS A % OF OVERALL

3,506 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

28,394 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

17.6% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

30th NET TECH EMPLOYMENT RANK

40th NET TECH EMPLOYMENT JOBS ADDED RANK

33rd ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 39,652
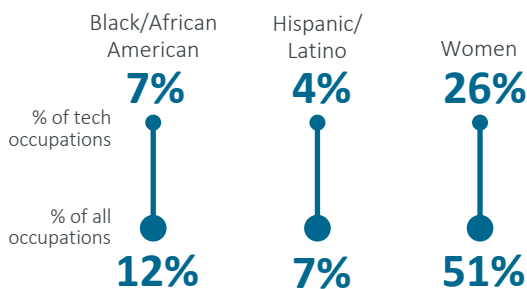
TECH OCCUPATION JOBS 59,658

46% intersection = 81,118 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-592 jobs -0.7%

Projected growth of +1,287 jobs and +1.6%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	11,016	+0.5%
Cybersecurity Analysts and Systems Engineers	6,023	-0.2%
IT Support Specialists	5,913	-1.5%
Network Administrators, Architects and Support	5,275	-1.1%
Database, Data Scientists and Computer Scientists	1,127	+0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	15,139	-0.0%
R&D, Testing, and Engineering Services	11,939	+0.5%
Telecommunications and Internet Services	6,627	+1.6%
Tech Manufacturing	3,688	+0.3%
Software [packaged]	2,258	-0.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	2%	26%
% of all occupations	12%	3%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $79,430, 78% higher than median metro wage
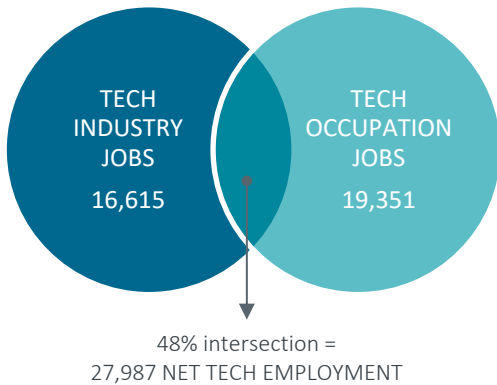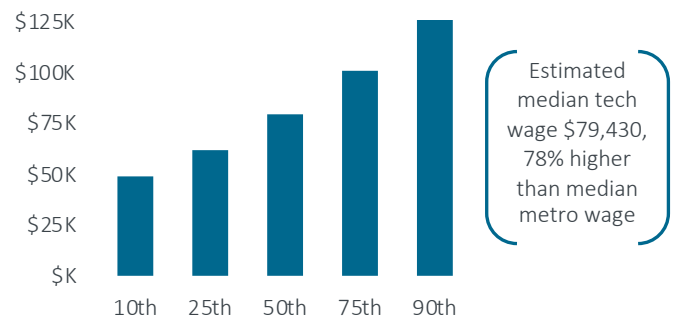
Cleveland

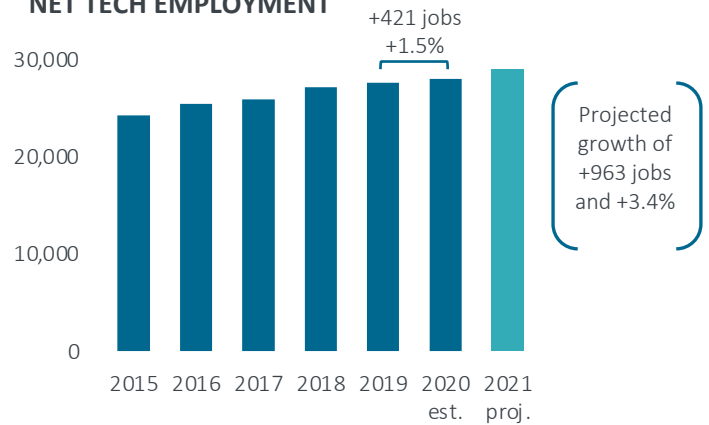Full MSA name: Cleveland-Elyria, OH

STATE OF TECHNOLOGY SUMMARY

74,118 NET TECH EMPLOYMENT[1]

7.0% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$7.1b ECONOMIC IMPACT [estimated direct impact of tech sector]

5.8% ECONOMIC IMPACT AS A % OF OVERALL

3,001 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

23,468 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.8% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

33rd NET TECH EMPLOYMENT RANK

45th NET TECH EMPLOYMENT JOBS ADDED RANK

37th ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
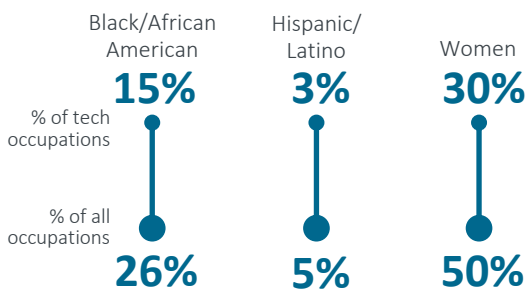
TECH INDUSTRY JOBS 36,582

TECH OCCUPATION JOBS 55,282

49% intersection =
74,118 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-961 jobs
-1.3%

75,000

50,000

25,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +528 jobs and +0.7%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	11,049	-0.2%
Cybersecurity Analysts and Systems Engineers	7,551	-1.1%
IT Support Specialists	4,864	-1.4%
Network Administrators, Architects and Support	4,433	-1.8%
Database, Data Scientists and Computer Scientists	891	-0.9%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	16,388	+0.6%
R&D, Testing, and Engineering Services	8,449	-0.8%
Tech Manufacturing	5,305	-2.4%
Telecommunications and Internet Services	4,952	-1.9%
Software [packaged]	1,488	+0.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	9%	2%	27%
% of all occupations	15%	5%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th

Estimated median tech wage $74,772, 66% higher than median metro wage
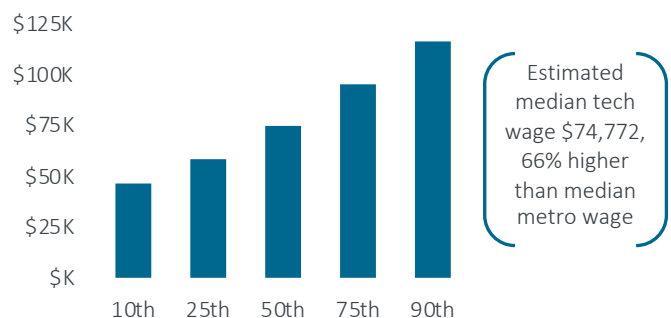
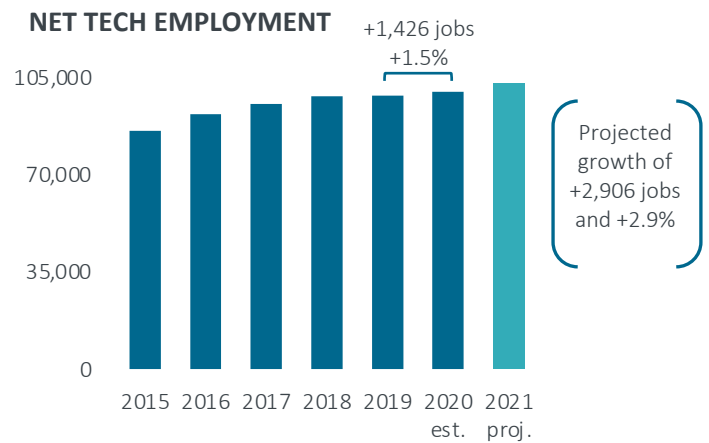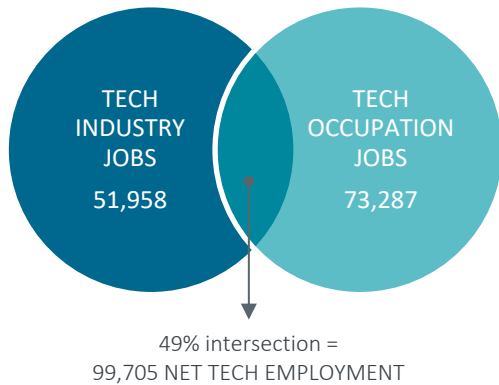# Colorado Springs

Full MSA name:
Colorado Springs, CO
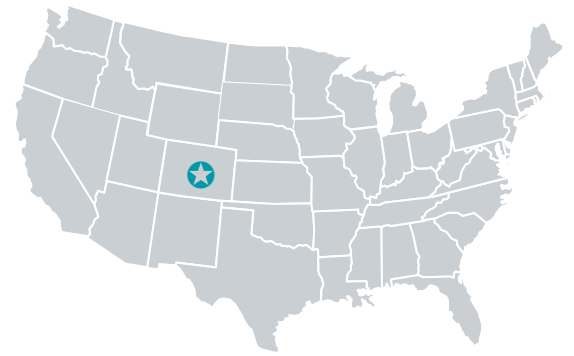
STATE OF TECHNOLOGY SUMMARY

34,222 NET TECH EMPLOYMENT[1]

11.1%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$4.5b   ECONOMIC IMPACT [estimated direct impact of tech sector]

12.4%   ECONOMIC IMPACT AS A % OF OVERALL

2,060   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

19,159 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

17.0%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

45th   NET TECH EMPLOYMENT RANK

19th   NET TECH EMPLOYMENT JOBS ADDED RANK

43rd   ECONOMIC IMPACT RANK

4th   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
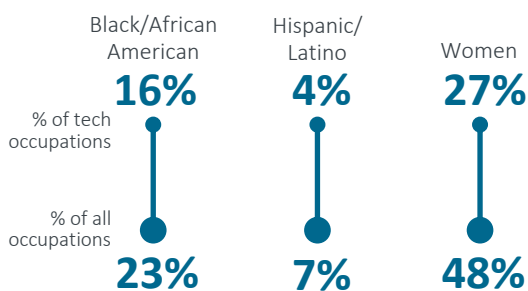

TECH INDUSTRY JOBS
24,701

TECH OCCUPATION JOBS
23,357

56% intersection =
34,222 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+310 jobs
+0.9%

Projected growth of +368 jobs and +1.1%

36,000

24,000

12,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	6,738	+1.4%
Network Administrators, Architects and Support	2,540	-0.3%
Cybersecurity Analysts and Systems Engineers	2,125	+2.2%
IT Support Specialists	1,858	+0.3%
Database, Data Scientists and Computer Scientists	543	+1.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	10,237	+2.6%
R&D, Testing, and Engineering Services	7,699	+3.6%
Tech Manufacturing	2,893	-4.1%
Telecommunications and Internet Services	2,098	-1.1%
Software [packaged]	1,774	-1.5%

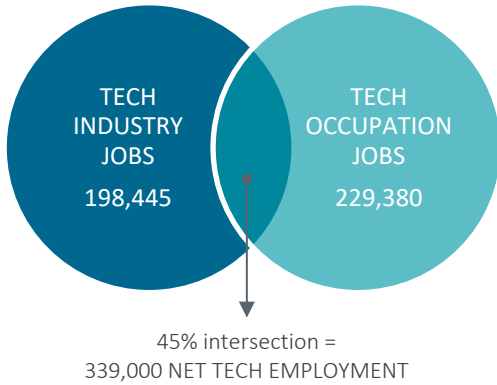## TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	8%	21%
% of all occupations	5%	16%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $92,552, 99% higher than median metro wage

$150K

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th
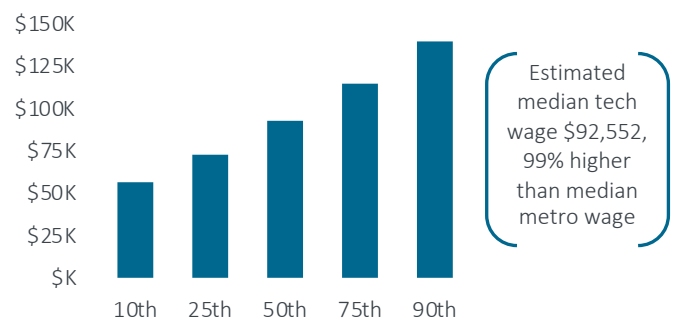
Dallas

Full MSA name: Dallas-Fort Worth-Arlington, TX
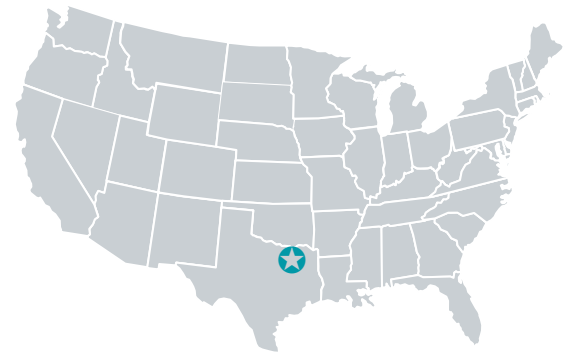
STATE OF TECHNOLOGY SUMMARY
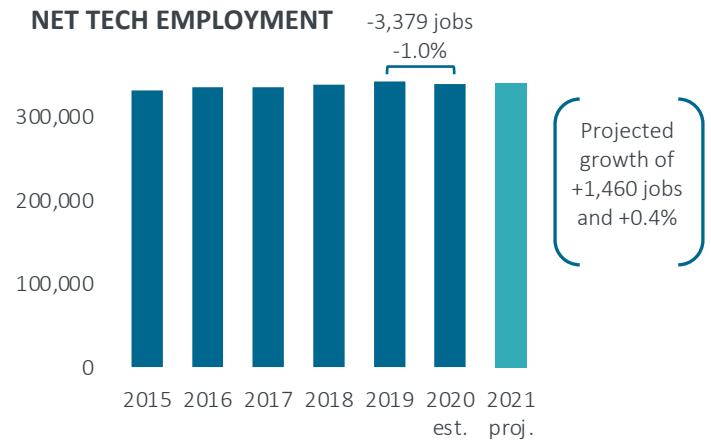
373,695	NET TECH EMPLOYMENT[1]
9.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$66.7b	ECONOMIC IMPACT [estimated direct impact of tech sector]
13.1%	ECONOMIC IMPACT AS A % OF OVERALL
12,943	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
171,633	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
22.7%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

7th	NET TECH EMPLOYMENT RANK
3rd	NET TECH EMPLOYMENT JOBS ADDED RANK
8th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
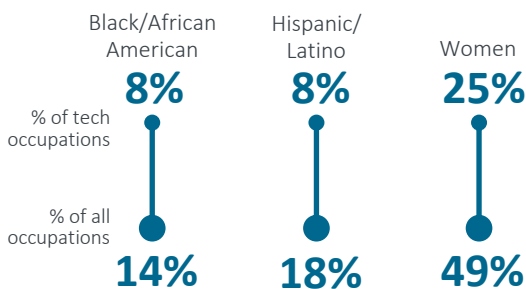244,179

TECH OCCUPATION JOBS
247,696

48% intersection =
373,695 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+4,466 jobs
+1.2%

Projected growth of +9,487 jobs and +2.5%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	65,022	+2.1%
IT Support Specialists	26,255	+0.8%
Cybersecurity Analysts and Systems Engineers	23,921	+1.5%
Network Administrators, Architects and Support	23,030	+0.4%
Database, Data Scientists and Computer Scientists	6,300	+1.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	107,195	+2.8%
Telecommunications and Internet Services	51,765	+0.2%
Tech Manufacturing	45,027	+0.9%
R&D, Testing, and Engineering Services	30,467	+1.9%
Software [packaged]	9,726	+6.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	10%	12%	24%
% of all occupations	16%	26%	48%

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $88,778, 89% higher than median metro wage

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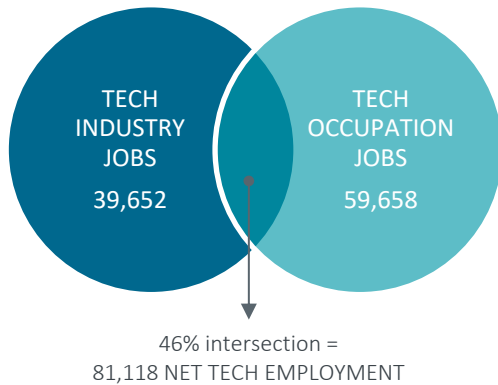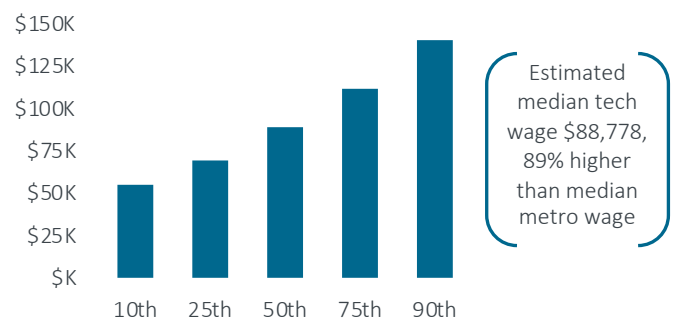
Denver

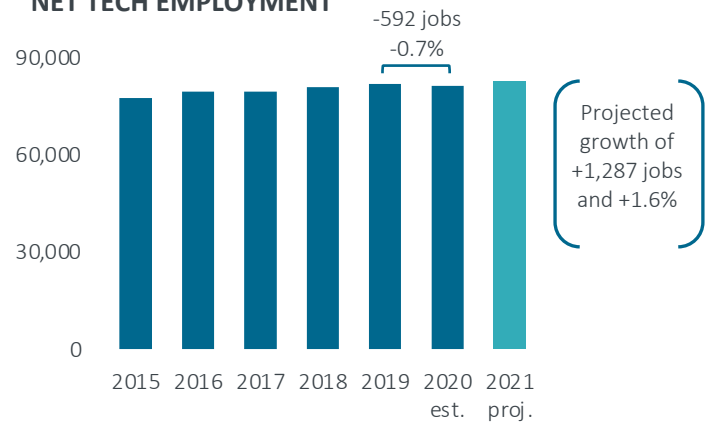Full MSA name: Denver-Aurora-Lakewood, CO
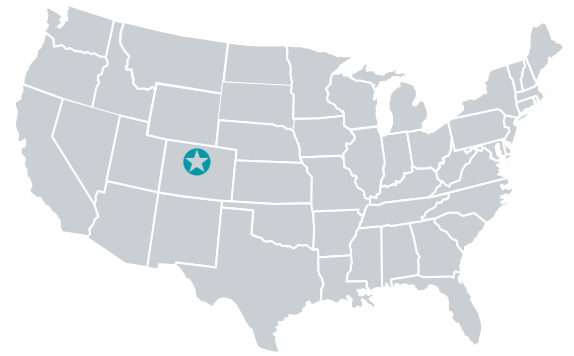
STATE OF TECHNOLOGY SUMMARY

191,793 NET TECH EMPLOYMENT[1]

12.0% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$34.8b ECONOMIC IMPACT [estimated direct impact of tech sector]

15.8% ECONOMIC IMPACT AS A % OF OVERALL

11,033 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

87,091 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

20.9% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

16th NET TECH EMPLOYMENT RANK

8th NET TECH EMPLOYMENT JOBS ADDED RANK

14th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
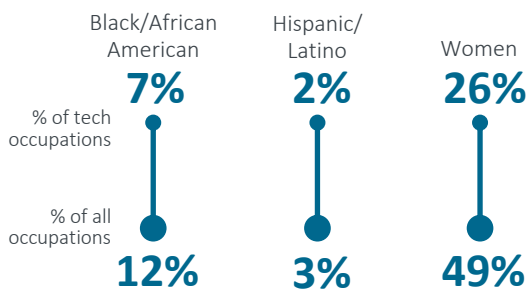135,190

TECH OCCUPATION JOBS
123,112

49% intersection =
191,793 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,532 jobs
+1.3%

Projected growth of +4,846 jobs and +2.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	34,626	+2.1%
Network Administrators, Architects and Support	16,439	-0.0%
IT Support Specialists	10,592	+0.6%
Cybersecurity Analysts and Systems Engineers	9,615	+1.5%
Database, Data Scientists and Computer Scientists	2,942	+1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	49,604	+2.3%
Telecommunications and Internet Services	32,673	+1.6%
R&D, Testing, and Engineering Services	31,035	+2.0%
Tech Manufacturing	12,439	+1.9%
Software [packaged]	9,440	+5.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	8%	24%
% of all occupations	5%	19%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

10th 25th 50th 75th 90th

Estimated median tech wage $96,121, 79% higher than median metro wage
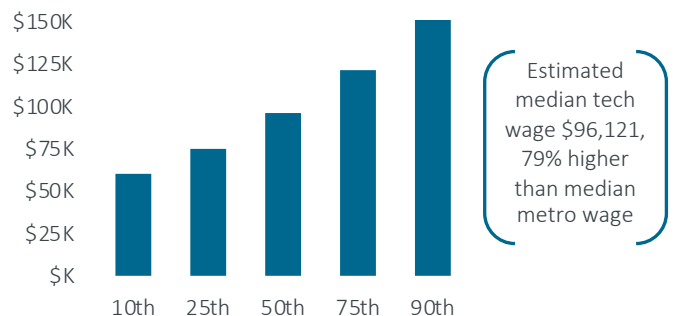
Des Moines

Full MSA name: Des Moines-West Des Moines, IA

STATE OF TECHNOLOGY SUMMARY

30,050	NET TECH EMPLOYMENT[1]
7.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.1%	ECONOMIC IMPACT AS A % OF OVERALL
1,828	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
13,524	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
13.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

46th	NET TECH EMPLOYMENT RANK
24th	NET TECH EMPLOYMENT JOBS ADDED RANK
48th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 14,615

TECH OCCUPATION JOBS 22,650

49% intersection = 30,050 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+86 jobs +0.3%

Projected growth of +578 jobs and +1.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	6,034	+0.5%
Cybersecurity Analysts and Systems Engineers	4,024	-0.1%
Network Administrators, Architects and Support	2,458	-0.8%
IT Support Specialists	2,016	-0.2%
Database, Data Scientists and Computer Scientists	652	+1.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,775	-0.6%
R&D, Testing, and Engineering Services	4,011	+2.5%
Telecommunications and Internet Services	3,434	-0.9%
Tech Manufacturing	940	+2.4%
Software [packaged]	455	+21.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	3%	27%
% of all occupations	5%	6%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $82,725, 79% higher than median metro wage
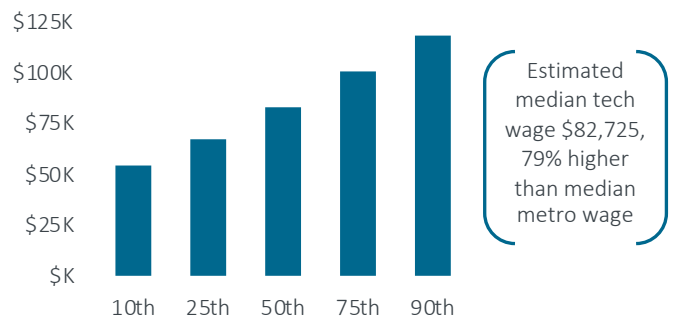
Detroit
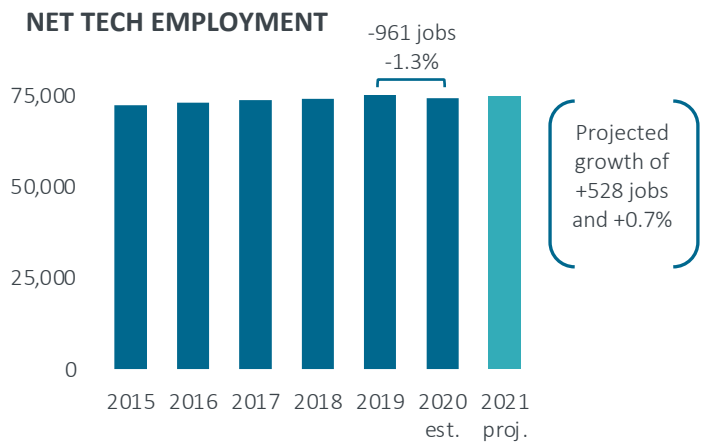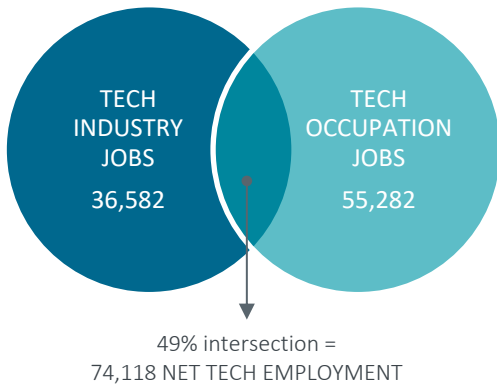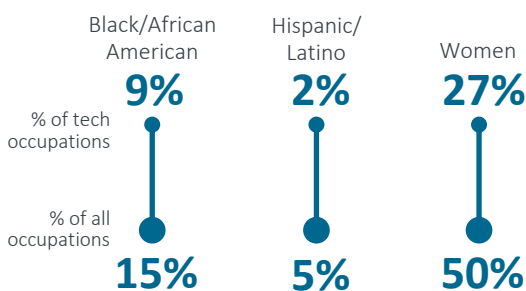
Full MSA name: Detroit-Warren-Dearborn, MI
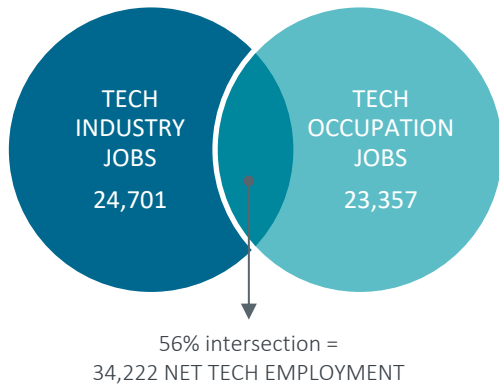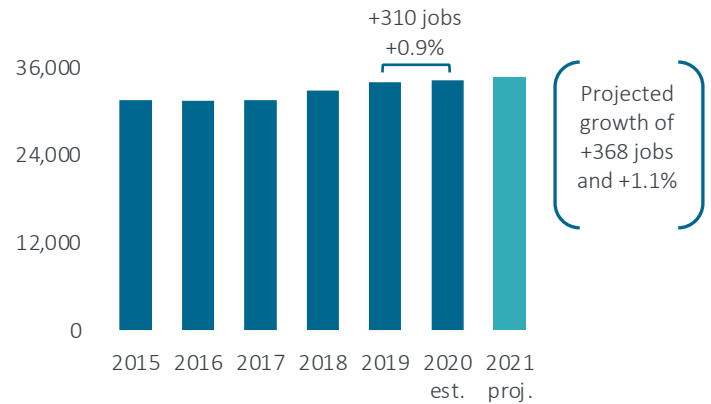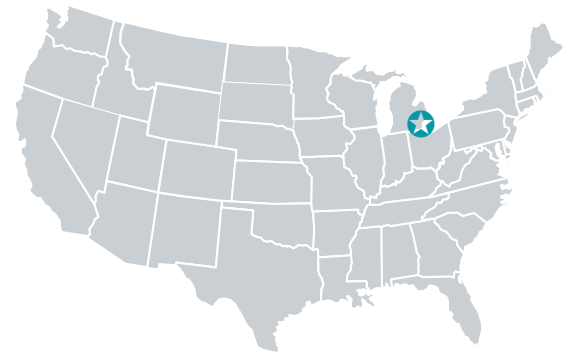
STATE OF TECHNOLOGY SUMMARY

227,883   NET TECH EMPLOYMENT[1]

11.6%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$24.1b   ECONOMIC IMPACT [estimated direct impact of tech sector]

10.0%   ECONOMIC IMPACT AS A % OF OVERALL

4,671   TECH BUSINESS ESTABLISHMENTS [firms with payroll]

64,168   EMPLOYER JOB POSTINGS [2020 total for tech occupations]

18.9%   EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

13th   NET TECH EMPLOYMENT RANK

51st   NET TECH EMPLOYMENT JOBS ADDED RANK

19th   ECONOMIC IMPACT RANK

2nd   DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
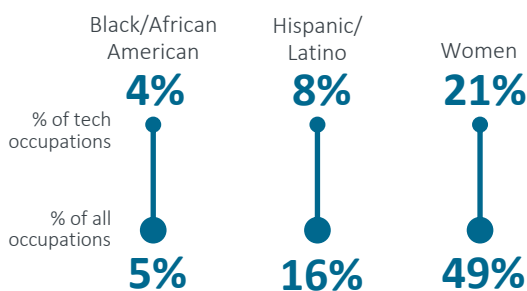

TECH INDUSTRY JOBS
134,765

TECH OCCUPATION JOBS
164,506

53% intersection =
227,883 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-9,402 jobs
-4.0%

Projected growth of -263 jobs and -0.1%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	29,921	-2.3%
Cybersecurity Analysts and Systems Engineers	10,779	-2.5%
IT Support Specialists	9,867	-3.2%
Network Administrators, Architects and Support	6,802	-2.1%
Database, Data Scientists and Computer Scientists	2,128	-1.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	76,256	-3.8%
IT Services and Custom Software Services	37,341	-3.4%
Telecommunications and Internet Services	11,286	+2.2%
Tech Manufacturing	6,269	-3.1%
Software [packaged]	3,612	-0.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	10%	3%	26%
% of all occupations	18%	4%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $86,405, 81% higher than median metro wage
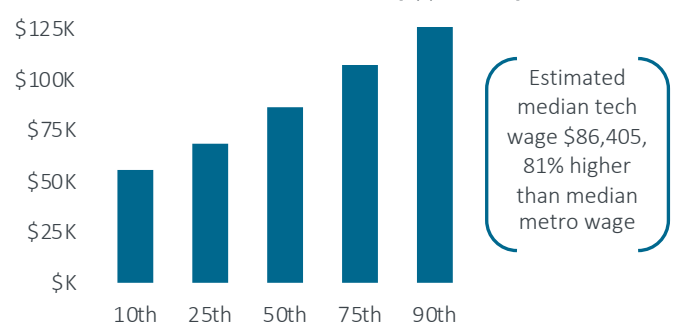
Hartford

Full MSA name: Hartford-East Hartford-Middletown, CT
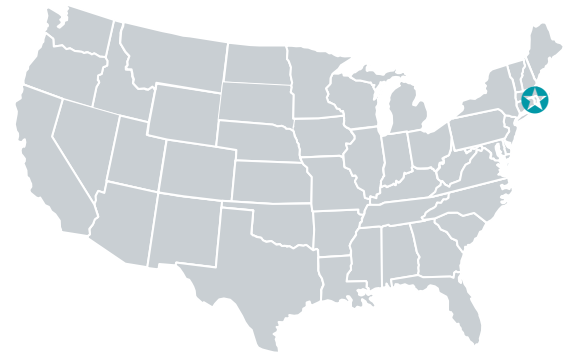
STATE OF TECHNOLOGY SUMMARY

55,073	NET TECH EMPLOYMENT[1]
8.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$5.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
5.2%	ECONOMIC IMPACT AS A % OF OVERALL
2,401	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
21,971	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
24.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

38th	NET TECH EMPLOYMENT RANK
33rd	NET TECH EMPLOYMENT JOBS ADDED RANK
39th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 25,015

TECH OCCUPATION JOBS 41,856

47% intersection = 55,073 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-151 jobs
-0.3%

Projected growth of +408 jobs and +0.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	8,903	+0.4%
IT Support Specialists	4,032	-1.3%
Cybersecurity Analysts and Systems Engineers	3,698	+0.0%
Network Administrators, Architects and Support	2,005	-0.1%
Database, Data Scientists and Computer Scientists	953	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	11,201	+0.5%
R&D, Testing, and Engineering Services	6,677	-1.3%
Tech Manufacturing	3,301	+0.4%
Telecommunications and Internet Services	2,598	+3.9%
Software [packaged]	1,238	-3.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	6%	5%	26%
% of all occupations	12%	14%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $88,494, 63% higher than median metro wage
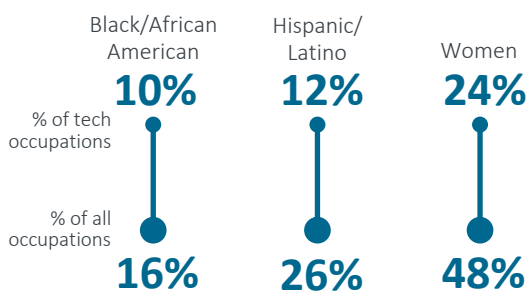
10th 25th 50th 75th 90th
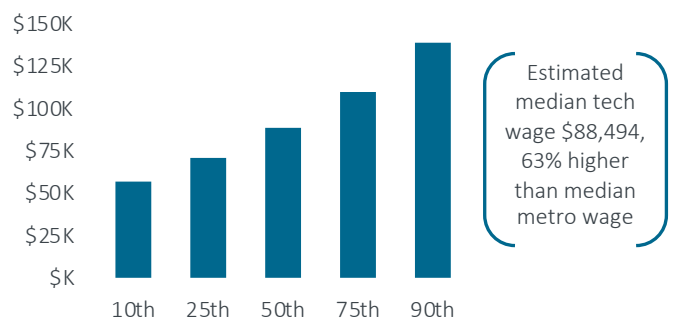
Houston

Full MSA name: Houston-The Woodlands-Sugar Land, TX
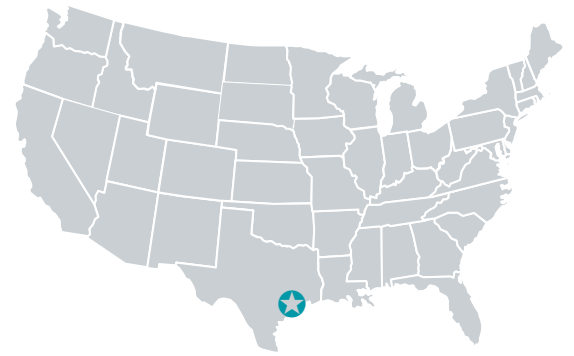
STATE OF TECHNOLOGY SUMMARY

243,908 NET TECH EMPLOYMENT[1]

7.5% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$29.2b ECONOMIC IMPACT [estimated direct impact of tech sector]

5.6% ECONOMIC IMPACT AS A % OF OVERALL

9,286 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

63,324 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

16.5% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

11th NET TECH EMPLOYMENT RANK

39th NET TECH EMPLOYMENT JOBS ADDED RANK

15th ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
146,853

TECH OCCUPATION JOBS
155,387

40% intersection =
243,908 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-558 jobs
-0.2%

Projected growth of +2,711 jobs and +1.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

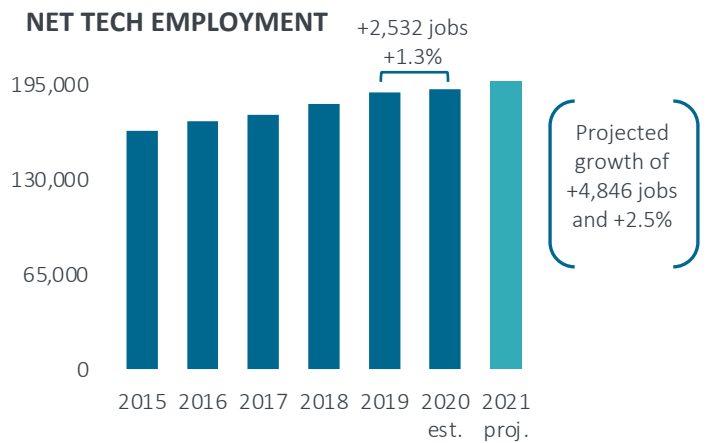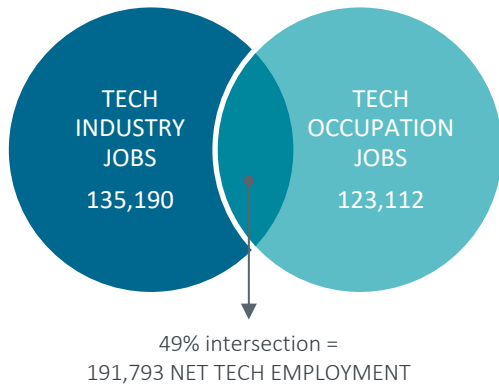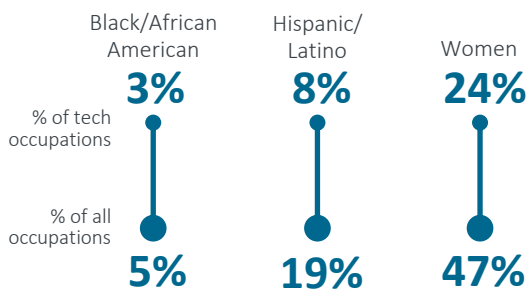|	2020	YoY % Change
Software, Programmers, Web and QA	26,789	+0.2%
Cybersecurity Analysts and Systems Engineers	17,013	-0.7%
IT Support Specialists	16,471	-1.1%
Network Administrators, Architects and Support	14,333	-1.2%
Database, Data Scientists and Computer Scientists	3,305	+0.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	68,782	+1.1%
IT Services and Custom Software Services	42,600	-0.7%
Telecommunications and Internet Services	17,920	-0.5%
Tech Manufacturing	14,406	+1.4%
Software [packaged]	3,145	-1.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	10%	16%	26%
% of all occupations	16%	32%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $90,438, 93% higher than median metro wage
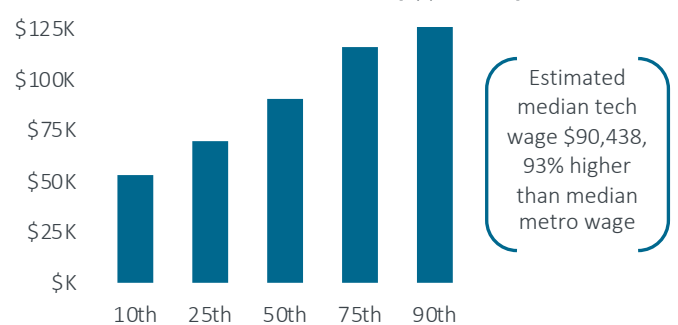
Huntsville

Full MSA name: Huntsville, AL

STATE OF TECHNOLOGY SUMMARY

55,594	NET TECH EMPLOYMENT[1]
23.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$7.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
26.5%	ECONOMIC IMPACT AS A % OF OVERALL
1,169	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
17,626	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
11.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

37th	NET TECH EMPLOYMENT RANK
14th	NET TECH EMPLOYMENT JOBS ADDED RANK
36th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1] net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
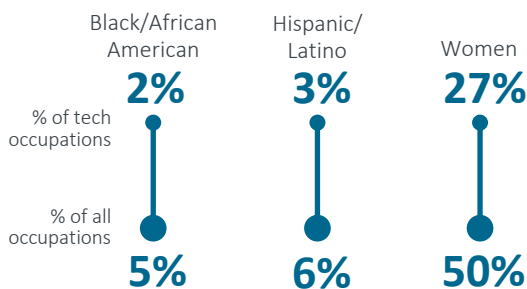

TECH INDUSTRY JOBS
43,472

TECH OCCUPATION JOBS
36,290

56% intersection =
55,594 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+860 jobs
+1.6%

Projected growth of +1,310 jobs and +2.4%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	8,886	+0.9%
Cybersecurity Analysts and Systems Engineers	2,235	+1.6%
Network Administrators, Architects and Support	1,521	+1.2%
IT Support Specialists	1,308	+2.1%
Database, Data Scientists and Computer Scientists	822	+2.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	21,363	+4.5%
IT Services and Custom Software Services	11,875	+2.6%
Tech Manufacturing	8,837	-2.5%
Telecommunications and Internet Services	1,107	-3.1%
Software [packaged]	290	+0.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	**13%**	**2%**	**25%**
% of all occupations	**23%**	**4%**	**47%**

[2] Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $96,227, 91% higher than median metro wage

10th 25th 50th 75th 90th
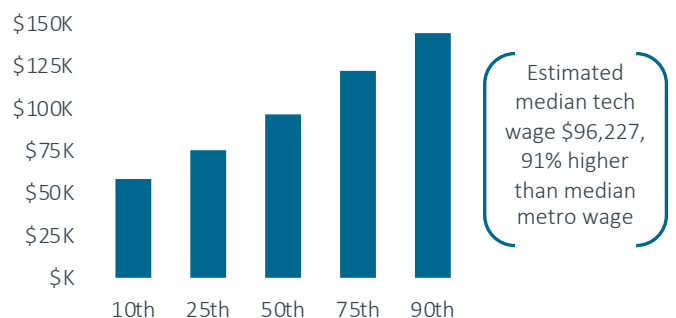
Indianapolis

Full MSA name: Indianapolis-Carmel-Anderson, IN

STATE OF TECHNOLOGY SUMMARY

74,273	NET TECH EMPLOYMENT[1]
7.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$9.3b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.6%	ECONOMIC IMPACT AS A % OF OVERALL
2,878	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
27,478	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
16.1%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

32nd	NET TECH EMPLOYMENT RANK
27th	NET TECH EMPLOYMENT JOBS ADDED RANK
30th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
42,093

TECH OCCUPATION JOBS
52,858

49% intersection =
74,273 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+63 jobs
+0.1%

Projected growth of +1,642 jobs and +2.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	13,546	+0.7%
Cybersecurity Analysts and Systems Engineers	5,957	+0.2%
IT Support Specialists	5,468	-0.8%
Network Administrators, Architects and Support	5,380	-0.7%
Database, Data Scientists and Computer Scientists	1,180	+0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	20,986	+1.7%
R&D, Testing, and Engineering Services	9,032	+2.6%
Telecommunications and Internet Services	6,568	-2.0%
Tech Manufacturing	4,146	+0.7%
Software [packaged]	1,361	-5.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	3%	28%
% of all occupations	13%	6%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $77,698, 78% higher than median metro wage

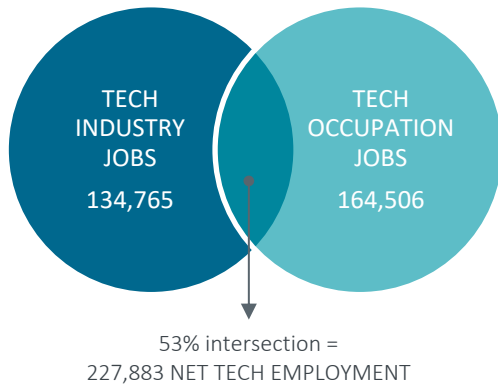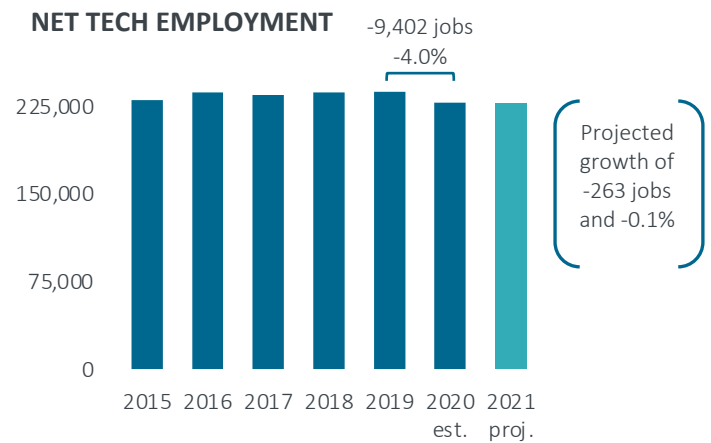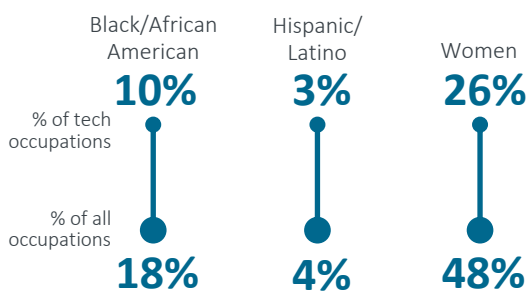CompTIA.
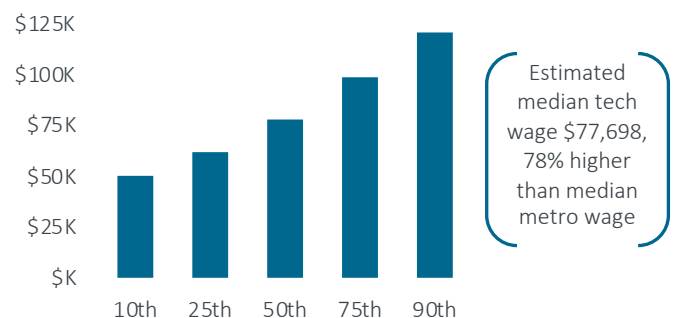
Kansas City

Full MSA name: Kansas City, MO-KS

STATE OF TECHNOLOGY SUMMARY

102,681 NET TECH EMPLOYMENT[1]

9.4% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$13.0b ECONOMIC IMPACT [estimated direct impact of tech sector]

10.5% ECONOMIC IMPACT AS A % OF OVERALL

4,315 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

28,542 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.3% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

24th NET TECH EMPLOYMENT RANK

11th NET TECH EMPLOYMENT JOBS ADDED RANK

27th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
69,464

TECH OCCUPATION JOBS
67,876

50% intersection = 102,681 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+1,723 jobs
+1.7%

Projected growth of +1,892 jobs and +1.8%

105,000

70,000

35,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	16,879	+1.2%
Network Administrators, Architects and Support	8,013	-1.5%
Cybersecurity Analysts and Systems Engineers	7,968	-0.9%
IT Support Specialists	6,597	-0.6%
Database, Data Scientists and Computer Scientists	1,743	-0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

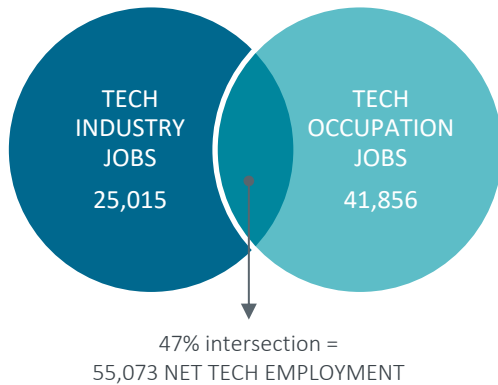|	2020	YoY % Change
IT Services and Custom Software Services	31,206	+0.5%
R&D, Testing, and Engineering Services	18,658	+0.6%
Telecommunications and Internet Services	9,813	+2.9%
Tech Manufacturing	8,567	+33.4%
Software [packaged]	1,220	+2.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	7%	4%	26%
% of all occupations	11%	8%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th

Estimated median tech wage $79,369, 76% higher than median metro wage

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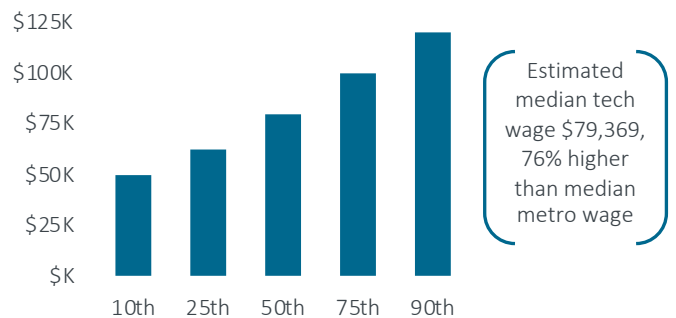
Las Vegas

Full MSA name: Las Vegas-Henderson-Paradise, NV
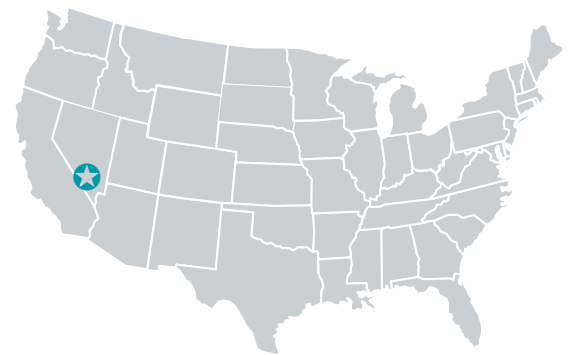
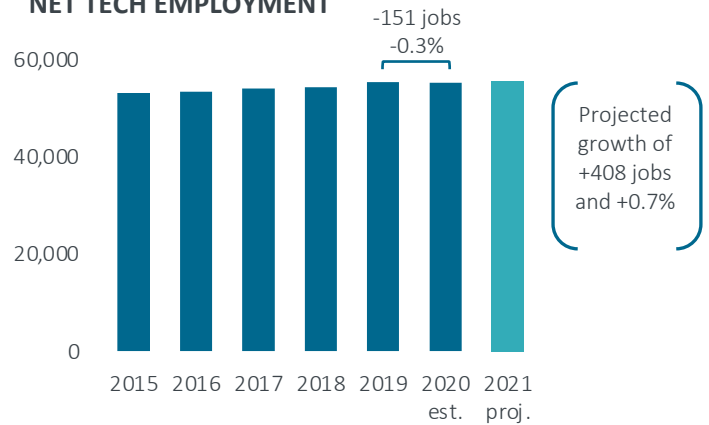## STATE OF TECHNOLOGY SUMMARY

43,635	NET TECH EMPLOYMENT[1]
4.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$4.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]
4.3%	ECONOMIC IMPACT AS A % OF OVERALL
3,611	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
18,225	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
13.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

40th	NET TECH EMPLOYMENT RANK
36th	NET TECH EMPLOYMENT JOBS ADDED RANK
41st	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 24,627
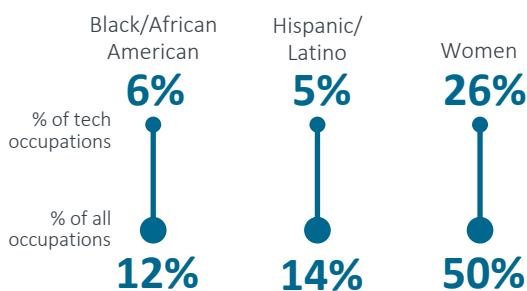
TECH OCCUPATION JOBS 28,803

40% intersection = 43,635 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-446 jobs
-1.0%

Projected growth of +1,203 jobs and +2.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	5,867	-0.2%
IT Support Specialists	4,306	-3.0%
Network Administrators, Architects and Support	2,968	-2.3%
Cybersecurity Analysts and Systems Engineers	1,985	-0.3%
Database, Data Scientists and Computer Scientists	700	-2.1%

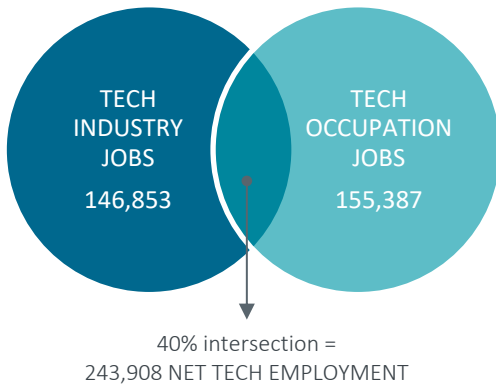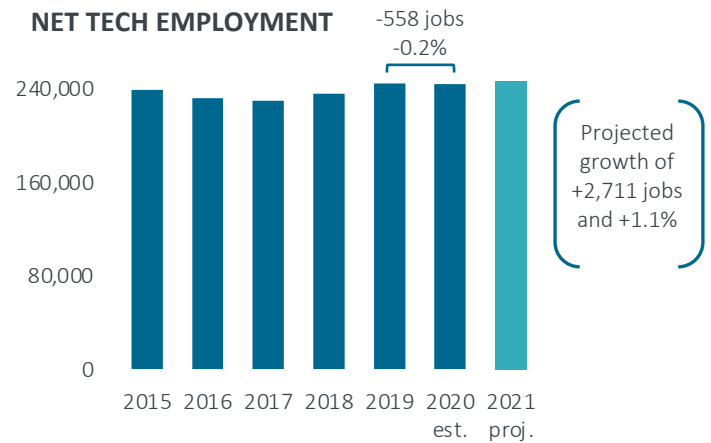### LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	8,676	+3.0%
IT Services and Custom Software Services	8,386	+0.8%
Telecommunications and Internet Services	5,556	-3.4%
Software [packaged]	1,240	+3.1%
Tech Manufacturing	769	+0.7%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	8%	13%	24%
% of all occupations	11%	28%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $75,716, 85% higher than median metro wage
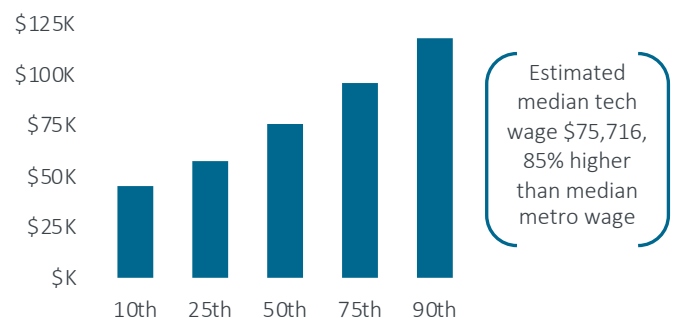
Los Angeles

Full MSA name: Los Angeles-Long Beach-Anaheim, CA
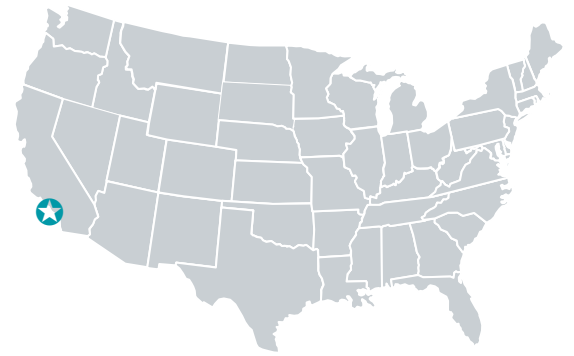
STATE OF TECHNOLOGY SUMMARY

512,500	NET TECH EMPLOYMENT[1]
7.7%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$94.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.0%	ECONOMIC IMPACT AS A % OF OVERALL
18,721	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
179,281	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.2%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

2nd	NET TECH EMPLOYMENT RANK
49th	NET TECH EMPLOYMENT JOBS ADDED RANK
5th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
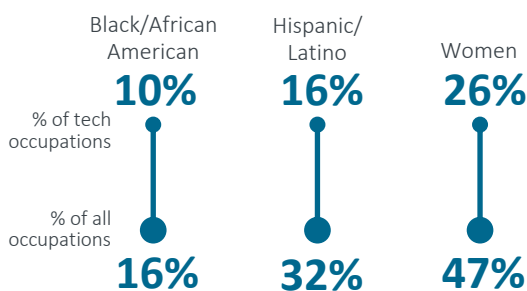
TECH INDUSTRY JOBS 320,813

TECH OCCUPATION JOBS 328,050

43% intersection = 512,500 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-2,668 jobs -0.5%

Projected growth of +2,617 jobs and +0.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	73,596	+0.2%
IT Support Specialists	28,541	-1.5%
Network Administrators, Architects and Support	22,951	-1.5%
Cybersecurity Analysts and Systems Engineers	20,190	-0.5%
Database, Data Scientists and Computer Scientists	6,011	-0.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	91,811	-0.0%
IT Services and Custom Software Services	86,142	+0.1%
R&D, Testing, and Engineering Services	69,213	+1.0%
Telecommunications and Internet Services	53,035	-0.2%
Software [packaged]	20,611	+4.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	17%	24%
% of all occupations	7%	38%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $94,141, 83% higher than median metro wage

$150K
$125K
$100K
$75 K
$50 K
$25 K
$K

10th 25th 50th 75th 90th
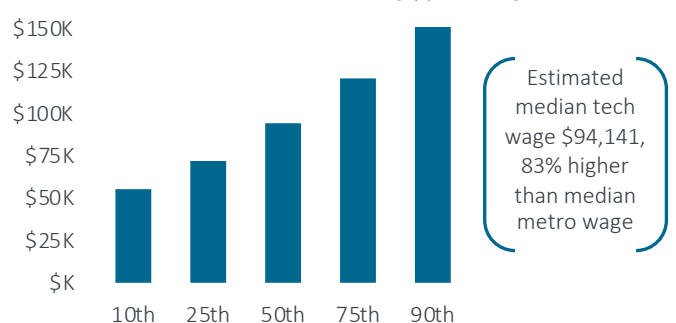
Memphis

Full MSA name: Memphis, TN-MS-AR
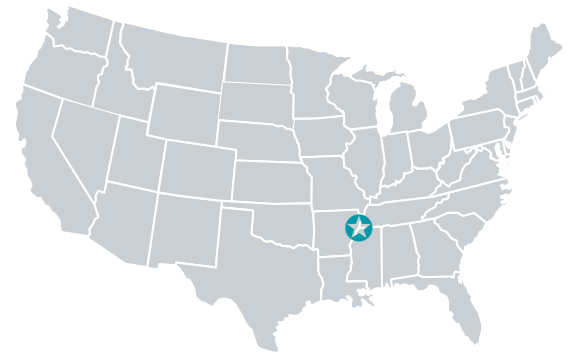
STATE OF TECHNOLOGY SUMMARY

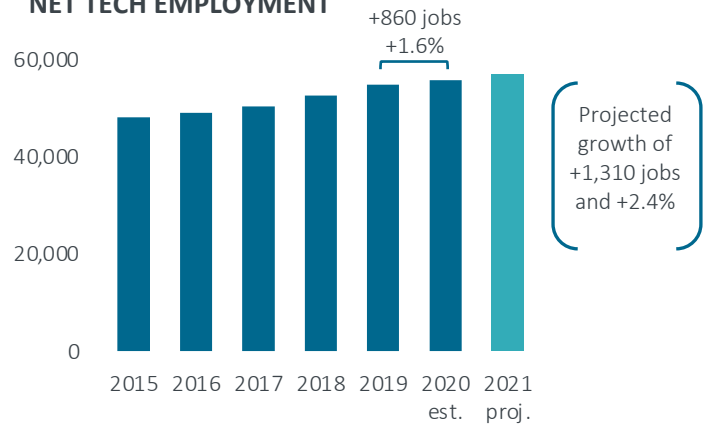|	
28,149	NET TECH EMPLOYMENT[1]
4.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.6%	ECONOMIC IMPACT AS A % OF OVERALL
1,179	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
14,244	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

48th	NET TECH EMPLOYMENT RANK
31st	NET TECH EMPLOYMENT JOBS ADDED RANK
51st	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
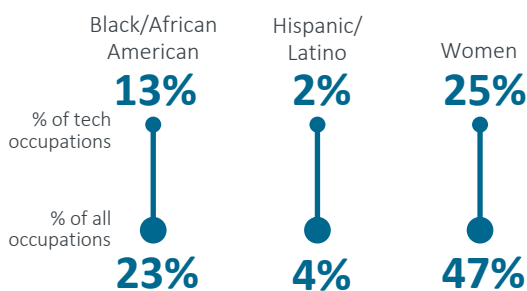

TECH INDUSTRY JOBS 12,236

TECH OCCUPATION JOBS 21,140

43% intersection = 28,149 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-49 jobs
-0.2%

Projected growth of +146 jobs and +0.5%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	2,817	+1.9%
Network Administrators, Architects and Support	2,025	-1.5%
IT Support Specialists	1,939	-0.4%
Cybersecurity Analysts and Systems Engineers	1,861	-0.9%
Database, Data Scientists and Computer Scientists	439	-0.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,119	-1.6%
R&D, Testing, and Engineering Services	3,088	+0.9%
Telecommunications and Internet Services	2,459	-4.6%
Tech Manufacturing	934	+12.5%
Software [packaged]	635	+27.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	25%	2%	31%
% of all occupations	38%	5%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $69,483, 77% higher than median metro wage
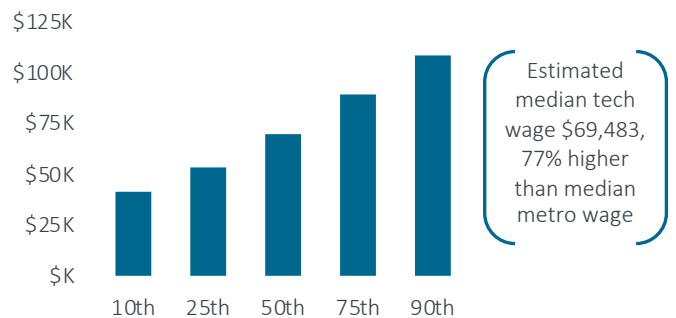
Miami

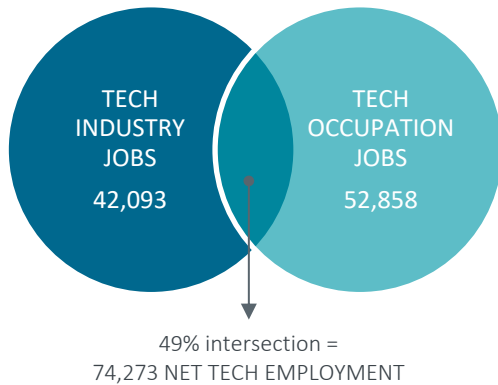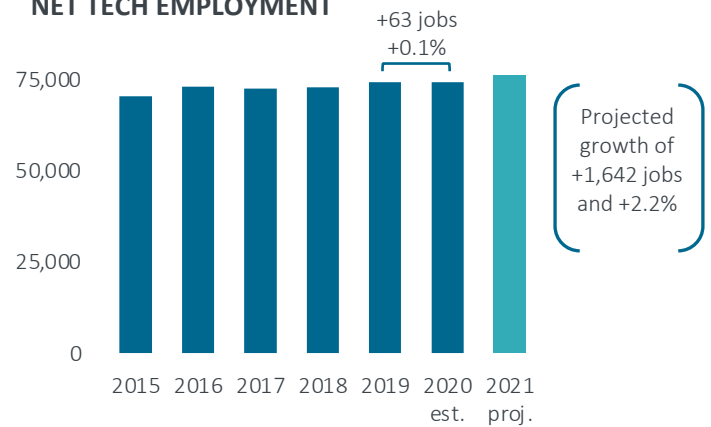Full MSA name: Miami-Fort Lauderdale-Pompano Beach, FL
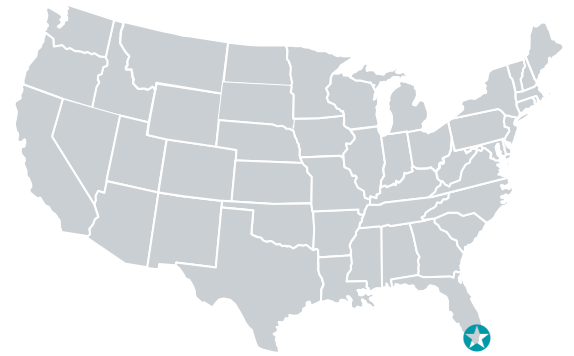
STATE OF TECHNOLOGY SUMMARY

150,161 NET TECH EMPLOYMENT[1]

5.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$23.2b ECONOMIC IMPACT [estimated direct impact of tech sector]

6.8% ECONOMIC IMPACT AS A % OF OVERALL

9,556 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

45,372 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

14.5% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

19th NET TECH EMPLOYMENT RANK

37th NET TECH EMPLOYMENT JOBS ADDED RANK

21st ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
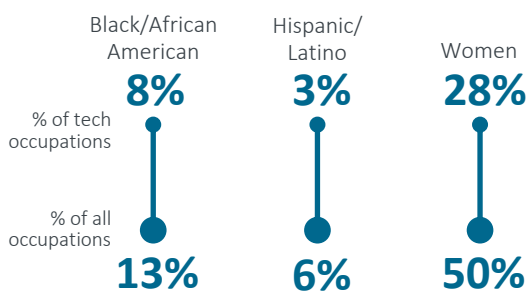
TECH INDUSTRY JOBS 92,996

TECH OCCUPATION JOBS 93,950

40% intersection = 150,161 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-459 jobs
-0.3%

Projected growth of +2,613 jobs and +1.7%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	20,717	+1.1%
IT Support Specialists	13,085	-1.0%
Network Administrators, Architects and Support	9,652	-1.1%
Cybersecurity Analysts and Systems Engineers	9,167	+0.2%
Database, Data Scientists and Computer Scientists	2,559	-0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	35,907	+1.5%
Telecommunications and Internet Services	22,853	-2.3%
R&D, Testing, and Engineering Services	20,830	+0.1%
Software [packaged]	6,738	+3.2%
Tech Manufacturing	6,667	-1.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	12%	27%	26%
% of all occupations	18%	37%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $75,754, 84% higher than median metro wage
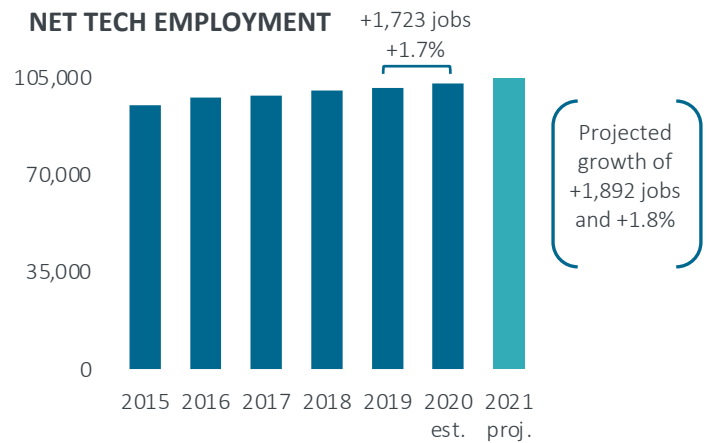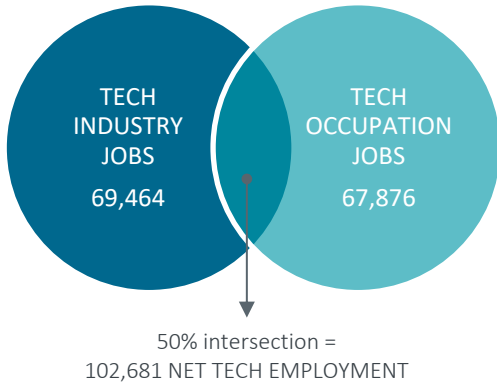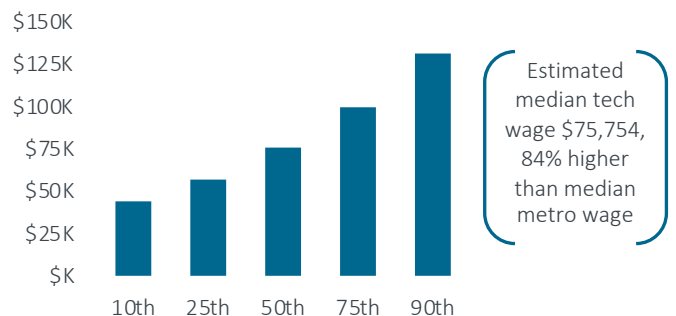
Milwaukee

Full MSA name: Milwaukee-Waukesha, WI
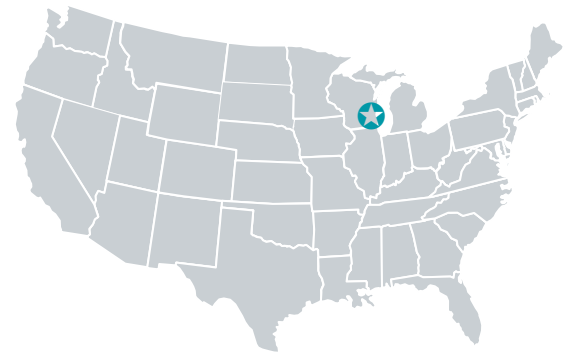
STATE OF TECHNOLOGY SUMMARY

72,131 NET TECH EMPLOYMENT[1]

8.5% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$9.1b ECONOMIC IMPACT [estimated direct impact of tech sector]

9.5% ECONOMIC IMPACT AS A % OF OVERALL

2,085 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

29,252 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

16.3% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

34th NET TECH EMPLOYMENT RANK

46th NET TECH EMPLOYMENT JOBS ADDED RANK

31st ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
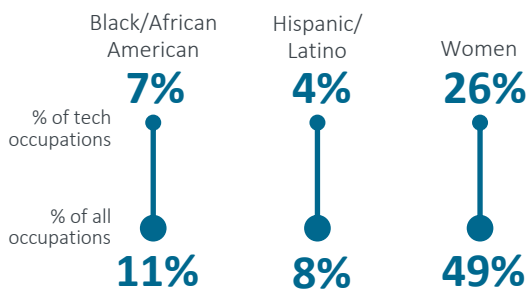
TECH INDUSTRY JOBS 35,577

TECH OCCUPATION JOBS 53,132

47% intersection = 72,131 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,309 jobs
-1.8%

Projected growth of -105 jobs and -0.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	9,625	-1.2%
Cybersecurity Analysts and Systems Engineers	5,617	-1.8%
Network Administrators, Architects and Support	4,328	-2.3%
IT Support Specialists	3,868	-2.0%
Database, Data Scientists and Computer Scientists	779	-0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	11,136	-2.3%
Tech Manufacturing	9,159	-1.5%
Telecommunications and Internet Services	7,466	-1.2%
R&D, Testing, and Engineering Services	6,534	-0.4%
Software [packaged]	1,282	+2.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	6%	4%	28%
% of all occupations	12%	9%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $73,149, 58% higher than median metro wage

10th 25th 50th 75th 90th
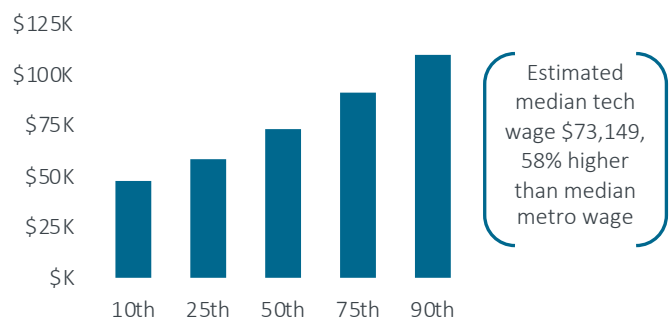
Minneapolis

Full MSA name: Minneapolis-St. Paul-Bloomington, MN-WI
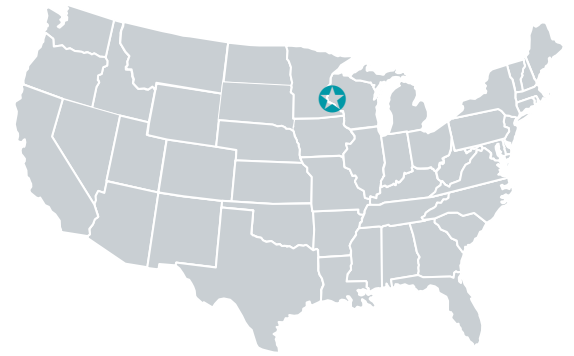
STATE OF TECHNOLOGY SUMMARY

195,727	NET TECH EMPLOYMENT[1]
9.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$28.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
11.1%	ECONOMIC IMPACT AS A % OF OVERALL
5,307	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
74,120	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
18.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

14th	NET TECH EMPLOYMENT RANK
47th	NET TECH EMPLOYMENT JOBS ADDED RANK
16th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
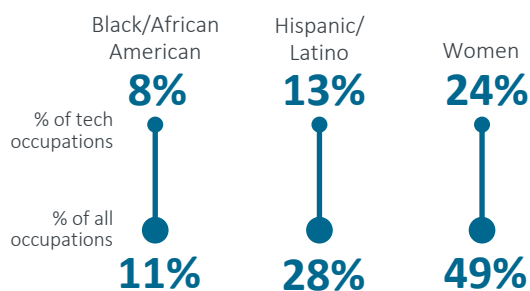

TECH INDUSTRY JOBS
114,212

TECH OCCUPATION JOBS
137,769

49% intersection =
195,727 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-1,382 jobs
-0.7%

Projected growth of +1,602 jobs and +0.8%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	32,069	+0.2%
Cybersecurity Analysts and Systems Engineers	19,382	-1.2%
IT Support Specialists	11,267	-1.3%
Network Administrators, Architects and Support	10,670	-1.6%
Database, Data Scientists and Computer Scientists	3,045	-0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	37,571	-0.6%
IT Services and Custom Software Services	35,992	+0.1%
R&D, Testing, and Engineering Services	21,005	-0.1%
Telecommunications and Internet Services	12,323	-3.0%
Software [packaged]	7,321	+7.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	2%	26%
% of all occupations	8%	5%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $88,981, 68% higher than median metro wage

10th 25th 50th 75th 90th
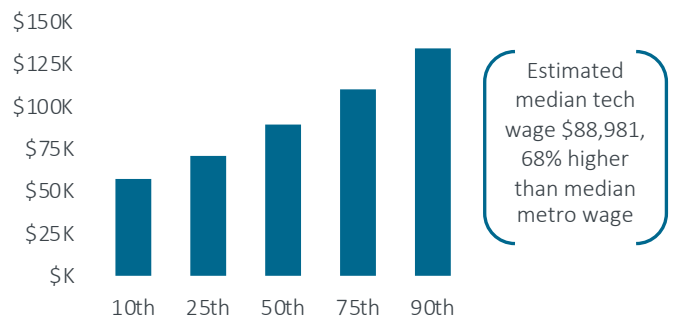
Nashville

Full MSA name: Nashville-Davidson--Murfreesboro--Franklin, TN
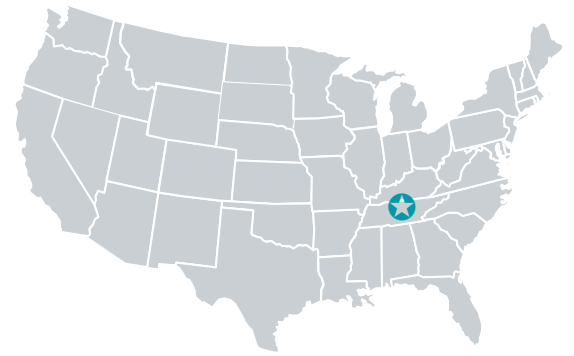
STATE OF TECHNOLOGY SUMMARY

65,283	NET TECH EMPLOYMENT[1]	
6.2%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE	
$7.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]	
6.2%	ECONOMIC IMPACT AS A % OF OVERALL	36th NET TECH EMPLOYMENT RANK
3,885	TECH BUSINESS ESTABLISHMENTS [firms with payroll]	30th NET TECH EMPLOYMENT JOBS ADDED RANK
30,036	EMPLOYER JOB POSTINGS [2020 total for tech occupations]	34th ECONOMIC IMPACT RANK
17.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL	3rd DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
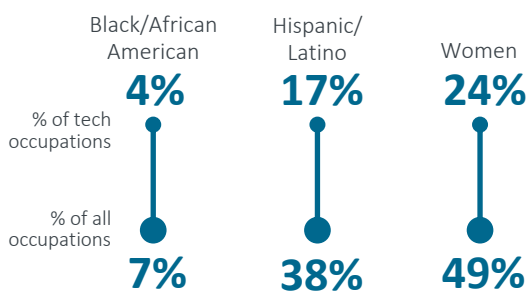

TECH INDUSTRY JOBS
33,212

TECH OCCUPATION JOBS
47,255

46% intersection =
65,283 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+9 jobs
+0.0%

Projected growth of +1,998 jobs and +3.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	8,766	+1.8%
Cybersecurity Analysts and Systems Engineers	5,275	-0.1%
IT Support Specialists	4,909	+0.1%
Network Administrators, Architects and Support	4,570	-0.7%
Database, Data Scientists and Computer Scientists	1,078	+0.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	13,610	+2.5%
Telecommunications and Internet Services	8,196	+0.3%
R&D, Testing, and Engineering Services	6,434	-1.9%
Software [packaged]	3,133	+9.6%
Tech Manufacturing	1,839	+3.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	11%	3%	28%
% of all occupations	16%	5%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $73,384 69% higher than median metro wage
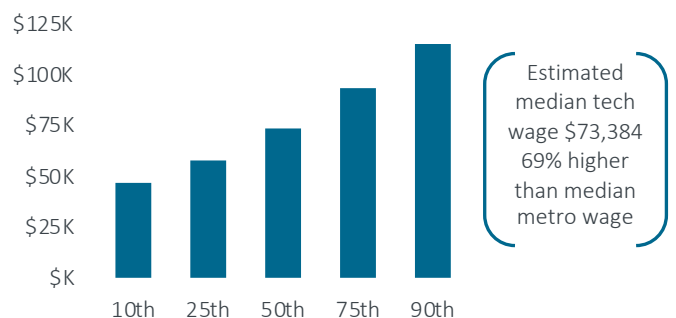
New Orleans

Full MSA name: New Orleans-Metairie, LA
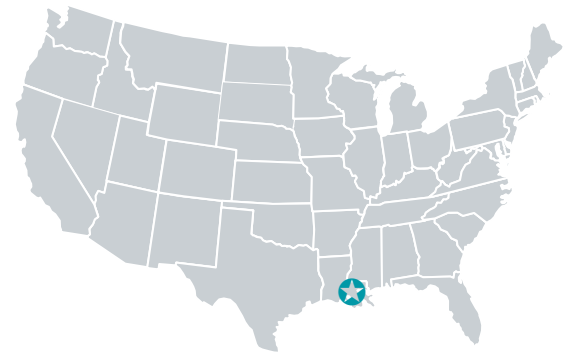
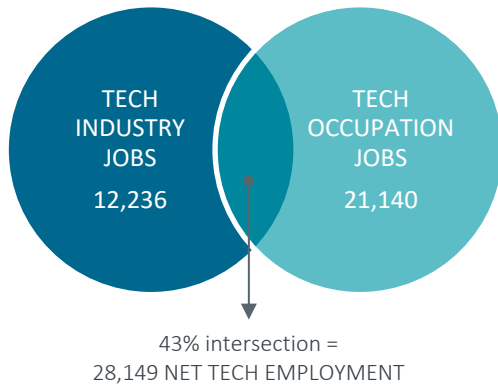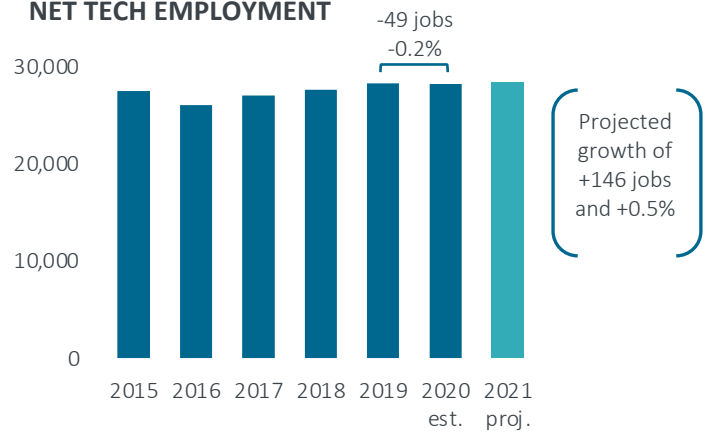## STATE OF TECHNOLOGY SUMMARY

26,132 NET TECH EMPLOYMENT[1]

4.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$2.7b ECONOMIC IMPACT [estimated direct impact of tech sector]

3.7% ECONOMIC IMPACT AS A % OF OVERALL

2,167 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

8,723 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

10.4% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

50th NET TECH EMPLOYMENT RANK

29th NET TECH EMPLOYMENT JOBS ADDED RANK

49th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
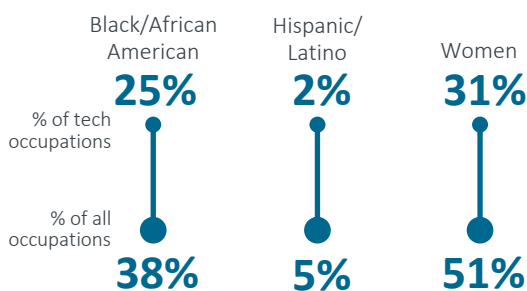15,528

TECH OCCUPATION JOBS
16,523

38% intersection =
26,132 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+21 jobs
+0.1%

30,000

20,000

10,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +256 jobs and +1.0%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	1,907	+3.7%
IT Support Specialists	1,387	+0.5%
Cybersecurity Analysts and Systems Engineers	1,304	+1.4%
Network Administrators, Architects and Support	1,291	-0.8%
Database, Data Scientists and Computer Scientists	295	+1.1%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	6,069	-0.2%
IT Services and Custom Software Services	5,108	+4.3%
Telecommunications and Internet Services	2,679	-0.8%
Tech Manufacturing	1,439	+1.4%
Software [packaged]	232	+20.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	20%	4%	27%
% of all occupations	31%	6%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K

$100K

$75K

$50K

$25K

$K

10th 25th 50th 75th 90th

Estimated median tech wage $76,590, 90% higher than median metro wage

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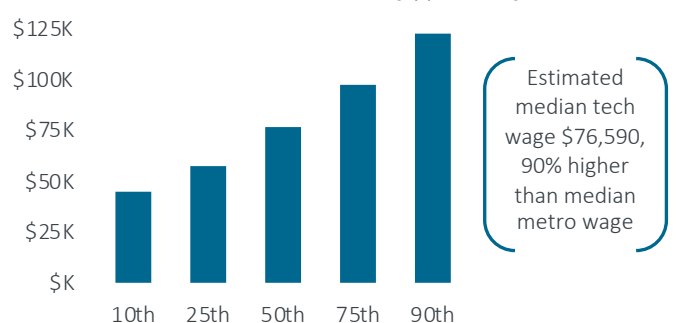
New York City

Full MSA name: New-York-Newark-Jersey City, NY-NJ-PA
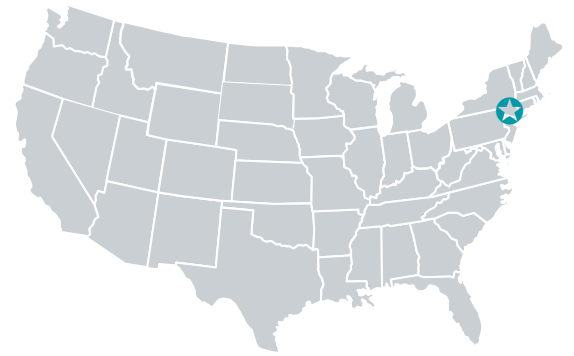
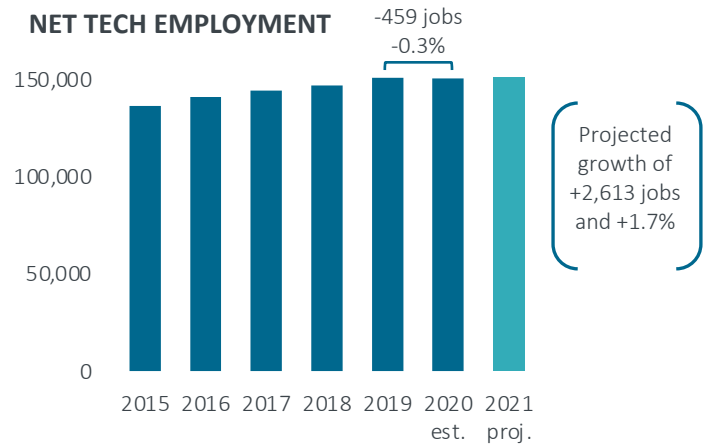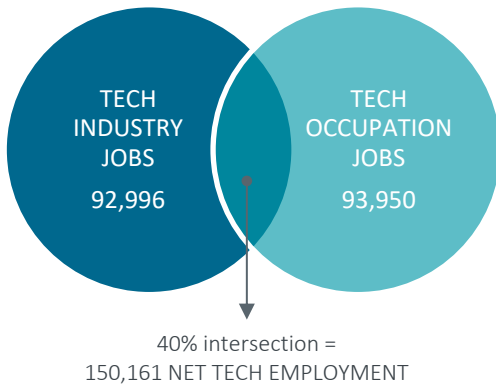## STATE OF TECHNOLOGY SUMMARY

680,527 NET TECH EMPLOYMENT[1]

7.2%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$153.9b ECONOMIC IMPACT [estimated direct impact of tech sector]

9.5%   ECONOMIC IMPACT AS A % OF OVERALL

25,300 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

243,002 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

23.7% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

1st NET TECH EMPLOYMENT RANK

7th NET TECH EMPLOYMENT JOBS ADDED RANK

3rd ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
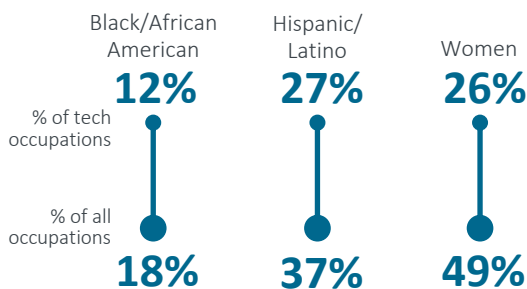

TECH INDUSTRY JOBS
429,613

TECH OCCUPATION JOBS
434,503

43% intersection =
680,527 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,860 jobs
+0.4%

Projected growth of +12,104 jobs and +1.8%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	127,648	+1.1%
Cybersecurity Analysts and Systems Engineers	50,961	-0.4%
IT Support Specialists	47,967	-0.9%
Network Administrators, Architects and Support	47,798	-1.1%
Database, Data Scientists and Computer Scientists	12,902	+0.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	161,057	+0.4%
Telecommunications and Internet Services	115,601	+3.9%
R&D, Testing, and Engineering Services	97,271	+0.2%
Tech Manufacturing	32,812	-3.3%
Software [packaged]	22,873	+28.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	8%	9%	24%
% of all occupations	15%	20%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$175K
$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $102,561 80% higher than median metro wage
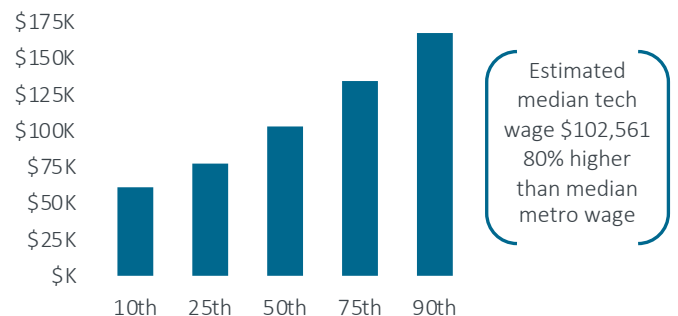
Oklahoma City

Full MSA name: Oklahoma City, OK
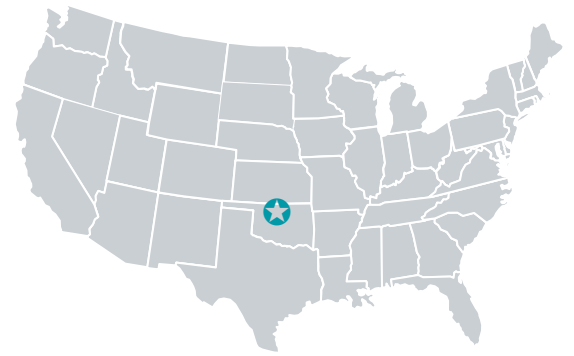
STATE OF TECHNOLOGY SUMMARY

39,457	NET TECH EMPLOYMENT[1]
6.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$2.6b	ECONOMIC IMPACT [estimated direct impact of tech sector]
3.6%	ECONOMIC IMPACT AS A % OF OVERALL
1,920	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
14,442	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
8.5%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

42nd	NET TECH EMPLOYMENT RANK
38th	NET TECH EMPLOYMENT JOBS ADDED RANK
50th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
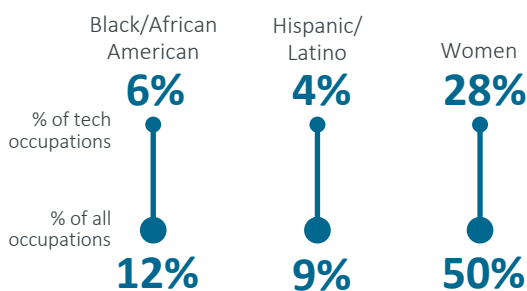
TECH INDUSTRY JOBS 15,611

TECH OCCUPATION JOBS 31,250

47% intersection = 39,457 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-531 jobs -1.3%

Projected growth of +112 jobs and +0.3%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	5,095	-0.9%
IT Support Specialists	2,953	-1.6%
Network Administrators, Architects and Support	2,286	-1.8%
Cybersecurity Analysts and Systems Engineers	2,204	-1.1%
Database, Data Scientists and Computer Scientists	1,252	-1.5%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	5,775	-1.7%
R&D, Testing, and Engineering Services	4,912	+1.8%
Telecommunications and Internet Services	3,316	-2.6%
Tech Manufacturing	1,180	-2.7%
Software [packaged]	428	+0.1%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	7%	5%	27%
% of all occupations	10%	10%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $75,010, 78% higher than median metro wage

$125K $100K $75K $50K $25K $K

10th 25th 50th 75th 90th
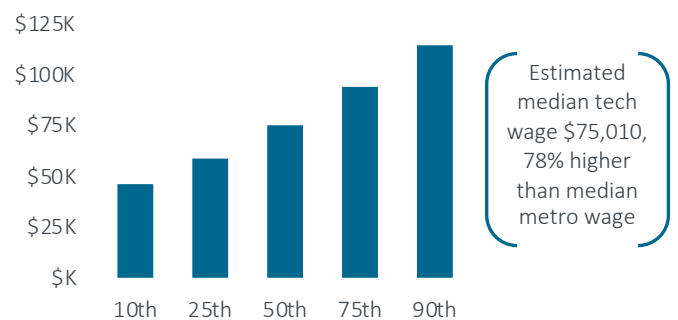
Omaha

Full MSA name: Omaha-Council Bluffs, NE-IA

STATE OF TECHNOLOGY SUMMARY

37,340	NET TECH EMPLOYMENT[1]
7.5%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$4.4b	ECONOMIC IMPACT [estimated direct impact of tech sector]
7.7%	ECONOMIC IMPACT AS A % OF OVERALL
1,393	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
13,212	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
13.0%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

44th	NET TECH EMPLOYMENT RANK
28th	NET TECH EMPLOYMENT JOBS ADDED RANK
44th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
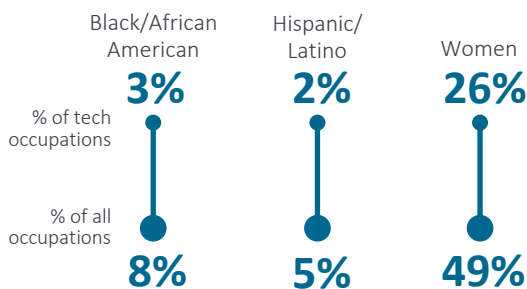
TECH INDUSTRY JOBS 20,797

TECH OCCUPATION JOBS 27,246

51% intersection = 37,340 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+30 jobs +0.1%

Projected growth of +303 jobs and +0.8%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	7,592	+1.3%
Network Administrators, Architects and Support	3,749	-1.3%
Cybersecurity Analysts and Systems Engineers	3,047	+0.4%
IT Support Specialists	2,483	+0.1%
Database, Data Scientists and Computer Scientists	939	-0.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	9,469	+2.1%
Telecommunications and Internet Services	5,892	-5.2%
R&D, Testing, and Engineering Services	3,881	+0.9%
Tech Manufacturing	972	-2.9%
Software [packaged]	583	+108.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	4%	4%	26%
% of all occupations	7%	9%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $80,875, 80% higher than median metro wage
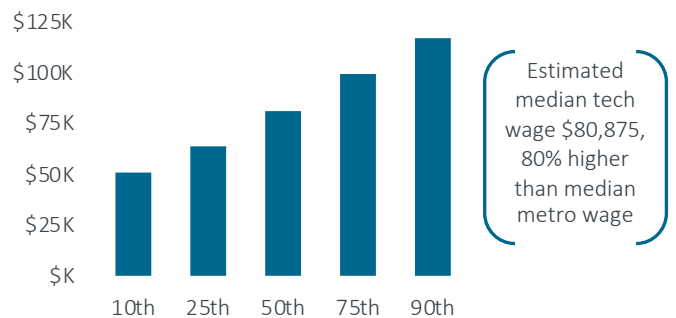
Orlando

Full MSA name: Orlando-Kissimmee-Sanford, FL
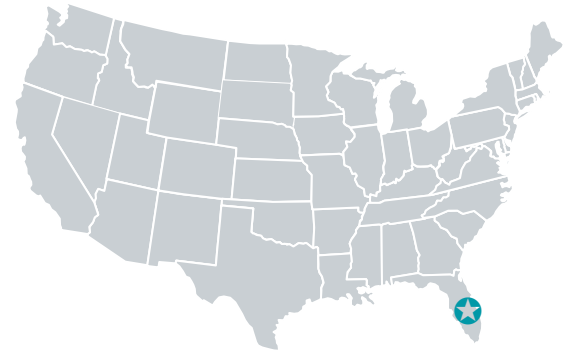
STATE OF TECHNOLOGY SUMMARY

94,627	NET TECH EMPLOYMENT[1]
7.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$14.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.4%	ECONOMIC IMPACT AS A % OF OVERALL
3,897	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
26,440	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
14.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

27th	NET TECH EMPLOYMENT RANK
26th	NET TECH EMPLOYMENT JOBS ADDED RANK
25th	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
63,102

TECH OCCUPATION JOBS
59,335

44% intersection =
94,627 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+71 jobs
+0.1%

Projected growth of +2,488 jobs and +2.6%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	14,252	+0.7%
IT Support Specialists	6,793	-1.4%
Network Administrators, Architects and Support	5,761	-1.3%
Cybersecurity Analysts and Systems Engineers	5,535	-0.0%
Database, Data Scientists and Computer Scientists	1,370	-0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	19,909	+2.8%
R&D, Testing, and Engineering Services	15,910	+1.4%
Telecommunications and Internet Services	12,459	-1.5%
Tech Manufacturing	10,977	+2.2%
Software [packaged]	3,848	+1.4%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	10%	15%	26%
% of all occupations	16%	26%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $77,966, 98% higher than median metro wage

CompTIA.
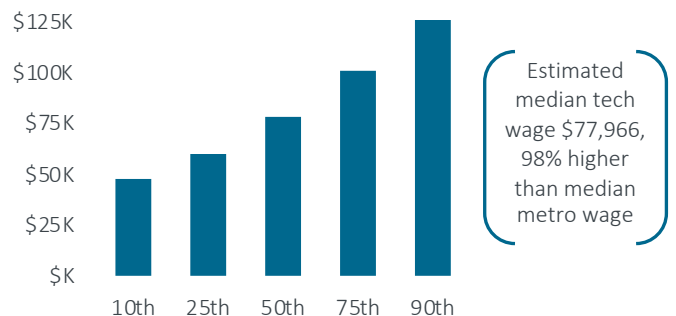
Philadelphia

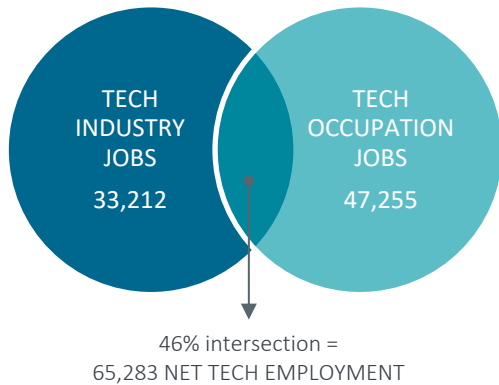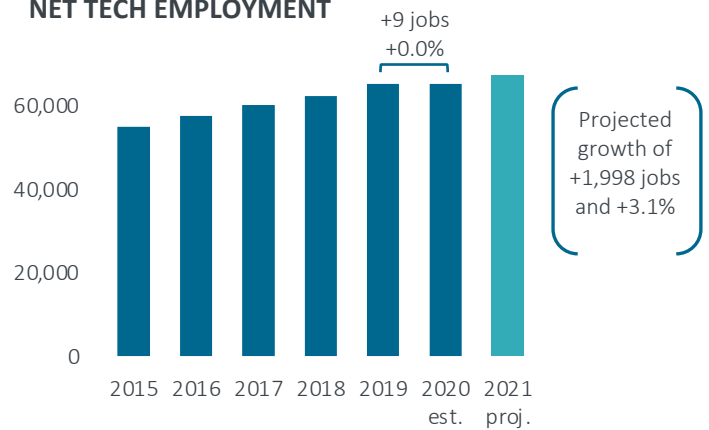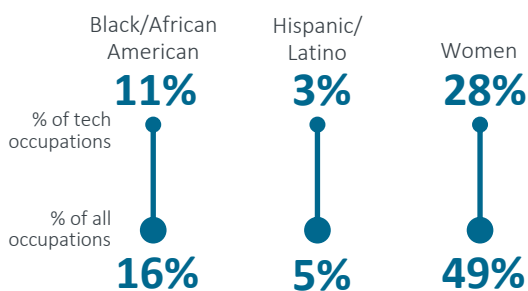Full MSA name: Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
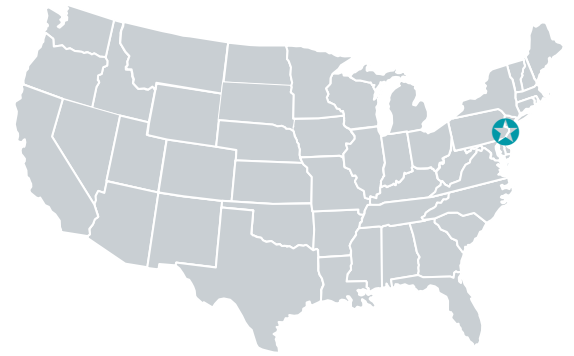
STATE OF TECHNOLOGY SUMMARY

233,422 NET TECH EMPLOYMENT[1]

8.1% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$41.3b ECONOMIC IMPACT [estimated direct impact of tech sector]

10.1% ECONOMIC IMPACT AS A % OF OVERALL

8,889 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

86,546 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

20.4% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

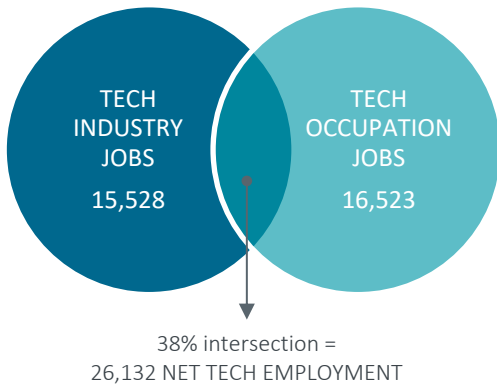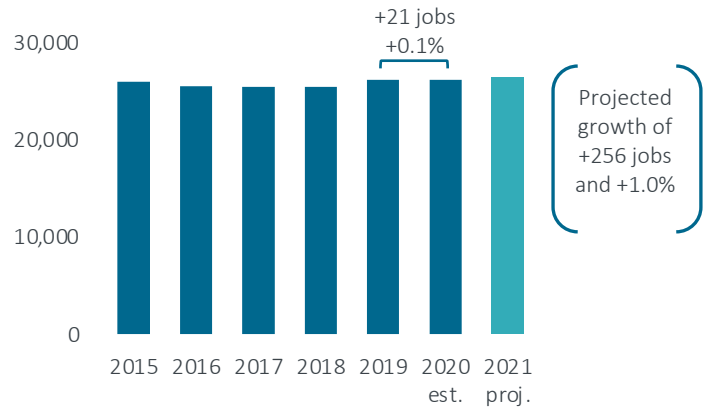12th NET TECH EMPLOYMENT RANK

25th NET TECH EMPLOYMENT JOBS ADDED RANK

11th ECONOMIC IMPACT RANK

3rd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
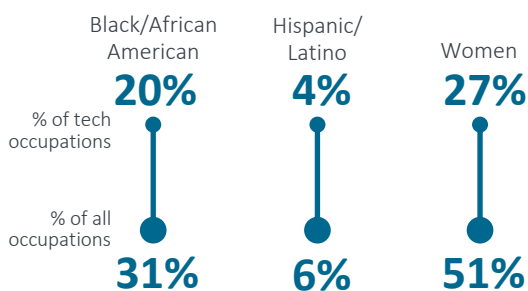
TECH INDUSTRY JOBS
145,607

TECH OCCUPATION JOBS
150,317

43% intersection =
233,422 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+85 jobs
+0.0%

Projected growth of +2,160 jobs and +0.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	35,090	+0.2%
Network Administrators, Architects and Support	14,537	-0.8%
Cybersecurity Analysts and Systems Engineers	13,746	-0.4%
IT Support Specialists	13,639	-1.4%
Database, Data Scientists and Computer Scientists	4,668	-0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	52,443	+0.6%
IT Services and Custom Software Services	41,807	-1.5%
Telecommunications and Internet Services	24,845	+5.6%
Tech Manufacturing	19,392	-0.3%
Software [packaged]	7,120	+8.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	9%	4%	26%
% of all occupations	18%	8%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $90,222, 79% higher than median metro wage

CompTIA.
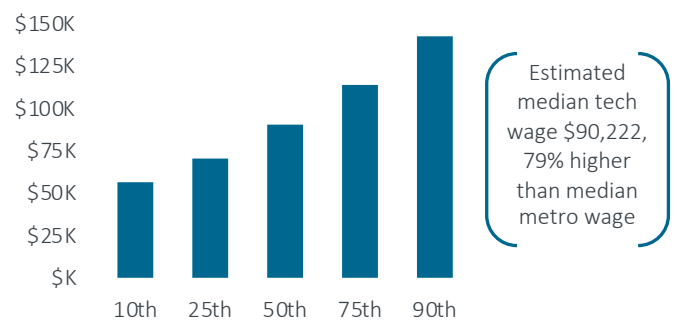
Phoenix

Full MSA name: Phoenix-Mesa-Chandler, AZ
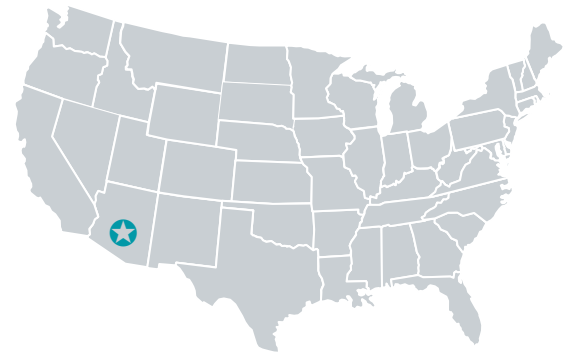
STATE OF TECHNOLOGY SUMMARY

195,158 NET TECH EMPLOYMENT[1]

8.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$27.4b ECONOMIC IMPACT [estimated direct impact of tech sector]

10.6% ECONOMIC IMPACT AS A % OF OVERALL

8,183 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

92,902 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

20.2% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

15th NET TECH EMPLOYMENT RANK

9th NET TECH EMPLOYMENT JOBS ADDED RANK

17th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
122,082

TECH OCCUPATION JOBS
130,256

47% intersection =
195,158 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,367 jobs
+1.2%

Projected growth of +5,152 jobs and +2.6%

LEADING TECH OCCUPATION CATEGORIES

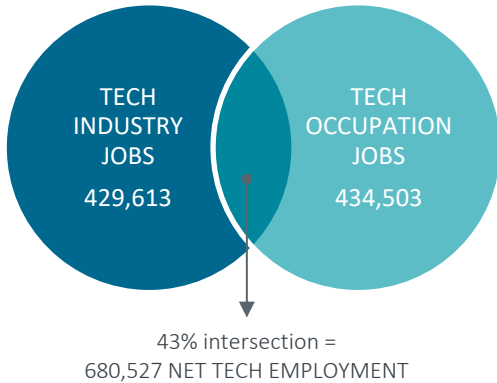|	2020	YoY % Change
Software, Programmers, Web and QA	29,869	+1.5%
IT Support Specialists	15,654	-0.0%
Cybersecurity Analysts and Systems Engineers	13,217	+0.8%
Network Administrators, Architects and Support	12,289	-0.3%
Database, Data Scientists and Computer Scientists	2,938	+1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	39,031	+0.9%
Tech Manufacturing	33,471	+3.6%
Telecommunications and Internet Services	26,015	-1.2%
R&D, Testing, and Engineering Services	19,427	+0.9%
Software [packaged]	4,138	+17.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	5%	14%	25%
% of all occupations	6%	29%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $83,175, 85% higher than median metro wage
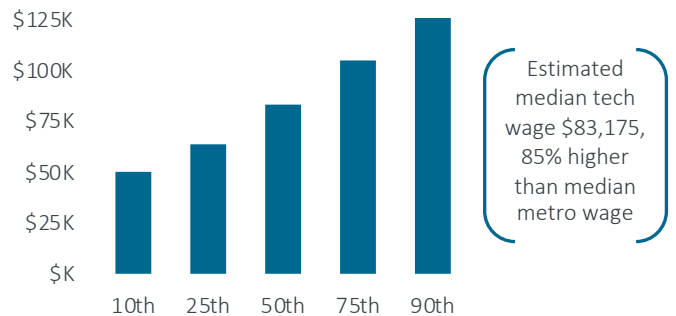
Pittsburgh

Full MSA name: Pittsburgh, PA
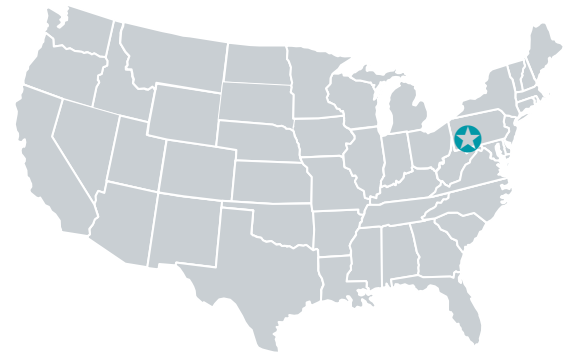
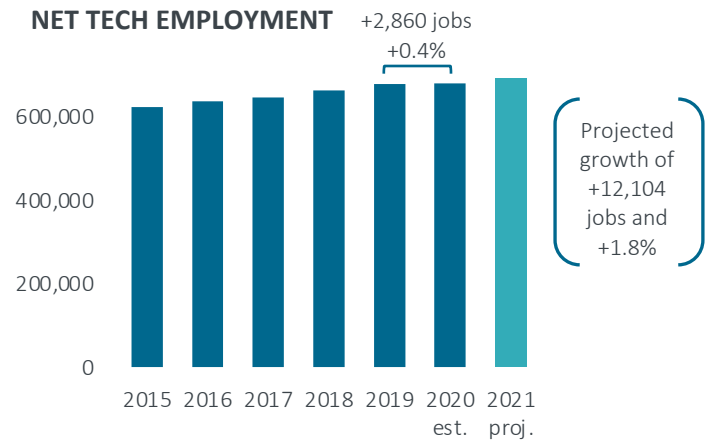## STATE OF TECHNOLOGY SUMMARY

97,627	NET TECH EMPLOYMENT[1]
8.6%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$14.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.4%	ECONOMIC IMPACT AS A % OF OVERALL
2,549	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
34,958	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
22.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

26th	NET TECH EMPLOYMENT RANK
44th	NET TECH EMPLOYMENT JOBS ADDED RANK
24th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
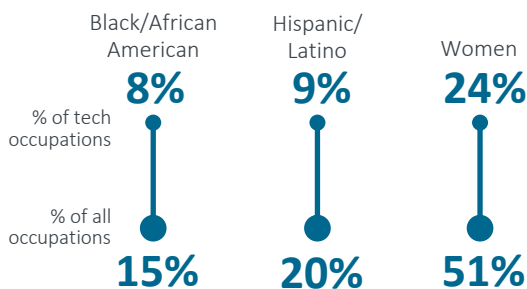

TECH INDUSTRY JOBS
60,217

TECH OCCUPATION JOBS
63,298

43% intersection =
97,627 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-922 jobs
-0.9%

Projected growth of +1,131 jobs and +1.2%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	12,220	+0.5%
Cybersecurity Analysts and Systems Engineers	6,721	-1.2%
IT Support Specialists	5,660	-2.0%
Network Administrators, Architects and Support	5,344	-2.3%
Database, Data Scientists and Computer Scientists	1,535	-0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	23,591	+0.9%
IT Services and Custom Software Services	16,878	+0.7%
Tech Manufacturing	8,830	-0.2%
Telecommunications and Internet Services	8,104	-3.4%
Software [packaged]	2,814	+5.3%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	5%	2%	24%
% of all occupations	8%	3%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $78,564, 72% higher than median metro wage
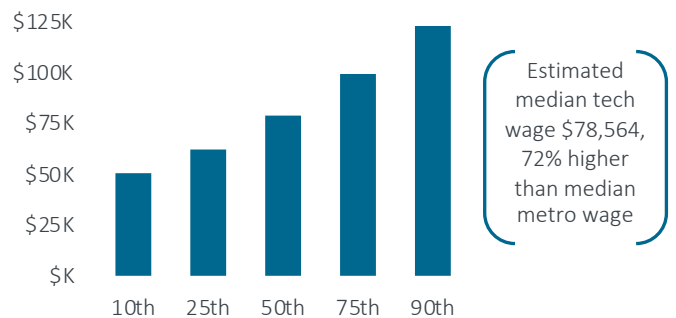
Portland

Full MSA name: Portland-Vancouver-Hillsboro, OR-WA
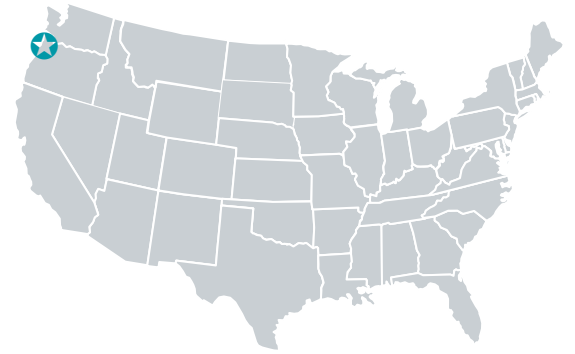
STATE OF TECHNOLOGY SUMMARY

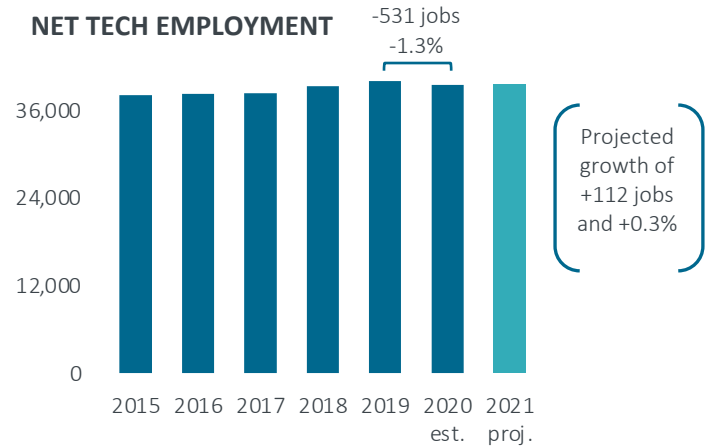|	
140,050	NET TECH EMPLOYMENT[1]
11.0%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$24.8b	ECONOMIC IMPACT [estimated direct impact of tech sector]
15.9%	ECONOMIC IMPACT AS A % OF OVERALL
6,333	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
38,716	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
18.5%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

21st	NET TECH EMPLOYMENT RANK
34th	NET TECH EMPLOYMENT JOBS ADDED RANK
18th	ECONOMIC IMPACT RANK
3rd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
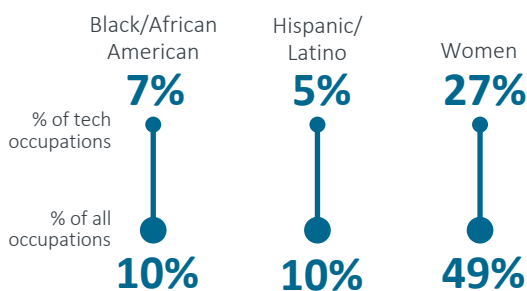
TECH INDUSTRY JOBS
96,843

TECH OCCUPATION JOBS
90,232

49% intersection =
140,050 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-192 jobs
-0.1%

Projected growth of +2,775 jobs and +2.0%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	19,963	+0.6%
IT Support Specialists	7,753	-1.0%
Cybersecurity Analysts and Systems Engineers	6,442	-0.3%
Network Administrators, Architects and Support	5,186	-1.0%
Database, Data Scientists and Computer Scientists	1,686	+0.6%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	40,663	+0.1%
IT Services and Custom Software Services	21,199	+0.1%
R&D, Testing, and Engineering Services	14,665	+1.1%
Telecommunications and Internet Services	10,901	+2.3%
Software [packaged]	9,414	+2.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	5%	24%
% of all occupations	3%	11%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,769, 67% higher than median metro wage

CompTIA.
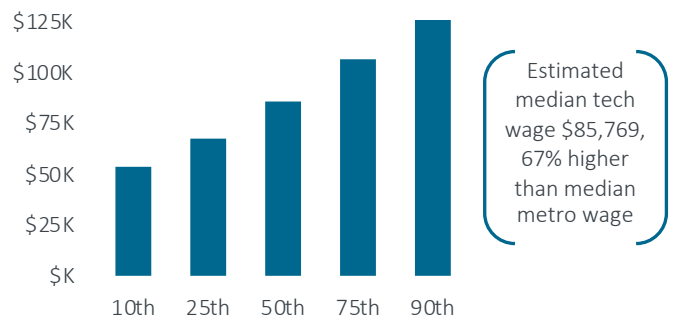
Providence

Full MSA name: Providence-Warwick, RI-MA
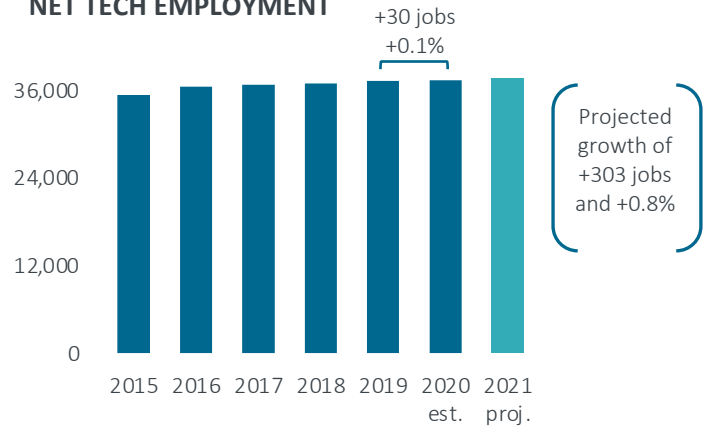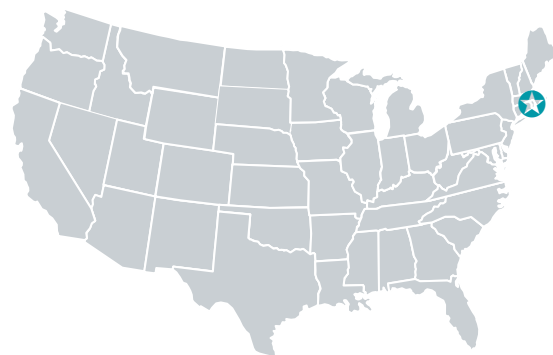
STATE OF TECHNOLOGY SUMMARY

45,833	NET TECH EMPLOYMENT[1]
6.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$5.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.6%	ECONOMIC IMPACT AS A % OF OVERALL
2,542	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
13,356	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
20.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

39th	NET TECH EMPLOYMENT RANK
42nd	NET TECH EMPLOYMENT JOBS ADDED RANK
40th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 25,168
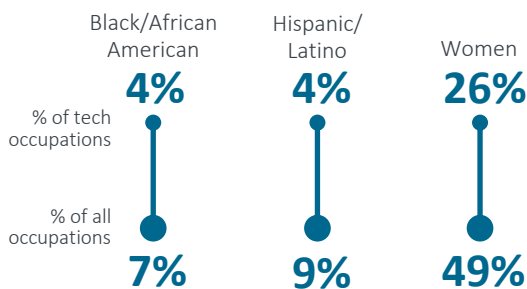
TECH OCCUPATION JOBS 33,367

50% intersection = 45,833 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-639 jobs
-1.4%

Projected growth of +213 jobs and +0.5%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	5,629	-0.6%
Network Administrators, Architects and Support	3,450	-1.7%
IT Support Specialists	2,767	-1.4%
Cybersecurity Analysts and Systems Engineers	2,682	-0.5%
Database, Data Scientists and Computer Scientists	1,132	-0.0%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	8,612	+0.1%
R&D, Testing, and Engineering Services	6,255	-1.1%
Tech Manufacturing	5,465	-1.8%
Telecommunications and Internet Services	3,703	-0.8%
Software [packaged]	1,133	+1.9%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	6%	27%
% of all occupations	6%	11%	52%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $85,786, 73% higher than median metro wage
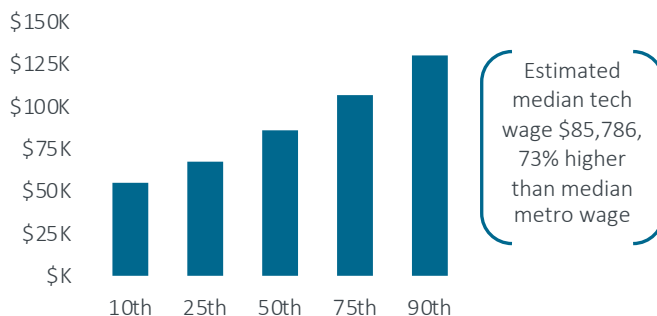
Raleigh

Full MSA name: Raleigh-Cary, NC
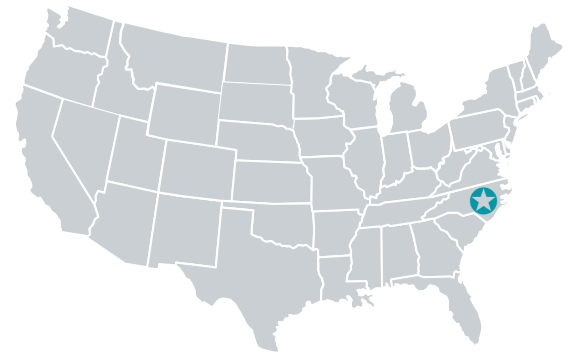
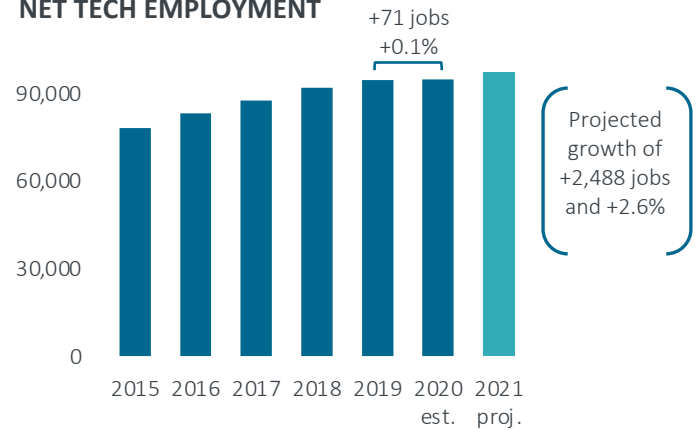## STATE OF TECHNOLOGY SUMMARY

92,100	NET TECH EMPLOYMENT[1]
13.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$18.1b	ECONOMIC IMPACT [estimated direct impact of tech sector]
21.9%	ECONOMIC IMPACT AS A % OF OVERALL
4,573	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
46,139	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
21.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

28th	NET TECH EMPLOYMENT RANK
48th	NET TECH EMPLOYMENT JOBS ADDED RANK
22nd	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
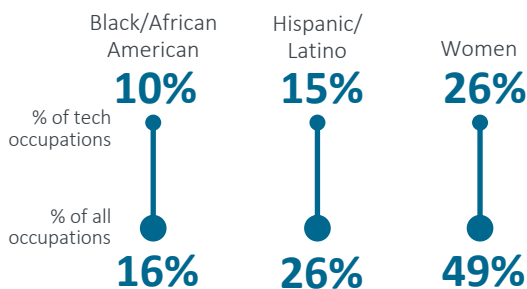

TECH INDUSTRY JOBS
71,213

TECH OCCUPATION JOBS
54,597

47% intersection =
92,100 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-2,307 jobs
-2.4%

Projected growth of +2,389 jobs and +2.6%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	16,223	-0.6%
Cybersecurity Analysts and Systems Engineers	7,925	-0.9%
Network Administrators, Architects and Support	5,945	-1.2%
IT Support Specialists	5,625	-0.2%
Database, Data Scientists and Computer Scientists	1,237	+0.8%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	22,742	-0.7%
R&D, Testing, and Engineering Services	18,095	+1.4%
Software [packaged]	10,427	+2.7%
Tech Manufacturing	10,260	-20.8%
Telecommunications and Internet Services	9,688	-0.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/ Latino	Women
% of tech occupations	13%	4%	28%
% of all occupations	22%	8%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $89,085, 88% higher than median metro wage
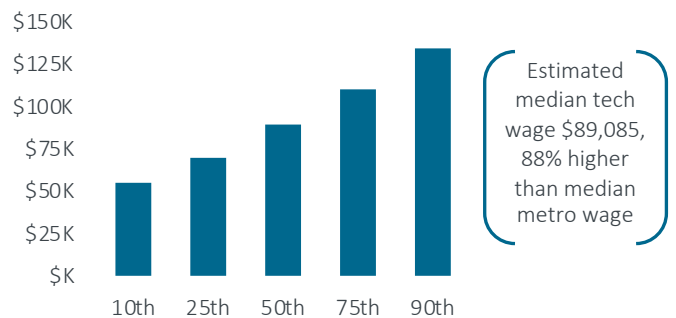
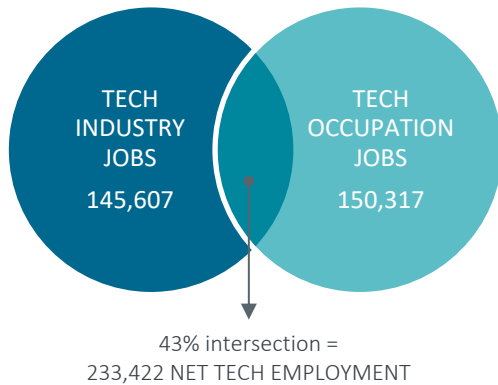# Sacramento

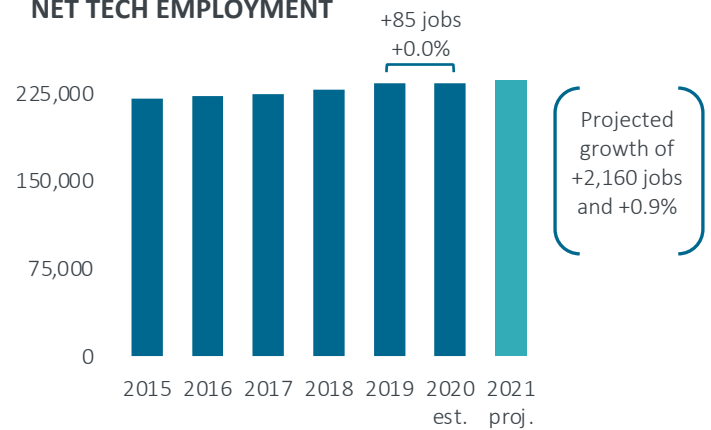Full MSA name: Sacramento-Roseville-Folsom, CA
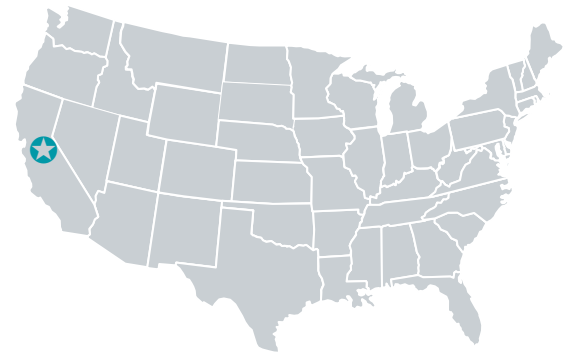
STATE OF TECHNOLOGY SUMMARY

75,268 NET TECH EMPLOYMENT[1]

6.9% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$8.8b ECONOMIC IMPACT [estimated direct impact of tech sector]

6.5% ECONOMIC IMPACT AS A % OF OVERALL

2,503 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

27,774 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

15.1% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

31st NET TECH EMPLOYMENT RANK

43rd NET TECH EMPLOYMENT JOBS ADDED RANK

32nd ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
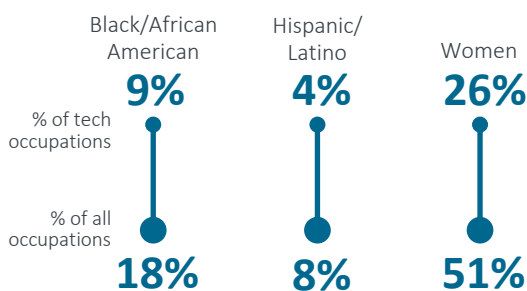

TECH INDUSTRY JOBS
41,571

TECH OCCUPATION JOBS
51,923

44% intersection =
75,268 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

-833 jobs
-1.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +915 jobs and +1.2%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
IT Support Specialists	12,092	-2.4%
Software, Programmers, Web and QA	9,770	-0.3%
Cybersecurity Analysts and Systems Engineers	3,511	-0.0%
Network Administrators, Architects and Support	3,166	-0.7%
Database, Data Scientists and Computer Scientists	1,836	+0.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	15,622	-2.1%
R&D, Testing, and Engineering Services	14,273	+0.5%
Tech Manufacturing	5,321	-3.9%
Telecommunications and Internet Services	5,188	-2.6%
Software [packaged]	1,168	+1.6%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	5%	14%	29%
% of all occupations	7%	27%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $90,482, 75% higher than median metro wage

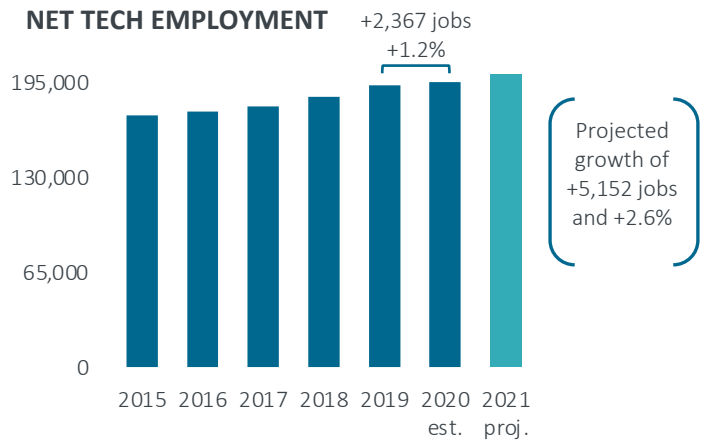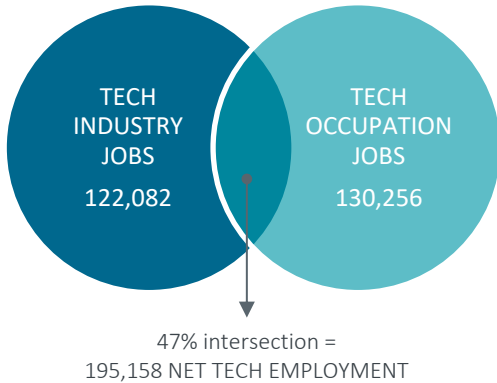---
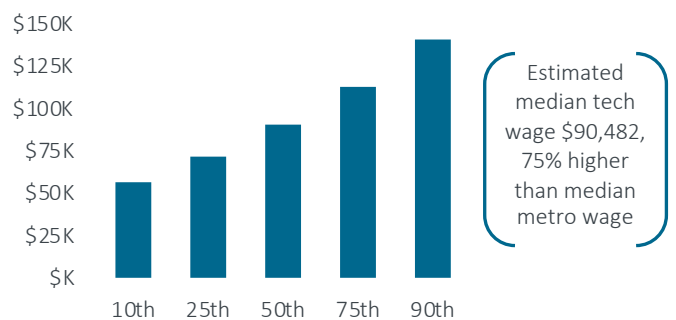
Salt Lake City

Full MSA name: Salt Lake City, UT
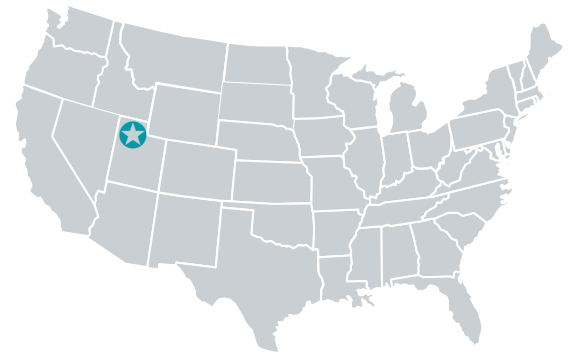
STATE OF TECHNOLOGY SUMMARY

81,322 NET TECH EMPLOYMENT[1]

10.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$11.0b ECONOMIC IMPACT [estimated direct impact of tech sector]

11.9% ECONOMIC IMPACT AS A % OF OVERALL

5,086 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

20,182 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

17.2% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

29th NET TECH EMPLOYMENT RANK

13th NET TECH EMPLOYMENT JOBS ADDED RANK

29th ECONOMIC IMPACT RANK

4th DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
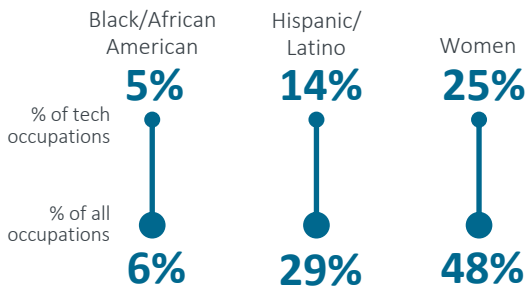

TECH INDUSTRY JOBS 53,835

TECH OCCUPATION JOBS 52,307

46% intersection = 81,322 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+894 jobs +1.1%

Projected growth of +3,013 jobs and +3.7%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	13,599	+2.2%
IT Support Specialists	6,739	+0.1%
Network Administrators, Architects and Support	4,242	+0.5%
Cybersecurity Analysts and Systems Engineers	3,174	+2.2%
Database, Data Scientists and Computer Scientists	1,502	+1.4%

LEADING TECH INDUSTRY SECTORS [by employment]

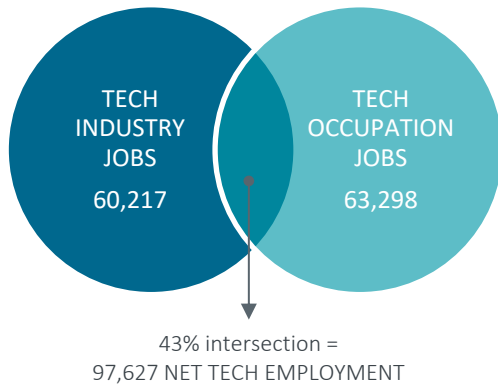|	2020	YoY % Change
IT Services and Custom Software Services	19,587	+2.0%
R&D, Testing, and Engineering Services	12,179	+3.0%
Telecommunications and Internet Services	8,097	-1.2%
Tech Manufacturing	7,984	-1.2%
Software [packaged]	5,988	+6.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	1%	7%	22%
% of all occupations	2%	14%	45%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $79,700, 75% higher than median metro wage
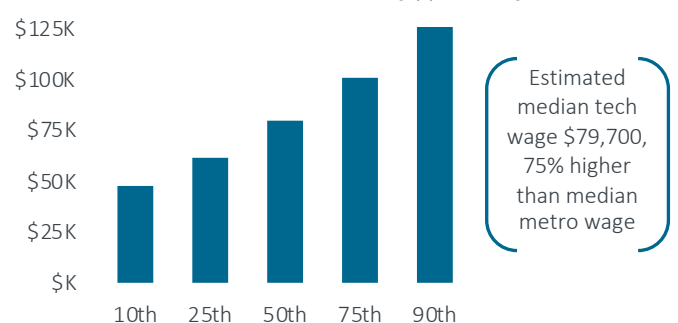
San Antonio

Full MSA name: San Antonio-New Braunfels, TX

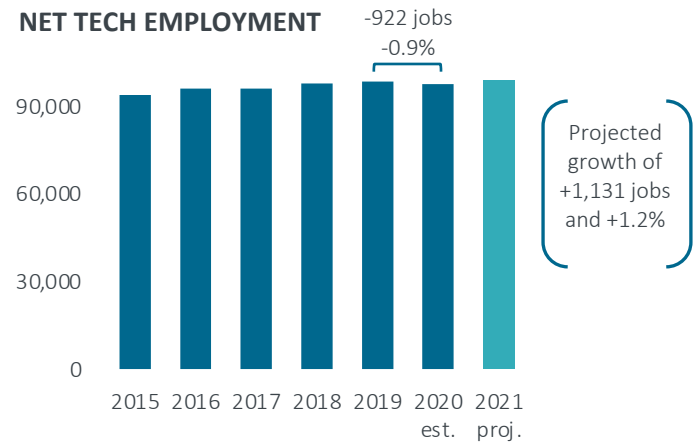## STATE OF TECHNOLOGY SUMMARY

69,138	NET TECH EMPLOYMENT[1]
6.3%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$7.5b	ECONOMIC IMPACT [estimated direct impact of tech sector]
6.2%	ECONOMIC IMPACT AS A % OF OVERALL
2,349	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
30,380	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
15.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

35th	NET TECH EMPLOYMENT RANK
21st	NET TECH EMPLOYMENT JOBS ADDED RANK
35th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
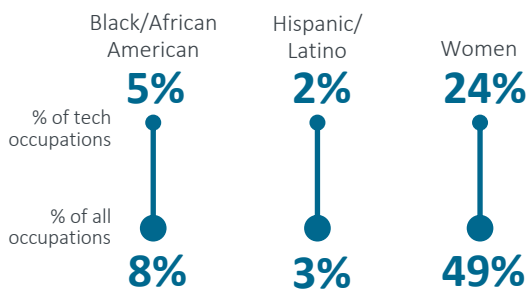40,377

TECH OCCUPATION JOBS
44,439

39% intersection =
69,138 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+147 jobs
+0.2%

Projected growth of +1,912 jobs and +2.8%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	7,456	+1.4%
Network Administrators, Architects and Support	5,465	-1.3%
IT Support Specialists	5,368	-0.4%
Cybersecurity Analysts and Systems Engineers	4,777	+0.1%
Database, Data Scientists and Computer Scientists	1,241	+0.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Telecommunications and Internet Services	12,935	-2.5%
R&D, Testing, and Engineering Services	12,286	+1.9%
IT Services and Custom Software Services	11,959	+2.5%
Tech Manufacturing	2,432	+3.1%
Software [packaged]	765	+5.0%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	8%	32%	25%
% of all occupations	9%	48%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $79,907, 90% higher than median metro wage

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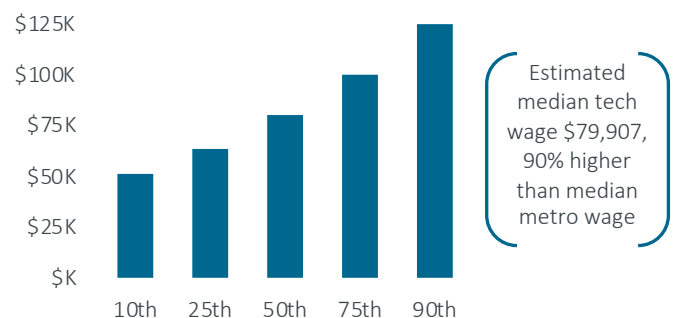
San Diego
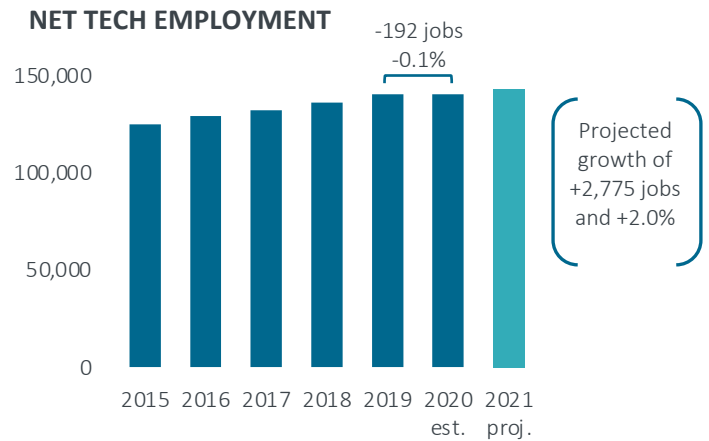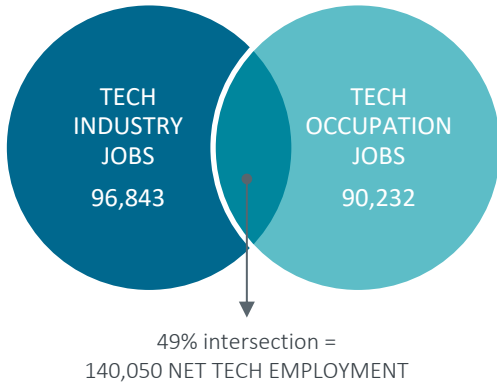
Full MSA name: San Diego-Chula Vista-Carlsbad, CA
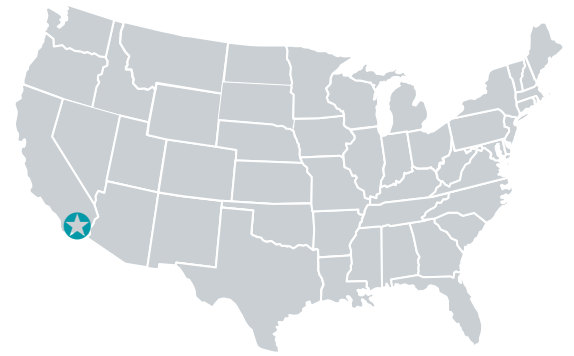
STATE OF TECHNOLOGY SUMMARY

188,312 NET TECH EMPLOYMENT[1]

11.9% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$38.3b ECONOMIC IMPACT [estimated direct impact of tech sector]

16.7% ECONOMIC IMPACT AS A % OF OVERALL

6,360 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

67,506 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

18.6% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

17th NET TECH EMPLOYMENT RANK

16th NET TECH EMPLOYMENT JOBS ADDED RANK

12th ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
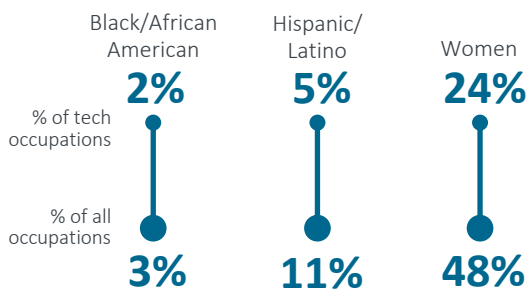

TECH INDUSTRY JOBS
135,570

TECH OCCUPATION JOBS
113,804

45% intersection =
188,312 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+662 jobs
+0.4%

Projected growth of +3,603 jobs and +1.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	26,830	+0.7%
Cybersecurity Analysts and Systems Engineers	8,056	+0.1%
Network Administrators, Architects and Support	5,975	-0.6%
IT Support Specialists	5,554	-0.4%
Database, Data Scientists and Computer Scientists	2,432	+0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	56,886	+0.4%
Tech Manufacturing	31,394	+2.3%
IT Services and Custom Software Services	30,266	+0.5%
Telecommunications and Internet Services	11,673	-2.0%
Software [packaged]	5,350	+5.2%

TECH WORKFORCE CHARACTERISTICS[2]

	Black/African American	Hispanic/Latino	Women
% of tech occupations	4%	14%	25%
% of all occupations	6%	34%	48%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $97,925, 86% higher than median metro wage

10th 25th 50th 75th 90th
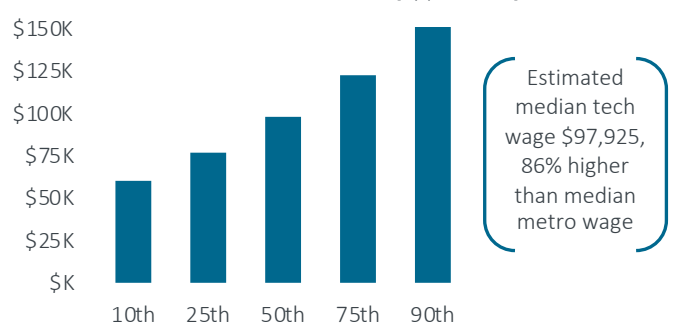
San Francisco

Full MSA name: San Francisco-Oakland-Berkeley, CA
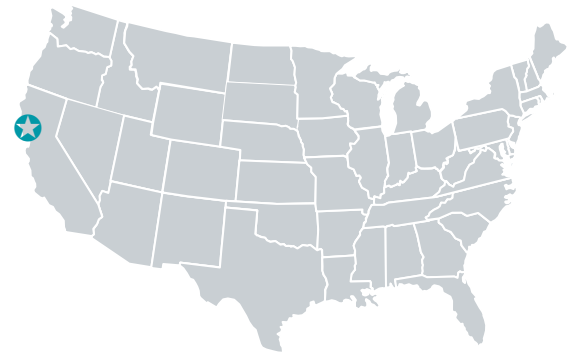
STATE OF TECHNOLOGY SUMMARY

426,286	NET TECH EMPLOYMENT[1]
16.4%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$158.2b	ECONOMIC IMPACT [estimated direct impact of tech sector]
28.4%	ECONOMIC IMPACT AS A % OF OVERALL
13,212	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
158,713	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
30.8%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

4th	NET TECH EMPLOYMENT RANK
1st	NET TECH EMPLOYMENT JOBS ADDED RANK
2nd	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 346,185

TECH OCCUPATION JOBS 241,040

46% intersection = 426,286 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+7,543 jobs +1.8%

Projected growth of +17,604 jobs and +4.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	80,731	+2.2%
Cybersecurity Analysts and Systems Engineers	19,608	+1.4%
IT Support Specialists	19,391	+0.7%
Network Administrators, Architects and Support	14,718	+0.9%
Database, Data Scientists and Computer Scientists	7,730	+1.9%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	119,699	+1.4%
Telecommunications and Internet Services	83,810	+4.8%
R&D, Testing, and Engineering Services	77,363	+3.1%
Tech Manufacturing	34,351	+0.7%
Software [packaged]	30,962	+3.4%

TECH WORKFORCE CHARACTERISTICS[2]
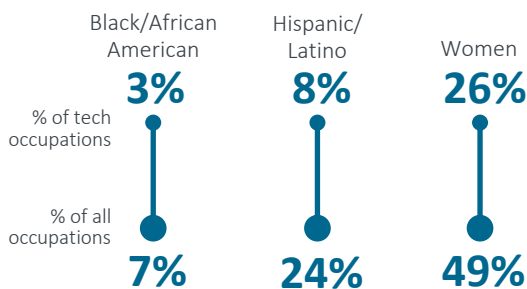
	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	8%	26%
% of all occupations	7%	24%	49%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$200K
$150K
$100K
$50K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $121,079, 82% higher than median metro wage

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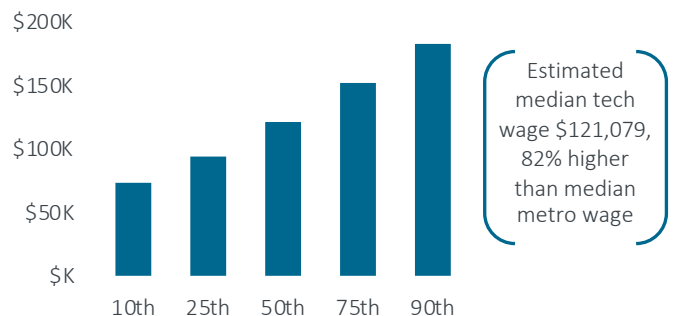
San Jose
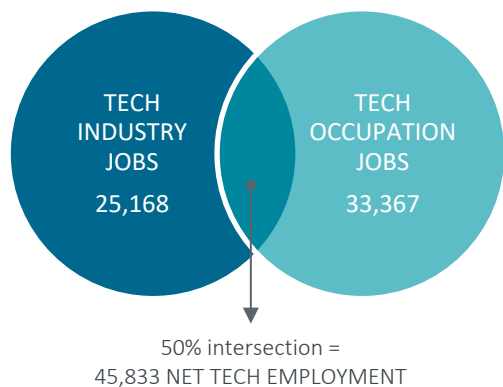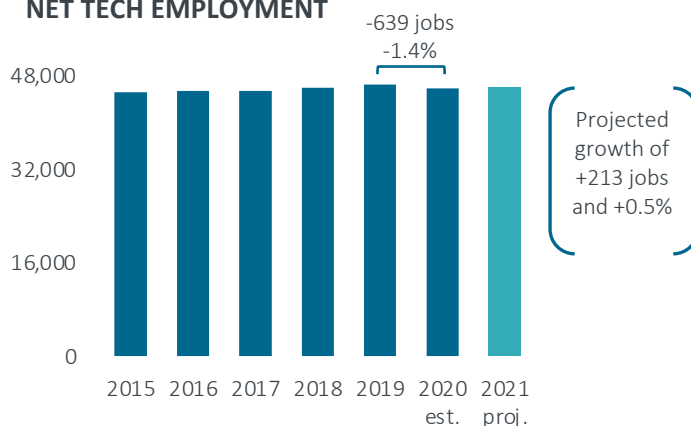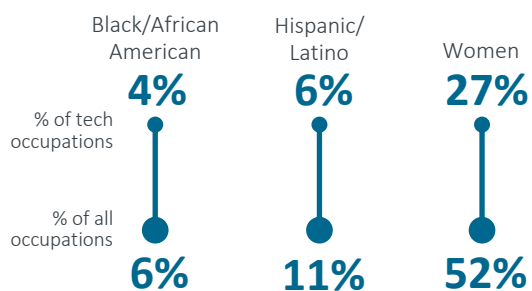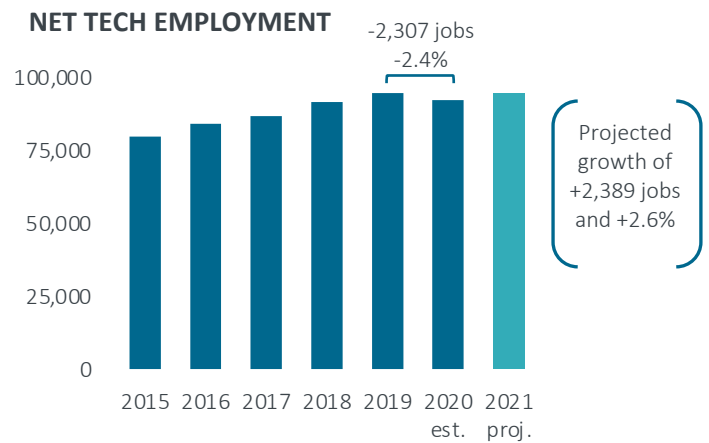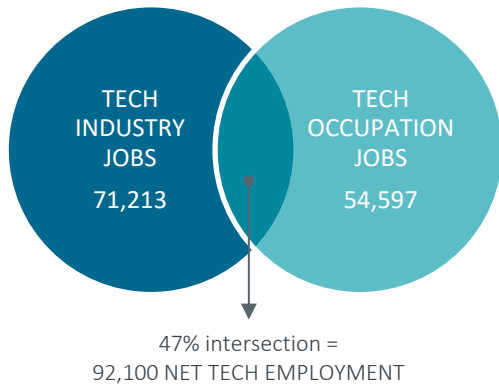
Full MSA name: San Jose-Sunnyvale-Santa Clara, CA
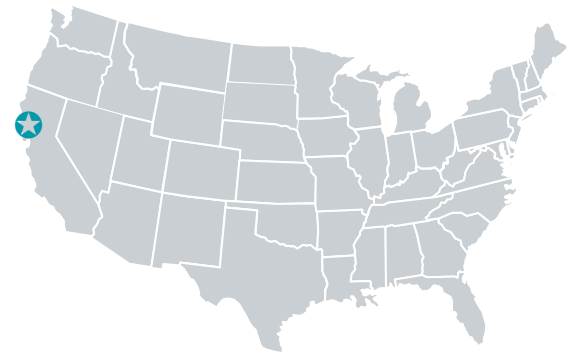
STATE OF TECHNOLOGY SUMMARY

398,839 NET TECH EMPLOYMENT[1]

33.7% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$196.2b ECONOMIC IMPACT [estimated direct impact of tech sector]

59.9% ECONOMIC IMPACT AS A % OF OVERALL

8,026 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

125,479 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

31.9% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

5th NET TECH EMPLOYMENT RANK

4th NET TECH EMPLOYMENT JOBS ADDED RANK

1st ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
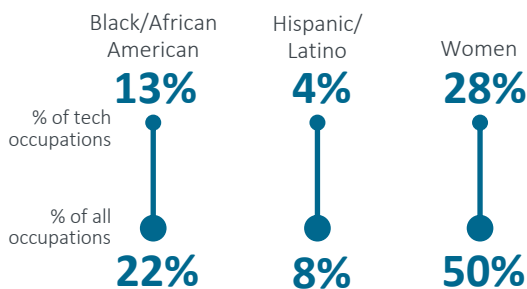

TECH INDUSTRY JOBS 367,510

TECH OCCUPATION JOBS 224,830

53% intersection =
398,839 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+4,269 jobs
+1.1%

Projected growth of +11,082 jobs and +2.8%

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	89,027	+1.9%
IT Support Specialists	13,820	+0.5%
Cybersecurity Analysts and Systems Engineers	13,533	+0.5%
Network Administrators, Architects and Support	10,212	+0.1%
Database, Data Scientists and Computer Scientists	4,385	+1.8%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Tech Manufacturing	130,994	+0.4%
IT Services and Custom Software Services	97,872	-0.9%
Telecommunications and Internet Services	64,019	+3.6%
R&D, Testing, and Engineering Services	39,192	+3.1%
Software [packaged]	35,432	+6.3%

TECH WORKFORCE CHARACTERISTICS[2]
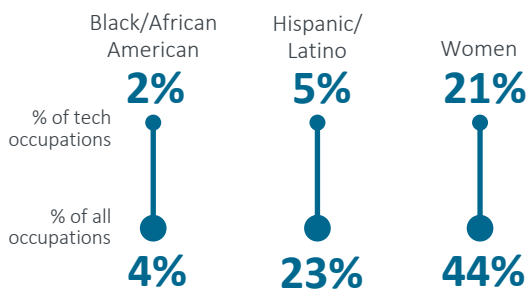
	Black/African American	Hispanic/Latino	Women
% of tech occupations	2%	5%	21%
% of all occupations	4%	23%	44%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $128,492, 71% higher than median metro wage

$200K
$150K
$100K
$50K
$K

10th 25th 50th 75th 90th
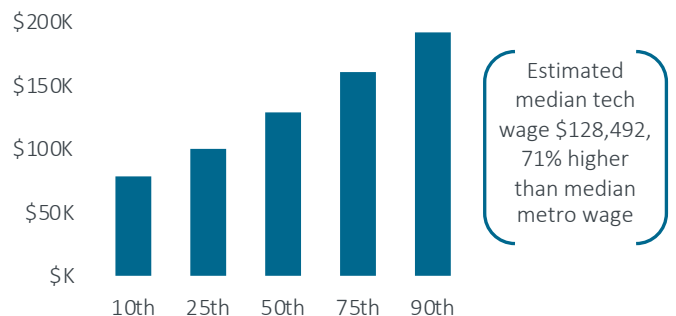
Seattle

Full MSA name: Seattle-Tacoma-Bellevue, WA
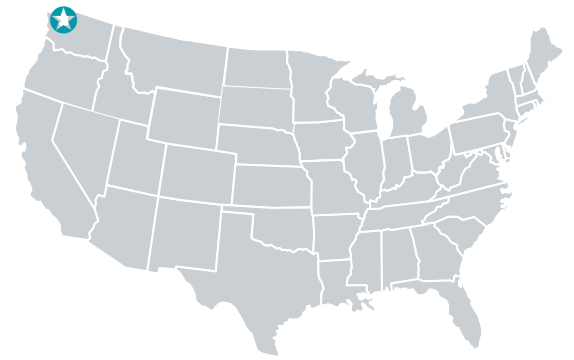
STATE OF TECHNOLOGY SUMMARY

326,355 NET TECH EMPLOYMENT[1]

15.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$113.2b ECONOMIC IMPACT [estimated direct impact of tech sector]
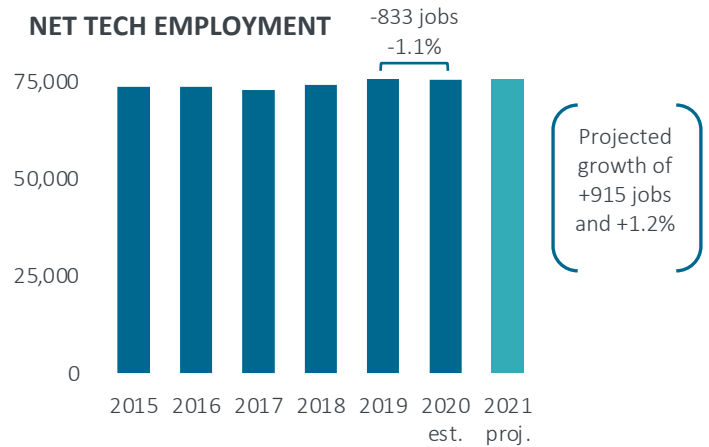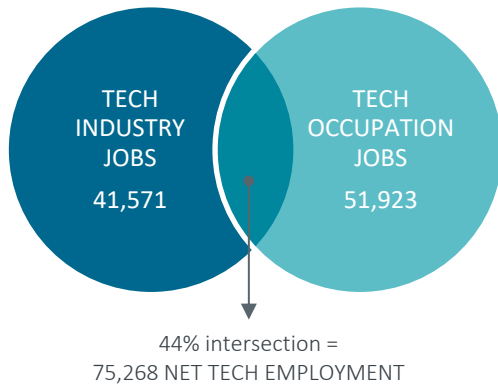
29.1% ECONOMIC IMPACT AS A % OF OVERALL

11,239 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

96,238 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

29.0% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

9th NET TECH EMPLOYMENT RANK

2nd NET TECH EMPLOYMENT JOBS ADDED RANK

4th ECONOMIC IMPACT RANK

2nd DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
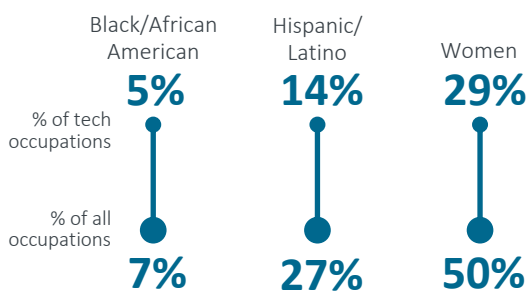

TECH INDUSTRY JOBS
231,240

TECH OCCUPATION JOBS
217,869

53% intersection =
326,355 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+4,695 jobs
+1.5%

Projected growth of +9,416 jobs and +2.9%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	94,131	+2.3%
Cybersecurity Analysts and Systems Engineers	15,602	+1.1%
IT Support Specialists	15,207	+1.0%
Network Administrators, Architects and Support	11,825	+0.3%
Database, Data Scientists and Computer Scientists	5,360	+2.3%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
Software [packaged]	70,768	+4.5%
IT Services and Custom Software Services	59,043	+1.3%
Telecommunications and Internet Services	53,114	+1.9%
R&D, Testing, and Engineering Services	31,045	+1.9%
Tech Manufacturing	17,271	-1.3%

TECH WORKFORCE CHARACTERISTICS[2]
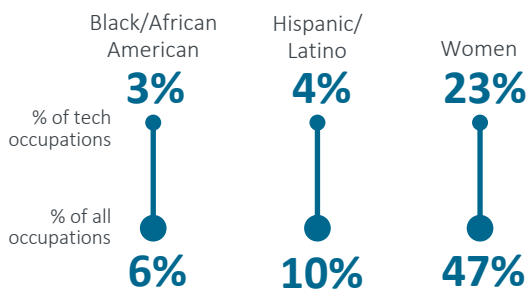
	Black/African American	Hispanic/Latino	Women
% of tech occupations	3%	4%	23%
% of all occupations	6%	10%	47%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $117,028, 92% higher than median metro wage

10th 25th 50th 75th 90th
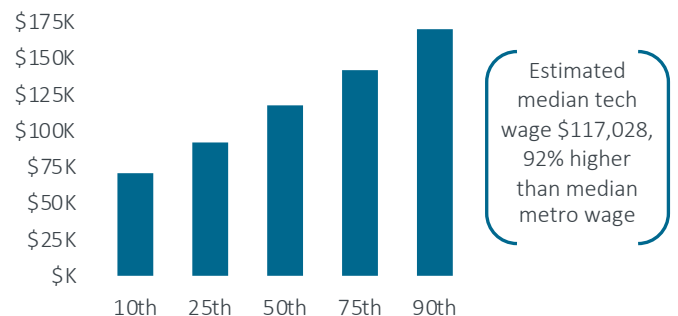
St. Louis

Full MSA name: St. Louis, MO-IL
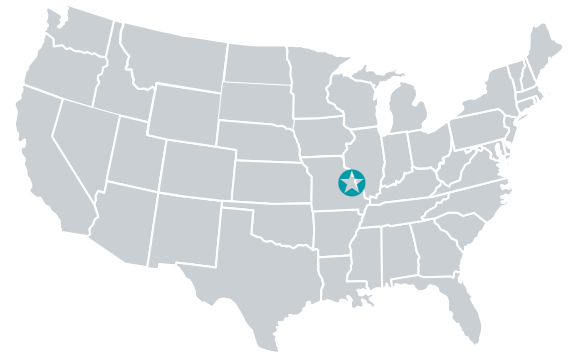
STATE OF TECHNOLOGY SUMMARY

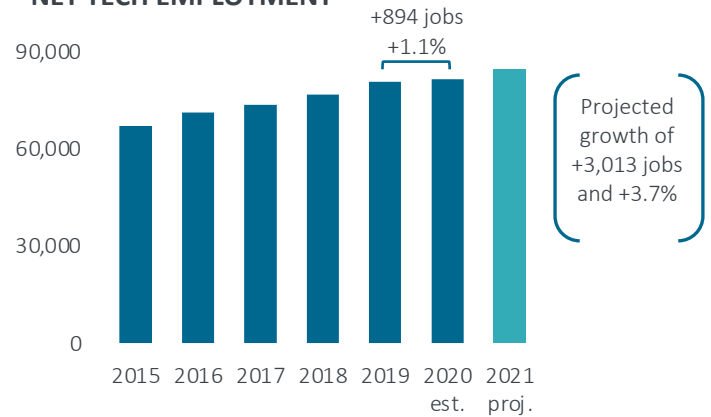|	
107,394	NET TECH EMPLOYMENT[1]
7.8%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$13.9b	ECONOMIC IMPACT [estimated direct impact of tech sector]
8.7%	ECONOMIC IMPACT AS A % OF OVERALL
3,285	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
45,428	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
19.9%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

23rd	NET TECH EMPLOYMENT RANK
23rd	NET TECH EMPLOYMENT JOBS ADDED RANK
26th	ECONOMIC IMPACT RANK
4th	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.
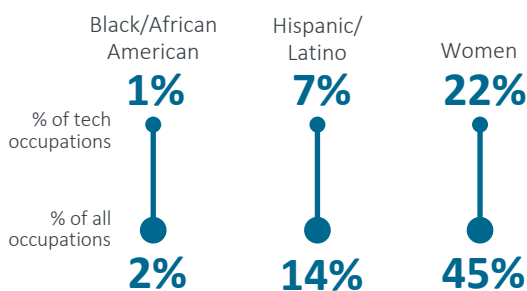
TECH INDUSTRY JOBS 58,342

TECH OCCUPATION JOBS 76,251

47% intersection = 107,394 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+97 jobs +0.1%

Projected growth of +1,023 jobs and +1.0%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	16,999	+1.3%
Network Administrators, Architects and Support	8,297	-1.3%
Cybersecurity Analysts and Systems Engineers	7,639	+0.5%
IT Support Specialists	6,573	-0.4%
Database, Data Scientists and Computer Scientists	2,298	-0.7%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	21,953	+2.3%
Telecommunications and Internet Services	15,988	+0.2%
R&D, Testing, and Engineering Services	13,521	+0.9%
Tech Manufacturing	4,544	-1.1%
Software [packaged]	2,336	+8.3%

TECH WORKFORCE CHARACTERISTICS[2]
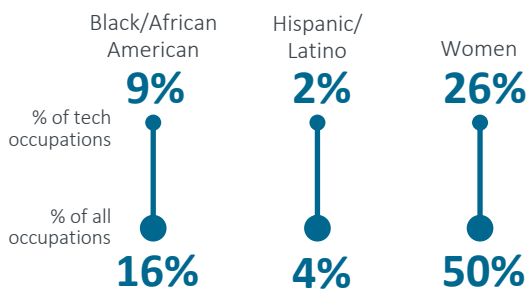
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	9%	2%	26%
% of all occupations	16%	4%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $81,017, 79% higher than median metro wage

CompTIA.
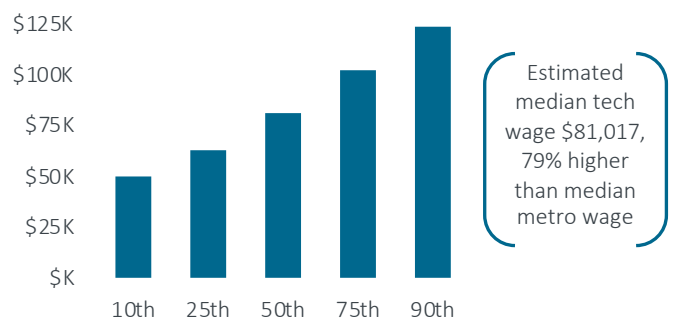
Tampa

Full MSA name: Tampa-St. Petersburg-Clearwater, FL
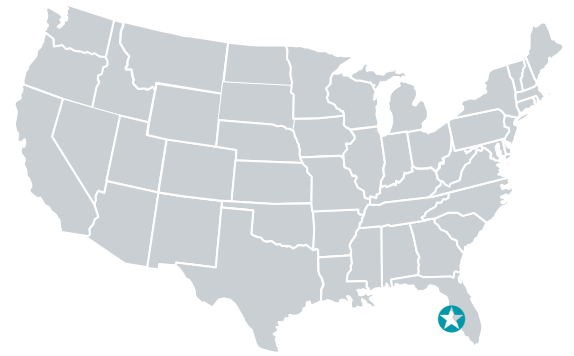
STATE OF TECHNOLOGY SUMMARY

109,295	NET TECH EMPLOYMENT[1]
7.9%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$16.3b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.2%	ECONOMIC IMPACT AS A % OF OVERALL
4,908	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
43,342	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
17.3%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

22nd	NET TECH EMPLOYMENT RANK
15th	NET TECH EMPLOYMENT JOBS ADDED RANK
23rd	ECONOMIC IMPACT RANK
2nd	DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
70,455

TECH OCCUPATION JOBS
68,980

43% intersection =
109,295 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+742 jobs
+0.7%

Projected growth of +2,316 jobs and +2.1%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

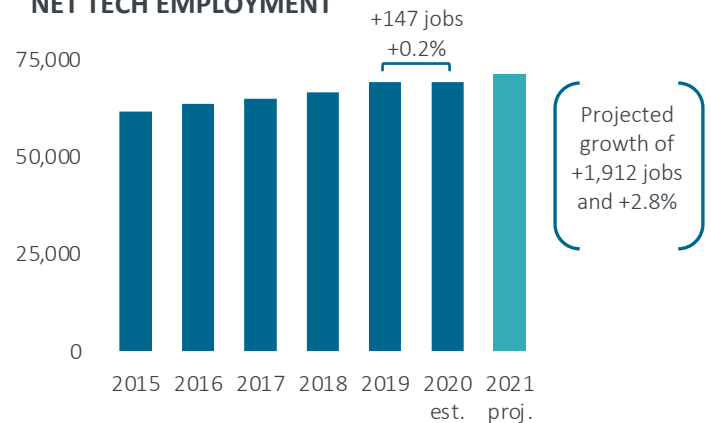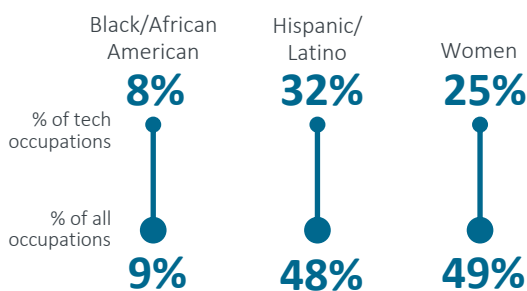|	2020	YoY % Change
Software, Programmers, Web and QA	16,858	+1.2%
IT Support Specialists	9,783	-0.3%
Cybersecurity Analysts and Systems Engineers	7,645	+0.8%
Network Administrators, Architects and Support	6,517	-0.2%
Database, Data Scientists and Computer Scientists	1,999	+0.4%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	25,537	+1.0%
R&D, Testing, and Engineering Services	15,539	+2.1%
Telecommunications and Internet Services	15,040	-1.8%
Tech Manufacturing	10,957	+2.6%
Software [packaged]	3,382	+2.0%

TECH WORKFORCE CHARACTERISTICS[2]
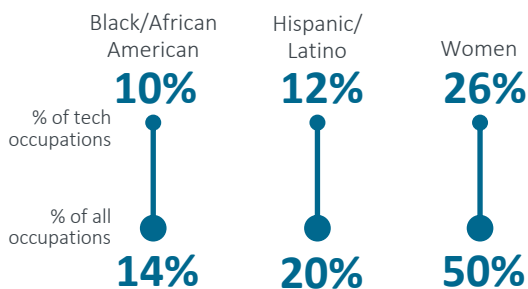
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	10%	12%	26%
% of all occupations	14%	20%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $77,512, 84% higher than median metro wage

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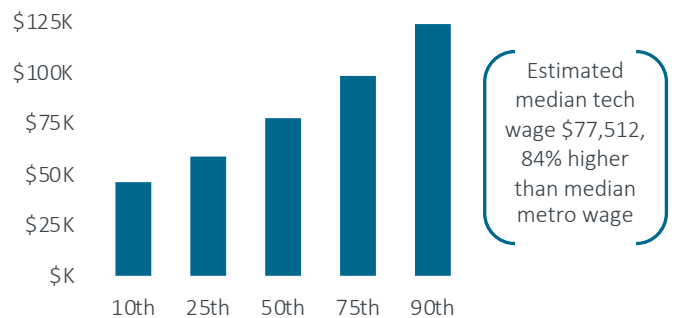
Trenton

Full MSA name: Trenton-Princeton, NJ
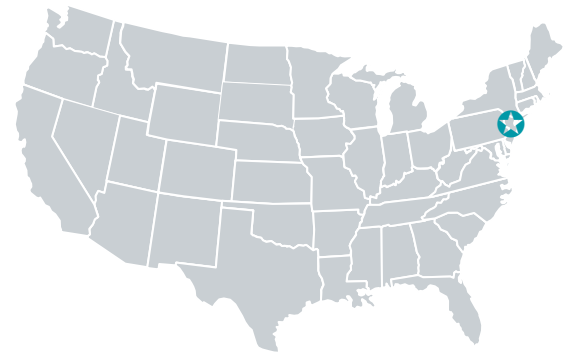
STATE OF TECHNOLOGY SUMMARY

25,584	NET TECH EMPLOYMENT[1]
9.7%	NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
$4.0b	ECONOMIC IMPACT [estimated direct impact of tech sector]
10.3%	ECONOMIC IMPACT AS A % OF OVERALL
919	TECH BUSINESS ESTABLISHMENTS [firms with payroll]
12,510	EMPLOYER JOB POSTINGS [2020 total for tech occupations]
22.6%	EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

51st	NET TECH EMPLOYMENT RANK
22nd	NET TECH EMPLOYMENT JOBS ADDED RANK
45th	ECONOMIC IMPACT RANK
1st	DIVERSITY INDEX QUARTILE [1st = top	see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS 16,033

TECH OCCUPATION JOBS 16,126

41% intersection = 25,584 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+104 jobs
+0.4%

Projected growth of +351 jobs and +1.4%

2015 2016 2017 2018 2019 2020 est. 2021 proj.

LEADING TECH OCCUPATION CATEGORIES

	2020	YoY % Change
Software, Programmers, Web and QA	5,293	+0.2%
Cybersecurity Analysts and Systems Engineers	1,676	+0.5%
Network Administrators, Architects and Support	1,566	-0.4%
IT Support Specialists	1,523	-0.3%
Database, Data Scientists and Computer Scientists	511	+1.2%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
R&D, Testing, and Engineering Services	7,993	+2.4%
IT Services and Custom Software Services	4,706	-3.1%
Telecommunications and Internet Services	1,765	+0.0%
Tech Manufacturing	904	-3.0%
Software [packaged]	665	+21.3%

TECH WORKFORCE CHARACTERISTICS[2]
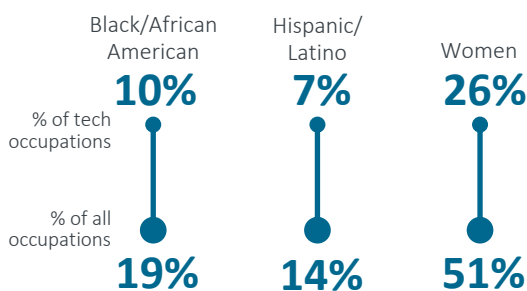
	Black/African American	Hispanic/ Latino	Women
% of tech occupations	10%	7%	26%
% of all occupations	19%	14%	51%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

Estimated median tech wage $94,560, 65% higher than median metro wage

10th 25th 50th 75th 90th
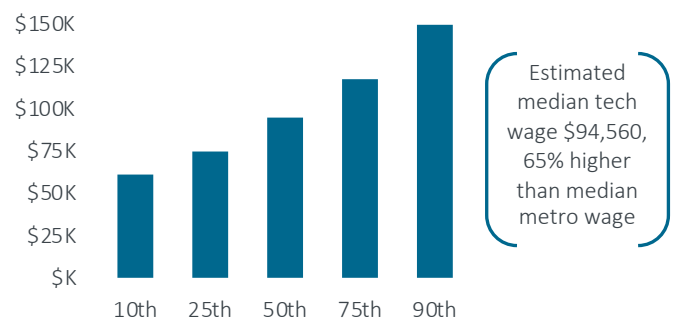
Washington D.C.

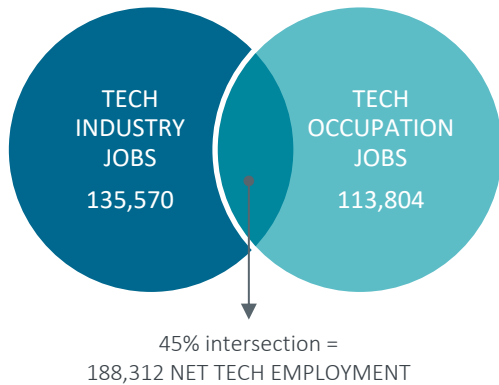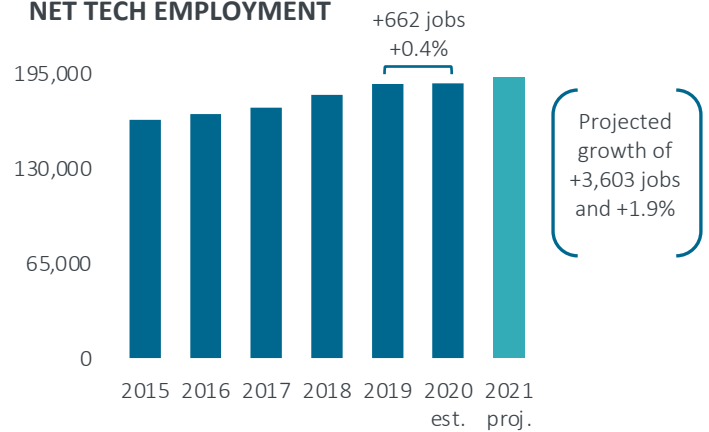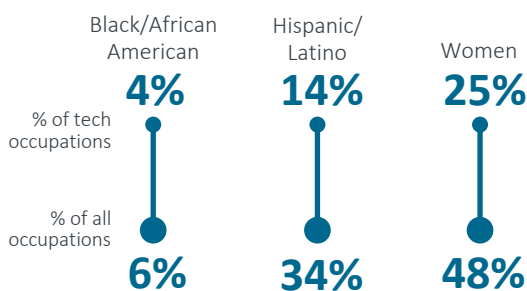Full MSA name: Washington-Arlington-Alexandria, DC-VA-MD-WV
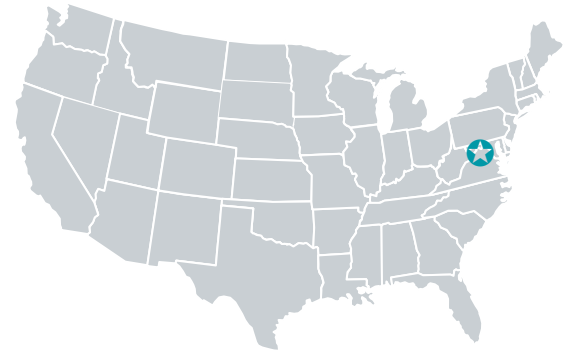
STATE OF TECHNOLOGY SUMMARY

452,666 NET TECH EMPLOYMENT[1]

13.7% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

$80.7b ECONOMIC IMPACT [estimated direct impact of tech sector]

15.8% ECONOMIC IMPACT AS A % OF OVERALL

21,451 TECH BUSINESS ESTABLISHMENTS [firms with payroll]

247,418 EMPLOYER JOB POSTINGS [2020 total for tech occupations]

23.8% EMERGING TECH EMPLOYER JOB POSTINGS % OF TOTAL

3rd NET TECH EMPLOYMENT RANK

10th NET TECH EMPLOYMENT JOBS ADDED RANK

7th ECONOMIC IMPACT RANK

1st DIVERSITY INDEX QUARTILE [1st = top | see footnote]

[1]net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis, Burning Glass Technologies Labor Insights, and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | Racial/Ethnicity Diversity Rank based on Simpson's Diversity Index measure | See report Methodology for details.

TECH INDUSTRY JOBS
323,657

TECH OCCUPATION JOBS
302,172

54% intersection =
452,666 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

+2,002 jobs
+0.4%

450,000

300,000

150,000

0

2015 2016 2017 2018 2019 2020 est. 2021 proj.

Projected growth of +6,097 jobs and +1.3%

LEADING TECH OCCUPATION CATEGORIES

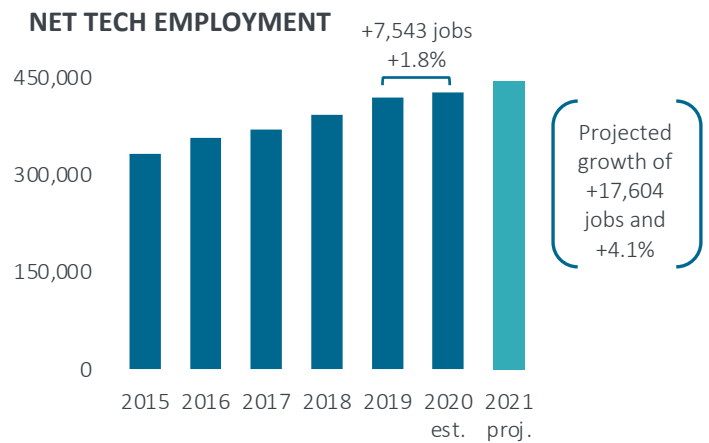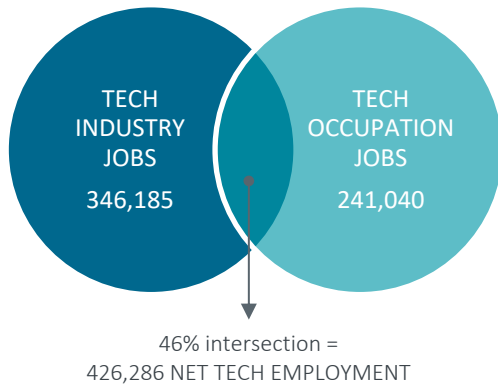|	2020	YoY % Change
Software, Programmers, Web and QA	82,483	+1.0%
Cybersecurity Analysts and Systems Engineers	41,332	+0.9%
Network Administrators, Architects and Support	34,093	-0.8%
IT Support Specialists	21,995	+0.3%
Database, Data Scientists and Computer Scientists	10,914	+0.8%

LEADING TECH INDUSTRY SECTORS [by employment]

	2020	YoY % Change
IT Services and Custom Software Services	189,100	+0.9%
R&D, Testing, and Engineering Services	74,711	+0.8%
Telecommunications and Internet Services	38,122	+0.5%
Tech Manufacturing	13,659	+0.7%
Software [packaged]	8,066	+1.9%

TECH WORKFORCE CHARACTERISTICS[2]
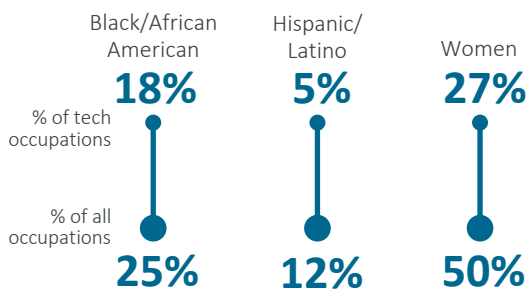
	Black/African American	Hispanic/Latino	Women
% of tech occupations	18%	5%	27%
% of all occupations	25%	12%	50%

[2]Data covers core tech occupations | See Appendix for numerical values

TECH OCCUPATION WAGES [by percentile]

$175K
$150K
$125K
$100K
$75K
$50K
$25K
$K

10th 25th 50th 75th 90th

Estimated median tech wage $109,424, 68% higher than median metro wage
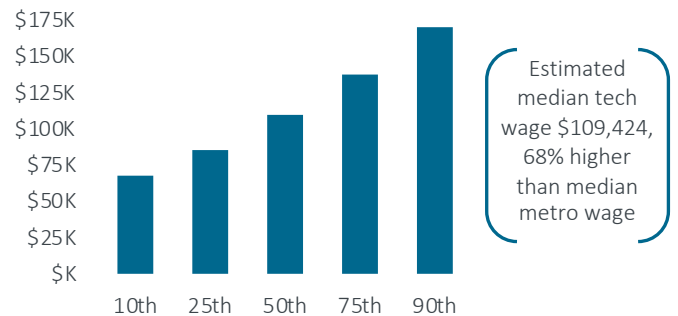
APPENDIX TABLES – A
NET TECH EMPLOYMENT

For an explanation of the net tech employment calculation, see page 6

	2015	2016	2017	2018	2019	2020 est.	2021 proj.
United States	11,038,594	11,281,233	11,478,428	11,811,679	12,147,636	12,159,552	12,405,066
Alabama	136,604	139,123	141,643	145,687	148,783	148,657	151,277
Alaska	18,990	18,561	18,382	18,057	18,200	17,914	18,044
Arizona	224,634	229,129	234,943	244,210	253,451	255,998	262,910
Arkansas	55,909	57,260	56,326	55,546	56,095	56,329	57,404
California	1,653,383	1,699,885	1,735,015	1,808,636	1,873,487	1,882,167	1,923,799
Colorado	269,594	278,220	284,510	296,689	309,493	313,260	320,773
Connecticut	136,048	138,272	137,610	138,226	138,835	137,744	137,996
Delaware	34,531	32,364	32,464	32,523	31,733	31,243	31,181
District of Columbia	76,389	78,432	79,732	81,090	83,197	84,230	85,813
Florida	508,149	529,857	548,275	568,455	591,533	595,156	611,191
Georgia	330,504	342,025	350,704	358,077	369,152	370,068	378,834
Hawaii	29,889	30,231	30,248	30,838	30,881	30,465	30,421
Idaho	48,065	48,690	49,592	51,871	53,779	53,803	55,242
Illinois	428,900	431,266	431,172	437,627	446,026	442,076	445,595
Indiana	175,033	177,408	179,091	182,278	186,182	184,274	187,950
Iowa	88,334	89,186	90,390	93,766	96,567	95,657	97,696
Kansas	93,001	93,817	93,794	96,305	97,680	98,811	100,015
Kentucky	93,422	93,503	95,610	97,602	98,902	98,278	99,909
Louisiana	82,578	81,074	82,142	84,120	84,932	83,863	85,122
Maine	32,860	33,279	34,065	35,455	36,017	35,935	36,684
Maryland	276,309	281,032	284,771	291,834	298,638	297,993	304,081
Massachusetts	397,213	407,524	417,419	429,855	448,092	450,548	459,205
Michigan	383,210	393,872	393,893	399,146	400,924	386,901	389,440
Minnesota	239,540	241,873	243,740	245,895	247,794	245,587	248,226
Mississippi	44,647	43,895	44,291	44,818	45,621	45,410	45,934
Missouri	194,551	199,364	202,426	205,458	208,704	208,690	212,811
Montana	21,240	21,571	21,899	22,505	22,684	22,853	23,443
Nebraska	59,407	60,975	62,055	62,848	63,697	64,048	65,169
Nevada	56,059	58,898	62,455	67,503	70,637	69,874	72,299
New Hampshire	61,999	64,009	67,778	70,082	72,131	71,912	73,318
New Jersey	329,335	332,916	331,619	337,367	341,529	339,951	342,819
New Mexico	65,927	65,735	66,232	68,019	70,291	71,178	72,115
New York	612,710	628,325	641,801	657,557	668,804	670,806	684,674
North Carolina	313,070	327,606	338,207	350,602	360,077	362,686	372,721
North Dakota	22,326	21,920	21,566	21,736	21,517	21,443	21,758
Ohio	369,365	378,836	384,483	390,037	396,216	391,539	397,379
Oklahoma	86,996	87,101	87,870	91,029	93,960	93,136	94,187
Oregon	147,628	152,987	157,057	161,589	167,078	166,862	170,258
Pennsylvania	412,493	420,957	425,826	434,160	443,551	441,162	448,207
Rhode Island	34,531	34,635	34,203	34,932	35,775	35,426	35,883
South Carolina	115,776	118,814	122,184	127,669	130,479	130,042	133,776
South Dakota	19,669	19,993	20,399	21,232	22,001	22,158	22,793
Tennessee	161,347	163,294	167,170	169,707	173,241	174,067	178,380
Texas	943,965	948,535	963,590	1,000,585	1,048,726	1,060,588	1,089,759
Utah	123,038	130,915	136,806	143,256	150,411	152,687	159,062
Vermont	22,087	22,133	22,223	22,405	22,729	22,509	22,696
Virginia	414,800	421,551	428,178	437,586	448,236	451,268	459,791
Washington	341,132	355,118	365,282	381,435	400,594	405,816	416,827
West Virginia	29,646	29,440	29,284	30,371	30,233	30,130	30,581
Wisconsin	201,166	205,863	208,223	213,341	218,175	216,210	219,359
Wyoming	9,649	9,167	9,191	9,469	9,743	9,621	9,782

For an explanation of the net tech employment calculation, see page 5

	2015	2016	2017	2018	2019	2020 est.	2021 proj.
United States	11,038,594	11,281,233	11,478,428	11,811,679	12,147,636	12,159,552	12,405,066
Albuquerque	38,291	38,055	37,928	38,986	39,914	40,554	40,750
Atlanta	239,171	248,283	256,155	263,581	273,090	272,869	278,875
Austin	144,546	146,350	150,618	158,679	169,597	172,961	179,678
Baltimore	129,853	132,613	134,188	138,173	140,717	140,903	144,002
Boise	25,807	26,706	27,090	28,618	29,753	29,623	30,296
Boston	341,358	350,093	361,587	372,322	389,899	392,781	401,155
Buffalo	35,146	36,010	36,741	37,865	37,980	37,348	37,697
Charleston	24,208	25,387	25,820	27,070	27,566	27,987	28,950
Charlotte	85,705	91,554	95,237	98,121	98,279	99,705	102,611
Chicago	331,864	335,124	335,398	338,617	342,379	339,000	340,460
Cincinnati	77,376	79,326	79,378	80,686	81,710	81,118	82,405
Cleveland	72,199	73,048	73,679	74,041	75,079	74,118	74,646
Colorado Springs	31,509	31,389	31,516	32,843	33,912	34,222	34,590
Dallas	329,866	336,197	341,786	352,796	369,229	373,695	383,182
Denver	163,339	169,629	173,963	181,687	189,261	191,793	196,639
Des Moines	25,471	26,981	28,171	29,517	29,964	30,050	30,628
Detroit	230,304	236,525	234,694	236,914	237,285	227,883	227,620
Hartford	53,045	53,303	53,975	54,184	55,224	55,073	55,481
Houston	238,757	232,058	229,923	235,427	244,467	243,908	246,620
Huntsville	48,083	49,004	50,310	52,453	54,734	55,594	56,904
Indianapolis	70,387	72,961	72,435	72,872	74,210	74,273	75,915
Kansas City	94,820	97,498	98,220	100,039	100,958	102,681	104,573
Las Vegas	37,272	38,988	40,690	42,771	44,081	43,635	44,839
Los Angeles	485,309	494,661	497,382	508,889	515,169	512,500	515,117
Memphis	27,452	25,950	26,941	27,557	28,198	28,149	28,295
Miami	136,087	140,761	143,959	146,810	150,620	150,161	152,774
Milwaukee	69,981	71,034	71,591	72,916	73,439	72,131	72,026
Minneapolis	189,331	191,881	192,474	195,506	197,110	195,727	197,329
Nashville	54,980	57,561	60,138	62,322	65,275	65,283	67,281
New Orleans	25,944	25,451	25,412	25,387	26,110	26,132	26,388
New York City	623,021	637,296	646,460	662,590	677,667	680,527	692,631
Oklahoma City	38,045	38,238	38,328	39,249	39,988	39,457	39,569
Omaha	35,383	36,477	36,789	36,950	37,310	37,340	37,643
Orlando	77,961	83,162	87,496	91,813	94,556	94,627	97,115
Philadelphia	220,116	222,441	224,002	228,133	233,336	233,422	235,582
Phoenix	172,494	174,977	178,587	185,045	192,791	195,158	200,310
Pittsburgh	93,857	96,067	96,072	97,786	98,549	97,627	98,757
Portland	124,704	129,027	131,779	135,746	140,241	140,050	142,824
Providence	45,144	45,402	45,392	45,933	46,471	45,833	46,046
Raleigh	79,501	83,907	86,615	91,502	94,407	92,100	94,489
Sacramento	73,422	73,578	72,749	73,922	76,100	75,268	76,183
Salt Lake City	66,958	71,066	73,366	76,554	80,428	81,322	84,335
San Antonio	61,570	63,509	64,735	66,367	68,991	69,138	71,050
San Diego	163,107	167,096	171,262	180,321	187,650	188,312	191,915
San Francisco	331,262	356,251	368,685	392,149	418,743	426,286	443,890
San Jose	342,920	349,687	359,741	377,859	394,570	398,839	409,921
Seattle	266,894	279,780	289,778	304,435	321,660	326,355	335,772
St. Louis	101,655	103,327	103,300	104,900	107,297	107,394	108,417
Tampa	94,998	98,552	100,012	103,948	108,553	109,295	111,612
Trenton	24,882	25,112	25,068	25,104	25,480	25,584	25,934
Washington DC	423,994	428,032	434,027	441,550	450,663	452,666	458,763

NET TECH EMPLOYMENT 2020 est.

Rank	State	Employment
	United States	12,159,552
1.	California	1,882,167
2.	Texas	1,060,588
3.	New York	670,806
4.	Florida	595,156
5.	Virginia	451,268
6.	Massachusetts	450,548
7.	Illinois	442,076
8.	Pennsylvania	441,162
9.	Washington	405,816
10.	Ohio	391,539
11.	Michigan	386,901
12.	Georgia	370,068
13.	North Carolina	362,686
14.	New Jersey	339,951
15.	Colorado	313,260
16.	Maryland	297,993
17.	Arizona	255,998
18.	Minnesota	245,587
19.	Wisconsin	216,210
20.	Missouri	208,690
21.	Indiana	184,274
22.	Tennessee	174,067
23.	Oregon	166,862
24.	Utah	152,687
25.	Alabama	148,657
26.	Connecticut	137,744
27.	South Carolina	130,042
28.	Kansas	98,811
29.	Kentucky	98,278
30.	Iowa	95,657
31.	Oklahoma	93,136
32.	District of Columbia	84,230
33.	Louisiana	83,863
34.	New Hampshire	71,912
35.	New Mexico	71,178
36.	Nevada	69,874
37.	Nebraska	64,048
38.	Arkansas	56,329
39.	Idaho	53,803
40.	Mississippi	45,410
41.	Maine	35,935
42.	Rhode Island	35,426
43.	Delaware	31,243
44.	Hawaii	30,465
45.	West Virginia	30,130
46.	Montana	22,853
47.	Vermont	22,509
48.	South Dakota	22,158
49.	North Dakota	21,443
50.	Alaska	17,914
51.	Wyoming	9,621

NET TECH EMPLOYMENT JOBS ADDED 2020 est.

Rank	State	Jobs Added
	United States	+11,916
1.	Texas	+11,862
2.	California	+8,680
3.	Washington	+5,222
4.	Colorado	+3,767
5.	Florida	+3,623
6.	Virginia	+3,032
7.	North Carolina	+2,609
8.	Arizona	+2,547
9.	Massachusetts	+2,456
10.	Utah	+2,275
11.	New York	+2,002
12.	Kansas	+1,131
13.	District of Columbia	+1,033
14.	Georgia	+917
15.	New Mexico	+887
16.	Tennessee	+826
17.	Nebraska	+351
18.	Arkansas	+234
19.	Montana	+169
20.	South Dakota	+156
21.	Idaho	+24
22.	Missouri	-14
23.	North Dakota	-75
24.	Maine	-82
25.	West Virginia	-103
26.	Wyoming	-122
27.	Alabama	-126
28.	Mississippi	-211
29.	Oregon	-216
30.	New Hampshire	-219
31.	Vermont	-220
32.	Alaska	-286
33.	Rhode Island	-349
34.	Hawaii	-416
35.	South Carolina	-437
36.	Delaware	-490
37.	Kentucky	-623
38.	Maryland	-645
39.	Nevada	-763
40.	Oklahoma	-824
41.	Iowa	-910
42.	Louisiana	-1,069
43.	Connecticut	-1,091
44.	New Jersey	-1,578
45.	Indiana	-1,908
46.	Wisconsin	-1,965
47.	Minnesota	-2,207
48.	Pennsylvania	-2,389
49.	Illinois	-3,950
50.	Ohio	-4,677
51.	Michigan	-14,023

NET TECH EMPLOYMENT JOBS ADDED 2021 proj.

Rank	State	Jobs Added
	United States	+245,514
1.	California	+41,632
2.	Texas	+29,171
3.	Florida	+16,035
4.	New York	+13,868
5.	Washington	+11,011
6.	North Carolina	+10,036
7.	Georgia	+8,766
8.	Massachusetts	+8,657
9.	Virginia	+8,523
10.	Colorado	+7,513
11.	Pennsylvania	+7,044
12.	Arizona	+6,912
13.	Utah	+6,375
14.	Maryland	+6,088
15.	Ohio	+5,840
16.	Tennessee	+4,312
17.	Missouri	+4,121
18.	South Carolina	+3,734
19.	Indiana	+3,676
20.	Illinois	+3,519
21.	Oregon	+3,396
22.	Wisconsin	+3,150
23.	New Jersey	+2,867
24.	Minnesota	+2,639
25.	Alabama	+2,620
26.	Michigan	+2,539
27.	Nevada	+2,425
28.	Iowa	+2,039
29.	Kentucky	+1,630
30.	District of Columbia	+1,583
31.	Idaho	+1,440
32.	New Hampshire	+1,406
33.	Louisiana	+1,258
34.	Kansas	+1,205
35.	Nebraska	+1,120
36.	Arkansas	+1,074
37.	Oklahoma	+1,050
38.	New Mexico	+937
39.	Maine	+749
40.	South Dakota	+635
41.	Montana	+590
42.	Mississippi	+524
43.	Rhode Island	+457
44.	West Virginia	+451
45.	North Dakota	+315
46.	Connecticut	+252
47.	Vermont	+187
48.	Wyoming	+161
49.	Alaska	+130
50.	Hawaii	-44
51.	Delaware	-62

NET TECH EMPLOYMENT 2020 est.

Rank	State	Employment
	United States	12,159,552
1.	California	1,882,167
2.	Texas	1,060,588
3.	New York	670,806
4.	Florida	595,156
5.	Virginia	451,268
6.	Massachusetts	450,548
7.	Illinois	442,076
8.	Pennsylvania	441,162
9.	Washington	405,816
10.	Ohio	391,539
11.	Michigan	386,901
12.	Georgia	370,068
13.	North Carolina	362,686
14.	New Jersey	339,951
15.	Colorado	313,260
16.	Maryland	297,993
17.	Arizona	255,998
18.	Minnesota	245,587
19.	Wisconsin	216,210
20.	Missouri	208,690
21.	Indiana	184,274
22.	Tennessee	174,067
23.	Oregon	166,862
24.	Utah	152,687
25.	Alabama	148,657
26.	Connecticut	137,744
27.	South Carolina	130,042
28.	Kansas	98,811
29.	Kentucky	98,278
30.	Iowa	95,657
31.	Oklahoma	93,136
32.	District of Columbia	84,230
33.	Louisiana	83,863
34.	New Hampshire	71,912
35.	New Mexico	71,178
36.	Nevada	69,874
37.	Nebraska	64,048
38.	Arkansas	56,329
39.	Idaho	53,803
40.	Mississippi	45,410
41.	Maine	35,935
42.	Rhode Island	35,426
43.	Delaware	31,243
44.	Hawaii	30,465
45.	West Virginia	30,130
46.	Montana	22,853
47.	Vermont	22,509
48.	South Dakota	22,158
49.	North Dakota	21,443
50.	Alaska	17,914
51.	Wyoming	9,621

NET TECH EMPLOYMENT JOBS ADDED 2020 est.

Rank	State	% Change
	United States	+0.1%
1.	Utah	+1.5%
2.	Washington	+1.3%
3.	New Mexico	+1.3%
4.	District of Columbia	+1.2%
5.	Colorado	+1.2%
6.	Kansas	+1.2%
7.	Texas	+1.1%
8.	Arizona	+1.0%
9.	Montana	+0.7%
10.	North Carolina	+0.7%
11.	South Dakota	+0.7%
12.	Virginia	+0.7%
13.	Florida	+0.6%
14.	Nebraska	+0.6%
15.	Massachusetts	+0.5%
16.	Tennessee	+0.5%
17.	California	+0.5%
18.	Arkansas	+0.4%
19.	New York	+0.3%
20.	Georgia	+0.2%
21.	Idaho	+0.0%
22.	Missouri	-0.0%
23.	Alabama	-0.1%
24.	Oregon	-0.1%
25.	Maryland	-0.2%
26.	Maine	-0.2%
27.	New Hampshire	-0.3%
28.	South Carolina	-0.3%
29.	West Virginia	-0.3%
30.	North Dakota	-0.3%
31.	Mississippi	-0.5%
32.	New Jersey	-0.5%
33.	Pennsylvania	-0.5%
34.	Kentucky	-0.6%
35.	Connecticut	-0.8%
36.	Oklahoma	-0.9%
37.	Illinois	-0.9%
38.	Minnesota	-0.9%
39.	Wisconsin	-0.9%
40.	Iowa	-0.9%
41.	Vermont	-1.0%
42.	Rhode Island	-1.0%
43.	Indiana	-1.0%
44.	Nevada	-1.1%
45.	Ohio	-1.2%
46.	Wyoming	-1.3%
47.	Louisiana	-1.3%
48.	Hawaii	-1.3%
49.	Delaware	-1.5%
50.	Alaska	-1.6%
51.	Michigan	-3.5%

NET TECH EMPLOYMENT JOBS ADDED 2021 proj.

Rank	State	% Change
	United States	+2.0%
1.	Utah	+4.2%
2.	Nevada	+3.5%
3.	South Carolina	+2.9%
4.	South Dakota	+2.9%
5.	North Carolina	+2.8%
6.	Texas	+2.8%
7.	Washington	+2.7%
8.	Arizona	+2.7%
9.	Florida	+2.7%
10.	Idaho	+2.7%
11.	Montana	+2.6%
12.	Tennessee	+2.5%
13.	Colorado	+2.4%
14.	Georgia	+2.4%
15.	California	+2.2%
16.	Iowa	+2.1%
17.	Maine	+2.1%
18.	New York	+2.1%
19.	Maryland	+2.0%
20.	Oregon	+2.0%
21.	Indiana	+2.0%
22.	Missouri	+2.0%
23.	New Hampshire	+2.0%
24.	Massachusetts	+1.9%
25.	Arkansas	+1.9%
26.	Virginia	+1.9%
27.	District of Columbia	+1.9%
28.	Alabama	+1.8%
29.	Nebraska	+1.7%
30.	Wyoming	+1.7%
31.	Kentucky	+1.7%
32.	Pennsylvania	+1.6%
33.	Louisiana	+1.5%
34.	West Virginia	+1.5%
35.	Ohio	+1.5%
36.	North Dakota	+1.5%
37.	Wisconsin	+1.5%
38.	New Mexico	+1.3%
39.	Rhode Island	+1.3%
40.	Kansas	+1.2%
41.	Mississippi	+1.2%
42.	Oklahoma	+1.1%
43.	Minnesota	+1.1%
44.	New Jersey	+0.8%
45.	Vermont	+0.8%
46.	Illinois	+0.8%
47.	Alaska	+0.7%
48.	Michigan	+0.7%
49.	Connecticut	+0.2%
50.	Hawaii	-0.1%
51.	Delaware	-0.2%

NET TECH EMPLOYMENT 2020 est.

Rank	State	Employment
	United States	12,159,552
1.	New York City	680,527
2.	Los Angeles	512,500
3.	Washington DC	452,666
4.	San Francisco	426,286
5.	San Jose	398,839
6.	Boston	392,781
7.	Dallas	373,695
8.	Chicago	339,000
9.	Seattle	326,355
10.	Atlanta	272,869
11.	Houston	243,908
12.	Philadelphia	233,422
13.	Detroit	227,883
14.	Minneapolis	195,727
15.	Phoenix	195,158
16.	Denver	191,793
17.	San Diego	188,312
18.	Austin	172,961
19.	Miami	150,161
20.	Baltimore	140,903
21.	Portland	140,050
22.	Tampa	109,295
23.	St. Louis	107,394
24.	Kansas City	102,681
25.	Charlotte	99,705
26.	Pittsburgh	97,627
27.	Orlando	94,627
28.	Raleigh	92,100
29.	Salt Lake City	81,322
30.	Cincinnati	81,118
31.	Sacramento	75,268
32.	Indianapolis	74,273
33.	Cleveland	74,118
34.	Milwaukee	72,131
35.	San Antonio	69,138
36.	Nashville	65,283
37.	Huntsville	55,594
38.	Hartford	55,073
39.	Providence	45,833
40.	Las Vegas	43,635
41.	Albuquerque	40,554
42.	Oklahoma City	39,457
43.	Buffalo	37,348
44.	Omaha	37,340
45.	Colorado Springs	34,222
46.	Des Moines	30,050
47.	Boise	29,623
48.	Memphis	28,149
49.	Charleston	27,987
50.	New Orleans	26,132
51.	Trenton	25,584

NET TECH EMPLOYMENT JOBS ADDED 2020 est.

Rank	State	Jobs Added
	United States	+11,916
1.	San Francisco	+7,543
2.	Seattle	+4,695
3.	Dallas	+4,466
4.	San Jose	+4,269
5.	Austin	+3,364
6.	Boston	+2,882
7.	New York City	+2,860
8.	Denver	+2,532
9.	Phoenix	+2,367
10.	Washington DC	+2,002
11.	Kansas City	+1,723
12.	Charlotte	+1,426
13.	Salt Lake City	+894
14.	Huntsville	+860
15.	Tampa	+742
16.	San Diego	+662
17.	Albuquerque	+640
18.	Charleston	+421
19.	Colorado Springs	+310
20.	Baltimore	+186
21.	San Antonio	+147
22.	Trenton	+104
23.	St. Louis	+97
24.	Des Moines	+86
25.	Philadelphia	+85
26.	Orlando	+71
27.	Indianapolis	+63
28.	Omaha	+30
29.	New Orleans	+21
30.	Nashville	+9
31.	Memphis	-49
32.	Boise	-130
33.	Hartford	-151
34.	Portland	-192
35.	Atlanta	-221
36.	Las Vegas	-446
37.	Miami	-459
38.	Oklahoma City	-531
39.	Houston	-558
40.	Cincinnati	-592
41.	Buffalo	-632
42.	Providence	-639
43.	Sacramento	-833
44.	Pittsburgh	-922
45.	Cleveland	-961
46.	Milwaukee	-1,309
47.	Minneapolis	-1,382
48.	Raleigh	-2,307
49.	Los Angeles	-2,668
50.	Chicago	-3,379
51.	Detroit	-9,402

NET TECH EMPLOYMENT JOBS ADDED 2021 proj.

Rank	State	Jobs Added
	United States	+245,514
1.	San Francisco	+17,604
2.	New York City	+12,104
3.	San Jose	+11,082
4.	Dallas	+9,487
5.	Seattle	+9,416
6.	Boston	+8,374
7.	Austin	+6,718
8.	Washington DC	+6,097
9.	Atlanta	+6,006
10.	Phoenix	+5,152
11.	Denver	+4,846
12.	San Diego	+3,603
13.	Baltimore	+3,098
14.	Salt Lake City	+3,013
15.	Charlotte	+2,906
16.	Portland	+2,775
17.	Houston	+2,711
18.	Los Angeles	+2,617
19.	Miami	+2,613
20.	Orlando	+2,488
21.	Raleigh	+2,389
22.	Tampa	+2,316
23.	Philadelphia	+2,160
24.	Nashville	+1,998
25.	San Antonio	+1,912
26.	Kansas City	+1,892
27.	Indianapolis	+1,642
28.	Minneapolis	+1,602
29.	Chicago	+1,460
30.	Huntsville	+1,310
31.	Cincinnati	+1,287
32.	Las Vegas	+1,203
33.	Pittsburgh	+1,131
34.	St. Louis	+1,023
35.	Charleston	+963
36.	Sacramento	+915
37.	Boise	+673
38.	Des Moines	+578
39.	Cleveland	+528
40.	Hartford	+408
41.	Colorado Springs	+368
42.	Trenton	+351
43.	Buffalo	+348
44.	Omaha	+303
45.	New Orleans	+256
46.	Providence	+213
47.	Albuquerque	+195
48.	Memphis	+146
49.	Oklahoma City	+112
50.	Milwaukee	-105
51.	Detroit	-263

NET TECH EMPLOYMENT 2020 est.

Rank	State	Employment
	United States	12,159,552
1.	New York City	680,527
2.	Los Angeles	512,500
3.	Washington DC	452,666
4.	San Francisco	426,286
5.	San Jose	398,839
6.	Boston	392,781
7.	Dallas	373,695
8.	Chicago	339,000
9.	Seattle	326,355
10.	Atlanta	272,869
11.	Houston	243,908
12.	Philadelphia	233,422
13.	Detroit	227,883
14.	Minneapolis	195,727
15.	Phoenix	195,158
16.	Denver	191,793
17.	San Diego	188,312
18.	Austin	172,961
19.	Miami	150,161
20.	Baltimore	140,903
21.	Portland	140,050
22.	Tampa	109,295
23.	St. Louis	107,394
24.	Kansas City	102,681
25.	Charlotte	99,705
26.	Pittsburgh	97,627
27.	Orlando	94,627
28.	Raleigh	92,100
29.	Salt Lake City	81,322
30.	Cincinnati	81,118
31.	Sacramento	75,268
32.	Indianapolis	74,273
33.	Cleveland	74,118
34.	Milwaukee	72,131
35.	San Antonio	69,138
36.	Nashville	65,283
37.	Huntsville	55,594
38.	Hartford	55,073
39.	Providence	45,833
40.	Las Vegas	43,635
41.	Albuquerque	40,554
42.	Oklahoma City	39,457
43.	Buffalo	37,348
44.	Omaha	37,340
45.	Colorado Springs	34,222
46.	Des Moines	30,050
47.	Boise	29,623
48.	Memphis	28,149
49.	Charleston	27,987
50.	New Orleans	26,132
51.	Trenton	25,584

NET TECH EMPLOYMENT JOBS ADDED 2020 est.

Rank	State	% Change
	United States	+0.1%
1.	Austin	+2.0%
2.	San Francisco	+1.8%
3.	Kansas City	+1.7%
4.	Albuquerque	+1.6%
5.	Huntsville	+1.6%
6.	Charleston	+1.5%
7.	Seattle	+1.5%
8.	Charlotte	+1.5%
9.	Denver	+1.3%
10.	Phoenix	+1.2%
11.	Dallas	+1.2%
12.	Salt Lake City	+1.1%
13.	San Jose	+1.1%
14.	Colorado Springs	+0.9%
15.	Boston	+0.7%
16.	Tampa	+0.7%
17.	Washington DC	+0.4%
18.	New York City	+0.4%
19.	Trenton	+0.4%
20.	San Diego	+0.4%
21.	Des Moines	+0.3%
22.	San Antonio	+0.2%
23.	Baltimore	+0.1%
24.	St. Louis	+0.1%
25.	Indianapolis	+0.1%
26.	New Orleans	+0.1%
27.	Omaha	+0.1%
28.	Orlando	+0.1%
29.	Philadelphia	+0.0%
30.	Nashville	+0.0%
31.	Atlanta	-0.1%
32.	Portland	-0.1%
33.	Memphis	-0.2%
34.	Houston	-0.2%
35.	Hartford	-0.3%
36.	Miami	-0.3%
37.	Boise	-0.4%
38.	Los Angeles	-0.5%
39.	Minneapolis	-0.7%
40.	Cincinnati	-0.7%
41.	Pittsburgh	-0.9%
42.	Chicago	-1.0%
43.	Las Vegas	-1.0%
44.	Sacramento	-1.1%
45.	Cleveland	-1.3%
46.	Oklahoma City	-1.3%
47.	Providence	-1.4%
48.	Buffalo	-1.7%
49.	Milwaukee	-1.8%
50.	Raleigh	-2.4%
51.	Detroit	-4.0%

NET TECH EMPLOYMENT JOBS ADDED 2021 proj.

Rank	State	% Change
	United States	+2.0%
1.	San Francisco	+4.1%
2.	Austin	+3.9%
3.	Salt Lake City	+3.7%
4.	Charleston	+3.4%
5.	Nashville	+3.1%
6.	Charlotte	+2.9%
7.	Seattle	+2.9%
8.	San Jose	+2.8%
9.	San Antonio	+2.8%
10.	Las Vegas	+2.8%
11.	Phoenix	+2.6%
12.	Orlando	+2.6%
13.	Raleigh	+2.6%
14.	Dallas	+2.5%
15.	Denver	+2.5%
16.	Huntsville	+2.4%
17.	Boise	+2.3%
18.	Indianapolis	+2.2%
19.	Atlanta	+2.2%
20.	Baltimore	+2.2%
21.	Boston	+2.1%
22.	Tampa	+2.1%
23.	Portland	+2.0%
24.	Des Moines	+1.9%
25.	San Diego	+1.9%
26.	Kansas City	+1.8%
27.	New York City	+1.8%
28.	Miami	+1.7%
29.	Cincinnati	+1.6%
30.	Trenton	+1.4%
31.	Washington DC	+1.3%
32.	Sacramento	+1.2%
33.	Pittsburgh	+1.2%
34.	Houston	+1.1%
35.	Colorado Springs	+1.1%
36.	New Orleans	+1.0%
37.	St. Louis	+1.0%
38.	Buffalo	+0.9%
39.	Philadelphia	+0.9%
40.	Minneapolis	+0.8%
41.	Omaha	+0.8%
42.	Hartford	+0.7%
43.	Cleveland	+0.7%
44.	Memphis	+0.5%
45.	Los Angeles	+0.5%
46.	Albuquerque	+0.5%
47.	Providence	+0.5%
48.	Chicago	+0.4%
49.	Oklahoma City	+0.3%
50.	Detroit	-0.1%
51.	Milwaukee	-0.1%

APPENDIX TABLES – B
TECH WORKFORCE CHARACTERISTICS

Data covers core information technology occupations across 7 primary Bureau of Labor Statistics race and ethnicity groups | 1st quartile = highest level of diversity

	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	Two or More Races	White	Diversity Index Quartile
United States	12,726	1,116,903	412,962	388,318	5,526	97,159	3,172,074	NA
Alabama	150	2,482	8,669	1,098	14	731	39,535	3rd quartile
Alaska	362	694	143	240	27	340	4,227	2nd quartile
Arizona	1,257	16,420	5,180	17,090	200	2,378	70,051	2nd quartile
Arkansas	103	2,675	2,424	987	18	374	19,328	3rd quartile
California	1,179	346,221	25,783	89,904	1,763	19,043	291,281	1st quartile
Colorado	344	14,533	4,306	11,464	126	3,053	109,162	3rd quartile
Connecticut	53	11,351	3,355	3,345	32	742	39,890	2nd quartile
Delaware	25	4,049	1,961	597	1	269	9,389	1st quartile
District of Columbia	40	7,608	14,602	2,808	35	1,200	23,436	1st quartile
Florida	360	28,414	27,036	40,853	178	4,355	152,369	1st quartile
Georgia	205	31,305	40,760	7,547	106	2,937	95,062	1st quartile
Hawaii	1	7,995	244	526	321	1,450	2,434	2nd quartile
Idaho	77	1,132	195	1,056	22	356	16,074	4th quartile
Illinois	183	45,264	14,849	14,073	105	2,955	128,016	2nd quartile
Indiana	64	6,755	4,674	2,004	20	1,029	55,646	3rd quartile
Iowa	37	3,699	938	993	12	478	35,408	4th quartile
Kansas	126	4,063	2,074	1,827	21	839	31,699	3rd quartile
Kentucky	36	2,870	2,510	751	14	514	32,158	4th quartile
Louisiana	65	1,432	4,903	764	1	293	17,950	2nd quartile
Maine	32	623	161	198	1	213	13,795	4th quartile
Maryland	199	24,987	29,358	6,002	89	3,048	81,747	1st quartile
Massachusetts	123	37,482	6,338	7,363	100	2,443	116,853	2nd quartile
Michigan	259	18,911	10,406	3,238	34	1,976	89,371	2nd quartile
Minnesota	238	18,317	3,363	2,254	39	1,803	82,415	3rd quartile
Mississippi	28	638	3,841	247	1	116	10,639	2nd quartile
Missouri	181	9,782	7,508	2,374	63	1,439	74,706	3rd quartile
Montana	163	254	64	252	1	156	8,906	4th quartile
Nebraska	108	2,837	1,157	1,327	11	497	27,498	4th quartile
Nevada	119	5,072	1,861	3,256	102	853	15,322	1st quartile
New Hampshire	18	2,882	320	625	1	292	23,008	4th quartile
New Jersey	126	55,912	11,021	12,105	93	1,866	80,551	1st quartile
New Mexico	625	1,265	513	6,143	15	358	10,821	1st quartile
New York	341	76,641	24,195	24,253	217	4,884	179,205	1st quartile
North Carolina	721	23,557	23,564	5,969	85	2,443	109,095	2nd quartile
North Dakota	114	353	169	164	1	130	7,042	4th quartile
Ohio	175	18,709	12,858	3,330	46	2,708	131,413	3rd quartile
Oklahoma	1,490	2,798	2,343	1,705	25	1,973	26,854	2nd quartile
Oregon	294	10,275	1,137	3,268	121	1,772	47,344	3rd quartile
Pennsylvania	120	25,558	11,162	5,573	58	2,313	135,995	3rd quartile
Rhode Island	31	2,256	579	1,014	1	272	12,685	3rd quartile
South Carolina	82	3,270	8,543	1,397	16	693	35,859	2nd quartile
South Dakota	133	331	135	150	1	108	8,422	4th quartile
Tennessee	88	5,564	8,301	1,593	22	1,048	52,782	3rd quartile
Texas	922	98,885	39,520	70,196	370	6,891	223,126	1st quartile
Utah	207	5,150	709	4,234	312	1,230	53,137	4th quartile
Vermont	1	415	89	127	1	129	7,907	4th quartile
Virginia	330	51,352	30,985	10,909	160	5,064	135,199	1st quartile
Washington	569	64,122	4,896	8,275	506	5,675	112,732	2nd quartile
West Virginia	1	491	386	164	1	168	11,739	4th quartile
Wisconsin	202	9,130	2,829	2,500	28	1,214	69,436	4th quartile
Wyoming	23	121	45	187	1	43	3,356	4th quartile

Data covers core information technology occupations across primary Bureau of Labor Statistics race and ethnicity groups.

	Black or African American		Hispanic or Latino		Women	
	% of Tech Workforce	% of Overall Workforce	% of Tech Workforce	% of Overall Workforce	% of Tech Workforce	% of Overall Workforce
United States	8%	13%	7%	16%	26%	49%
Alabama	16%	27%	2%	4%	27%	49%
Alaska	2%	3%	4%	7%	27%	48%
Arizona	5%	5%	15%	30%	25%	48%
Arkansas	9%	15%	4%	7%	26%	49%
California	3%	6%	12%	35%	25%	48%
Colorado	3%	4%	8%	18%	24%	47%
Connecticut	6%	11%	6%	14%	26%	51%
Delaware	12%	21%	4%	9%	26%	52%
District of Columbia	29%	34%	6%	10%	29%	52%
Florida	11%	16%	16%	25%	26%	50%
Georgia	23%	32%	4%	8%	29%	50%
Hawaii	2%	2%	4%	10%	29%	50%
Idaho	1%	2%	6%	12%	24%	47%
Illinois	7%	13%	7%	15%	26%	49%
Indiana	7%	10%	3%	6%	28%	48%
Iowa	2%	4%	2%	6%	28%	48%
Kansas	5%	7%	4%	10%	25%	50%
Kentucky	6%	9%	2%	4%	28%	49%
Louisiana	19%	31%	3%	5%	28%	51%
Maine	1%	2%	1%	2%	29%	50%
Maryland	20%	27%	4%	8%	28%	50%
Massachusetts	4%	8%	4%	11%	25%	51%
Michigan	8%	13%	3%	5%	26%	49%
Minnesota	3%	6%	2%	5%	26%	50%
Mississippi	25%	38%	2%	3%	30%	50%
Missouri	8%	12%	2%	4%	27%	49%
Montana	1%	1%	3%	4%	28%	49%
Nebraska	3%	5%	4%	10%	26%	48%
Nevada	7%	9%	12%	26%	25%	48%
New Hampshire	1%	2%	2%	5%	26%	50%
New Jersey	7%	14%	7%	18%	25%	50%
New Mexico	3%	3%	31%	45%	24%	48%
New York	8%	14%	8%	16%	25%	51%
North Carolina	14%	22%	4%	7%	27%	50%
North Dakota	2%	3%	2%	5%	25%	45%
Ohio	8%	12%	2%	4%	27%	49%
Oklahoma	6%	8%	5%	9%	26%	48%
Oregon	2%	3%	5%	12%	24%	48%
Pennsylvania	6%	11%	3%	6%	25%	49%
Rhode Island	3%	6%	6%	12%	27%	52%
South Carolina	17%	27%	3%	5%	29%	50%
South Dakota	1%	2%	2%	5%	25%	48%
Tennessee	12%	18%	2%	5%	28%	49%
Texas	9%	13%	16%	34%	25%	48%
Utah	1%	2%	7%	13%	21%	46%
Vermont	1%	2%	1%	3%	25%	50%
Virginia	13%	21%	5%	8%	26%	50%
Washington	2%	5%	4%	11%	24%	48%
West Virginia	3%	4%	1%	2%	26%	48%
Wisconsin	3%	6%	3%	6%	28%	49%
Wyoming	1%	2%	5%	10%	26%	46%

Sources: EMSI | U.S. Bureau of Labor Statistics | CompTIA

Data covers core information technology occupations across primary Bureau of Labor Statistics race and ethnicity groups.

	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	Two or More Races	White	Diversity Index Quartile
United States	12,726	1,116,903	412,962	388,318	5,526	97,159	3,172,074	
Albuquerque	321	742	299	3,188	1	213	5,908	2nd quartile
Atlanta	163	26,628	31,419	5,841	84	2,299	71,663	1st quartile
Austin	148	14,847	4,246	10,140	62	1,280	40,582	2nd quartile
Baltimore	96	10,824	13,653	2,439	35	1,405	41,550	2nd quartile
Boise	42	759	110	630	15	212	9,397	4th quartile
Boston	108	33,497	5,270	5,983	90	2,036	101,090	3rd quartile
Buffalo	23	1,525	1,016	550	1	207	11,503	4th quartile
Charleston	22	595	1,761	333	1	185	8,645	3rd quartile
Charlotte	269	9,055	8,692	2,085	29	750	33,117	2nd quartile
Chicago	147	37,721	11,859	11,993	83	2,181	93,377	2nd quartile
Cincinnati	33	3,910	2,486	652	12	485	26,991	4th quartile
Cleveland	34	3,808	2,907	797	1	512	25,773	4th quartile
Colorado Springs	51	1,414	665	1,370	24	445	13,656	4th quartile
Dallas	412	45,766	17,186	19,608	149	2,564	83,357	1st quartile
Denver	226	9,952	2,967	7,583	78	1,959	69,072	3rd quartile
Des Moines	16	2,100	442	478	1	204	14,559	4th quartile
Detroit	145	13,580	7,464	1,810	26	1,110	47,907	2nd quartile
Hartford	20	4,816	1,508	1,316	11	287	16,615	3rd quartile
Houston	159	21,801	9,335	14,266	76	1,245	42,518	1st quartile
Huntsville	73	808	2,258	428	1	284	13,736	4th quartile
Indianapolis	40	4,031	2,933	1,004	15	532	27,704	4th quartile
Kansas City	104	5,385	3,327	1,863	38	855	36,830	3rd quartile
Las Vegas	73	4,025	1,613	2,527	83	655	10,500	1st quartile
Los Angeles	282	76,645	8,222	33,207	390	4,792	76,156	1st quartile
Memphis	10	1,151	2,947	296	1	166	7,346	2nd quartile
Miami	76	7,409	8,041	17,533	44	996	30,820	1st quartile
Milwaukee	66	3,317	1,613	1,060	1	417	21,471	4th quartile
Minneapolis	193	16,245	2,983	1,919	36	1,503	67,148	3rd quartile
Nashville	46	2,776	3,443	810	12	456	22,899	3rd quartile
New Orleans	20	532	1,744	360	1	114	6,026	3rd quartile
New York City	322	107,650	26,135	28,992	266	4,717	167,998	1st quartile
Oklahoma City	592	1,464	1,204	822	12	860	12,253	3rd quartile
Omaha	69	1,952	915	868	1	346	17,924	4th quartile
Orlando	57	4,970	4,011	6,044	29	683	23,695	2nd quartile
Philadelphia	79	19,618	9,028	3,692	40	1,419	67,989	3rd quartile
Phoenix	883	14,042	4,245	12,864	145	1,823	54,909	2nd quartile
Pittsburgh	23	4,465	1,848	675	14	464	31,516	4th quartile
Portland	205	9,519	987	2,503	111	1,447	36,395	3rd quartile
Providence	33	2,446	729	1,148	1	319	15,374	4th quartile
Raleigh	133	6,267	5,492	1,488	20	656	28,437	2nd quartile
Sacramento	102	11,851	1,931	5,198	155	1,193	17,448	1st quartile
Salt Lake City	117	3,567	444	2,627	198	704	29,839	4th quartile
San Antonio	60	2,995	2,467	9,540	31	509	13,905	1st quartile
San Diego	131	21,955	2,473	9,149	178	1,879	30,157	1st quartile
San Francisco	255	91,319	5,962	14,628	483	5,044	72,347	1st quartile
San Jose	175	107,018	3,016	9,264	327	2,972	45,728	2nd quartile
Seattle	418	59,623	4,172	6,615	424	4,649	89,189	2nd quartile
St. Louis	68	5,117	4,640	1,130	25	696	38,043	4th quartile
Tampa	68	6,418	4,790	5,866	34	823	31,384	2nd quartile
Trenton	13	4,018	1,223	825	1	158	6,156	1st quartile
Washington DC	322	55,833	44,419	13,143	189	5,606	129,574	1st quartile

Data covers core information technology occupations across primary Bureau of Labor Statistics race and ethnicity groups.

	Black or African American		Hispanic or Latino		Women	
	% of Tech Workforce	% of Overall Workforce	% of Tech Workforce	% of Overall Workforce	% of Tech Workforce	% of Overall Workforce
United States	8%	13%	7%	16%	26%	49%
Albuquerque	3%	3%	30%	45%	24%	49%
Atlanta	23%	33%	4%	8%	28%	50%
Austin	6%	10%	14%	30%	24%	47%
Baltimore	20%	29%	3%	7%	27%	51%
Boise	1%	2%	6%	13%	24%	48%
Boston	4%	8%	4%	10%	24%	50%
Buffalo	7%	12%	4%	7%	26%	51%
Charleston	15%	26%	3%	5%	30%	50%
Charlotte	16%	23%	4%	7%	27%	48%
Chicago	8%	14%	8%	18%	25%	49%
Cincinnati	7%	12%	2%	3%	26%	49%
Cleveland	9%	15%	2%	5%	27%	50%
Colorado Springs	4%	5%	8%	16%	21%	49%
Dallas	10%	16%	12%	26%	24%	48%
Denver	3%	5%	8%	19%	24%	47%
Des Moines	2%	5%	3%	6%	27%	50%
Detroit	10%	18%	3%	4%	26%	48%
Hartford	6%	12%	5%	14%	26%	50%
Houston	10%	16%	16%	32%	26%	47%
Huntsville	13%	23%	2%	4%	25%	47%
Indianapolis	8%	13%	3%	6%	28%	50%
Kansas City	7%	11%	4%	8%	26%	49%
Las Vegas	8%	11%	13%	28%	24%	49%
Los Angeles	4%	7%	17%	38%	24%	49%
Memphis	25%	38%	2%	5%	31%	51%
Miami	12%	18%	27%	37%	26%	49%
Milwaukee	6%	12%	4%	9%	28%	50%
Minneapolis	3%	8%	2%	5%	26%	49%
Nashville	11%	16%	3%	5%	28%	49%
New Orleans	20%	31%	4%	6%	27%	51%
New York City	8%	15%	9%	20%	24%	51%
Oklahoma City	7%	10%	5%	10%	27%	49%
Omaha	4%	7%	4%	9%	26%	49%
Orlando	10%	16%	15%	26%	26%	49%
Philadelphia	9%	18%	4%	8%	26%	51%
Phoenix	5%	6%	14%	29%	25%	48%
Pittsburgh	5%	8%	2%	3%	24%	49%
Portland	2%	3%	5%	11%	24%	48%
Providence	4%	6%	6%	11%	27%	52%
Raleigh	13%	22%	4%	8%	28%	50%
Sacramento	5%	7%	14%	27%	29%	50%
Salt Lake City	1%	2%	7%	14%	22%	45%
San Antonio	8%	9%	32%	48%	25%	49%
San Diego	4%	6%	14%	34%	25%	48%
San Francisco	3%	7%	8%	24%	26%	49%
San Jose	2%	4%	5%	23%	21%	44%
Seattle	3%	6%	4%	10%	23%	47%
St. Louis	9%	16%	2%	4%	26%	50%
Tampa	10%	14%	12%	20%	26%	50%
Trenton	10%	19%	7%	14%	26%	51%
Washington DC	18%	25%	5%	12%	27%	50%

	Black or African American		Hispanic or Latino		Women	
	Count	% of Occ.	Count	% of Occ.	Count	% of Occ.
CIOs and IT Managers	27,531	6%	30,735	7%	130,952	29%
Systems Analysts and Engineers	58,335	10%	43,864	7%	219,903	36%
Cybersecurity	18,612	14%	11,536	9%	27,759	21%
Information Research Scientists	2,950	9%	2,091	6%	9,732	29%
Network Support Specialists	23,002	12%	18,835	10%	52,332	28%
IT Support Specialists	73,215	11%	69,494	11%	183,279	28%
Network Architects	14,464	9%	12,374	8%	21,773	14%
Network and Systems Administrators	31,436	9%	31,310	9%	70,935	20%
Database Administrators and Architects	10,521	8%	8,411	7%	46,205	37%
Computer Programmers	10,136	5%	11,616	6%	46,466	22%
Software Developers and Software QA	59,061	4%	70,931	5%	304,318	20%
Web Developers and Digital Interface Designers	10,251	6%	14,341	8%	59,035	33%
IT Proj. Mgt., Emerging Tech, Other	55,624	13%	40,685	10%	124,334	30%
Data Scientists	2,178	7%	2,510	8%	15,237	46%
Computer Hardware Engineers	4,514	6%	5,141	7%	11,035	15%
Computer, ATM, and Office Machine Repairers	11,133	10%	14,445	13%	11,027	10%
Subtotal	412,962	8%	388,318	7%	1,334,322	26%
Other Technician, Engineering, Installer, Repairer	206,289	7%	292,874	10%	450,747	16%
Subtotal	206,289	7%	292,874	10%	450,747	16%
Total	619,251	8%	681,191	8%	1,785,069	22%

	19-34 Age Range		35-54 Age Range		55+ Age Range	
	Count	% of Occ.	Count	% of Occ.	Count	% of Occ.
CIOs and IT Managers	80,674	18%	276,540	62%	88,780	20%
Systems Analysts and Engineers	186,197	31%	304,475	50%	117,681	19%
Cybersecurity	38,777	30%	67,837	52%	23,200	18%
Information Research Scientists	12,323	36%	14,952	44%	6,784	20%
Network Support Specialists	66,129	36%	88,485	48%	31,114	17%
IT Support Specialists	239,292	36%	308,817	47%	108,305	16%
Network Architects	40,560	27%	90,788	59%	21,676	14%
Network and Systems Administrators	108,935	31%	188,320	54%	52,476	15%
Database Administrators and Architects	31,345	25%	68,488	55%	25,249	20%
Computer Programmers	61,572	30%	105,912	51%	41,188	20%
Software Developers and Software QA	541,080	36%	749,171	50%	198,830	13%
Web Developers and Digital Interface Designers	82,008	46%	79,946	45%	15,822	9%
IT Proj. Mgt., Emerging Tech, Other	128,241	31%	212,578	51%	75,880	18%
Data Scientists	13,069	40%	14,603	44%	5,399	16%
Computer Hardware Engineers	21,200	30%	38,007	53%	12,176	17%
Computer, ATM, and Office Machine Repairers	39,318	35%	51,040	46%	21,398	19%
Subtotal	1,690,719	33%	2,659,959	51%	845,958	16%
Other Technician, Engineering, Installer, Repairer	753,243	27%	1,302,857	46%	768,468	27%
Subtotal	753,243	27%	1,302,857	46%	768,468	27%
Total	2,443,962	30%	3,962,816	49%	1,614,426	20%

TECH WORKFORCE CHARACTERISTICS BY INDUSTRY

Note: this subset of industry data is a proxy for Solution Providers, Managed Service Providers, IT Services and related firms characterized as IT Channel Partners.

	Black or African American		Hispanic or Latino		Women	
	Count	% of Occ.	Count	% of Occ.	Count	% of Occ.
United States	100,973	8%	92,933	7%	412,722	32%
Alabama	2,478	13%	470	2%	6,314	33%
Alaska	36	3%	36	3%	273	26%
Arizona	1,001	4%	2,993	13%	7,241	32%
Arkansas	607	9%	194	3%	2,087	32%
California	5,377	3%	17,216	10%	52,688	32%
Colorado	1,075	3%	2,707	7%	11,896	30%
Connecticut	762	4%	845	5%	5,087	30%
Delaware	321	11%	123	4%	809	28%
District of Columbia	5,268	30%	1,155	6%	6,436	36%
Florida	5,276	8%	10,515	16%	20,294	31%
Georgia	9,328	20%	2,483	5%	15,941	35%
Hawaii	157	4%	254	7%	1,228	33%
Idaho	53	1%	221	6%	1,135	29%
Illinois	2,519	5%	2,841	6%	14,036	29%
Indiana	1,012	6%	450	3%	5,545	32%
Iowa	129	2%	166	3%	1,893	32%
Kansas	344	4%	365	4%	2,586	29%
Kentucky	569	6%	230	2%	3,498	35%
Louisiana	771	12%	236	4%	1,866	30%
Maine	54	1%	68	2%	1,510	37%
Maryland	10,465	19%	2,682	5%	18,106	33%
Massachusetts	1,270	3%	1,930	4%	13,512	31%
Michigan	2,081	7%	937	3%	9,730	31%
Minnesota	552	3%	484	2%	6,110	29%
Mississippi	708	16%	81	2%	1,613	36%
Missouri	2,089	6%	1,139	3%	11,957	36%
Montana	18	1%	63	3%	925	37%
Nebraska	262	3%	282	4%	2,369	31%
Nevada	316	6%	497	10%	1,391	28%
New Hampshire	117	1%	225	3%	2,817	32%
New Jersey	2,214	5%	2,977	7%	12,255	30%
New Mexico	149	3%	1,379	28%	1,441	29%
New York	4,127	7%	4,902	8%	19,028	32%
North Carolina	4,096	12%	1,489	4%	10,904	31%
North Dakota	31	2%	33	2%	457	33%
Ohio	2,189	6%	830	2%	10,321	30%
Oklahoma	389	6%	310	5%	2,086	32%
Oregon	197	2%	517	5%	3,292	29%
Pennsylvania	1,911	4%	1,372	3%	12,905	29%
Rhode Island	154	3%	303	6%	1,623	30%
South Carolina	1,111	10%	362	3%	3,640	33%
South Dakota	20	1%	35	2%	647	34%
Tennessee	1,234	8%	390	3%	4,352	29%
Texas	8,958	8%	15,781	14%	35,122	31%
Utah	135	1%	688	6%	2,814	26%
Vermont	19	1%	28	2%	535	30%
Virginia	17,489	14%	7,187	6%	42,625	34%
Washington	1,032	3%	1,998	5%	12,099	30%
West Virginia	111	3%	57	2%	1,120	32%
Wisconsin	387	3%	388	3%	4,396	33%
Wyoming	1	0%	22	4%	168	28%

APPENDIX TABLES – C
TECH EMPLOYMENT OUTLOOK

	2020	2030 Proj	Proj. Numeric Change 2020-30	Proj. Percent Change 2020-30	Proj. Annual Replacement Count 2020-30	Proj. Annual Replacement Percent 2020-30
CIOs and IT Managers	446,129	507,918	61,788	14%	31,657	7%
Systems Analysts and Engineers	608,750	681,313	72,562	12%	40,848	6%
Cybersecurity	129,927	169,647	39,720	31%	9,762	7%
Information Research Scientists	34,087	40,256	6,169	18%	2,658	7%
Network Support Specialists	186,289	204,870	18,581	10%	13,143	7%
IT Support Specialists	658,513	741,079	82,566	13%	47,098	7%
Network Architects	153,685	167,601	13,915	9%	9,034	6%
Network and Systems Administrators	350,257	380,750	30,492	9%	21,298	6%
Database Administrators and Architects	125,168	141,271	16,103	13%	8,295	6%
Computer Programmers	209,033	204,847	-4,186	-2%	12,736	6%
Software Developers and Software QA	1,490,272	1,838,822	348,550	23%	102,103	6%
Web Developers and Digital Interface Designers	178,898	205,048	26,151	15%	12,750	7%
IT Proj. Mgt., Emerging Tech, Other	417,878	460,782	42,904	10%	29,600	7%
Data Scientists	33,084	42,984	9,901	30%	2,989	8%
Computer Hardware Engineers	71,409	75,550	4,141	6%	4,961	7%
Computer, ATM, and Office Machine Repairers	112,348	112,435	87	0%	10,811	10%
Subtotal	5,205,728	5,975,172	769,444	15%	359,741	6%
Other Technician, Engineering, Installer, Repairer	2,830,281	2,986,728	156,447	6%	217,862	7%
Subtotal	2,830,281	2,986,728	156,447	6%	217,862	7%
Total	8,036,009	8,961,900	925,891	12%	577,603	6%

Note: data covers core information technology occupations.

	2020	2030 Proj.	Proj. Numeric Change 2020-30	Proj. Percent Change 2020-30	Proj. Annual Replacement Count 2020-30	Proj. Annual Replacement Percent 2020-30
United States	5,205,728	5,975,172	769,444	15%	359,741	6.9%
Alabama	52,678	59,999	7,321	14%	3,626	6.9%
Alaska	6,033	6,548	515	9%	406	6.7%
Arizona	112,575	135,328	22,754	20%	7,984	7.1%
Arkansas	25,909	29,284	3,375	13%	1,785	6.9%
California	775,174	901,705	126,530	16%	54,018	7.0%
Colorado	142,988	165,841	22,853	16%	9,869	6.9%
Connecticut	58,768	60,002	1,234	2%	3,802	6.5%
Delaware	16,296	17,045	749	5%	1,062	6.5%
District of Columbia	49,728	55,883	6,155	12%	3,437	6.9%
Florida	253,565	307,285	53,720	21%	18,086	7.1%
Georgia	177,922	208,103	30,182	17%	12,481	7.0%
Hawaii	12,975	12,984	9	0%	838	6.5%
Idaho	18,911	23,329	4,418	23%	1,367	7.2%
Illinois	205,445	221,922	16,477	8%	13,753	6.7%
Indiana	70,192	80,731	10,539	15%	4,852	6.9%
Iowa	41,565	46,977	5,412	13%	2,840	6.8%
Kansas	40,649	44,195	3,545	9%	2,734	6.7%
Kentucky	38,853	43,682	4,829	12%	2,685	6.9%
Louisiana	25,414	30,350	4,936	19%	1,826	7.2%
Maine	15,025	16,657	1,632	11%	1,033	6.9%
Maryland	145,430	168,602	23,172	16%	10,039	6.9%
Massachusetts	170,703	190,939	20,236	12%	11,591	6.8%
Michigan	124,196	132,270	8,074	7%	8,230	6.6%
Minnesota	108,429	116,227	7,798	7%	7,198	6.6%
Mississippi	15,510	17,478	1,968	13%	1,080	7.0%
Missouri	96,053	109,199	13,146	14%	6,576	6.8%
Montana	9,797	11,508	1,711	17%	696	7.1%
Nebraska	33,434	36,908	3,474	10%	2,260	6.8%
Nevada	26,585	32,984	6,399	24%	1,949	7.3%
New Hampshire	27,152	30,902	3,749	14%	1,856	6.8%
New Jersey	161,673	175,348	13,675	8%	10,752	6.7%
New Mexico	19,740	22,270	2,530	13%	1,360	6.9%
New York	309,735	357,150	47,415	15%	21,365	6.9%
North Carolina	165,434	190,535	25,101	15%	11,513	7.0%
North Dakota	7,976	8,419	443	6%	536	6.7%
Ohio	169,238	187,235	17,997	11%	11,467	6.8%
Oklahoma	37,188	39,922	2,734	7%	2,511	6.8%
Oregon	64,210	72,647	8,437	13%	4,422	6.9%
Pennsylvania	180,780	200,991	20,211	11%	12,323	6.8%
Rhode Island	16,846	18,541	1,695	10%	1,145	6.8%
South Carolina	49,860	60,132	10,272	21%	3,570	7.2%
South Dakota	9,286	10,754	1,468	16%	644	6.9%
Tennessee	69,399	81,374	11,976	17%	4,898	7.1%
Texas	439,912	532,117	92,204	21%	31,309	7.1%
Utah	64,980	84,046	19,066	29%	4,798	7.4%
Vermont	8,674	9,735	1,061	12%	591	6.8%
Virginia	233,998	267,499	33,501	14%	16,007	6.8%
Washington	196,775	228,721	31,946	16%	13,649	6.9%
West Virginia	12,955	15,072	2,116	16%	913	7.0%
Wisconsin	85,340	93,593	8,254	10%	5,752	6.7%
Wyoming	3,775	4,203	428	11%	259	6.9%

Note: data covers core information technology occupations.

	2020	2030 Proj.	Proj. Numeric Change 2020-30	Proj. Percent Change 2020-30	Proj. Annual Replacement Count 2020-30	Proj. Annual Replacement Percent 2020-30
United States	5,205,728	5,975,172	769,444	15%	359,741	6.9%
Albuquerque	10,680	11,774	1,094	10%	728	6.8%
Atlanta	138,098	160,308	22,211	16%	9,625	7.0%
Austin	71,306	90,630	19,324	27%	5,189	7.3%
Baltimore	70,004	82,063	12,060	17%	4,850	6.9%
Boise	11,165	13,530	2,365	21%	798	7.1%
Boston	148,075	167,794	19,719	13%	10,110	6.8%
Buffalo	14,827	16,151	1,324	9%	996	6.7%
Charleston	11,545	14,235	2,690	23%	837	7.3%
Charlotte	53,997	63,066	9,069	17%	3,789	7.0%
Chicago	157,361	167,365	10,004	6%	10,457	6.6%
Cincinnati	34,569	38,005	3,436	10%	2,334	6.8%
Cleveland	33,838	36,701	2,863	8%	2,267	6.7%
Colorado Springs	17,626	19,118	1,492	8%	1,171	6.6%
Dallas	169,041	204,169	35,128	21%	11,975	7.1%
Denver	91,836	107,343	15,507	17%	6,360	6.9%
Des Moines	17,806	19,543	1,737	10%	1,195	6.7%
Detroit	72,042	74,065	2,023	3%	4,657	6.5%
Hartford	24,572	25,974	1,402	6%	1,618	6.6%
Houston	89,400	97,887	8,487	9%	6,024	6.7%
Huntsville	17,597	20,608	3,012	17%	1,215	6.9%
Indianapolis	36,259	41,986	5,728	16%	2,503	6.9%
Kansas City	48,401	54,519	6,118	13%	3,289	6.8%
Las Vegas	19,477	24,153	4,676	24%	1,427	7.3%
Los Angeles	199,695	215,713	16,018	8%	13,401	6.7%
Memphis	11,920	12,485	565	5%	792	6.6%
Miami	64,919	75,920	11,000	17%	4,550	7.0%
Milwaukee	27,952	27,821	-132	0%	1,781	6.4%
Minneapolis	90,027	95,295	5,268	6%	5,932	6.6%
Nashville	30,441	36,615	6,174	20%	2,179	7.2%
New Orleans	8,799	10,213	1,414	16%	623	7.1%
New York City	336,080	380,952	44,871	13%	22,931	6.8%
Oklahoma City	17,208	17,760	552	3%	1,134	6.6%
Omaha	22,082	23,148	1,066	5%	1,448	6.6%
Orlando	39,490	47,185	7,695	19%	2,785	7.1%
Philadelphia	101,864	107,116	5,251	5%	6,696	6.6%
Phoenix	88,912	107,371	18,459	21%	6,324	7.1%
Pittsburgh	39,004	42,303	3,299	8%	2,622	6.7%
Portland	51,168	58,122	6,955	14%	3,527	6.9%
Providence	20,058	21,244	1,186	6%	1,337	6.7%
Raleigh	42,493	48,550	6,057	14%	2,922	6.9%
	37,877	41,041	3,163	8%	2,589	6.8%
Sacramento	37,496	47,760	10,264	27%	2,742	7.3%
Salt Lake City	29,507	34,058	4,551	15%	2,064	7.0%
San Antonio	65,922	74,610	8,688	13%	4,514	6.8%
San Diego	190,038	233,433	43,394	23%	13,646	7.2%
San Francisco						
	168,501	204,364	35,863	21%	11,894	7.1%
San Jose	165,090	192,169	27,079	16%	11,443	6.9%
Seattle	49,720	53,541	3,821	8%	3,308	6.7%
St. Louis	49,384	57,853	8,469	17%	3,442	7.0%
Tampa	12,399	13,827	1,428	12%	833	6.7%
Trenton	249,086	277,312	28,226	11%	16,828	6.8%
Washington DC	10,680	11,774	1,094	10%	728	6.8%

APPENDIX TABLES – D
WAGES & ECONOMIC IMPACT

	10th Percentile	25th Percentile	50th (median) Percentile	75th Percentile	90th Percentile	% Greater than Overall Median Wage
United States	$51,635	$66,321	$86,852	$111,379	$142,692	89%
Alabama	$48,793	$62,620	$80,873	$102,475	$125,120	106%
Alaska	$54,484	$67,715	$84,451	$103,850	$124,701	61%
Arizona	$50,168	$63,505	$82,313	$103,583	$127,019	88%
Arkansas	$40,672	$51,212	$65,364	$82,478	$100,574	78%
California	$61,545	$80,187	$105,037	$133,845	$166,327	98%
Colorado	$57,800	$73,357	$94,366	$118,939	$148,635	88%
Connecticut	$57,704	$71,835	$90,376	$112,230	$142,312	66%
Delaware	$59,962	$72,715	$91,910	$115,479	$142,957	94%
District of Columbia	$73,481	$91,968	$114,304	$136,982	$164,619	41%
Florida	$44,280	$56,863	$75,406	$97,462	$124,289	88%
Georgia	$50,478	$65,623	$85,052	$106,553	$133,219	98%
Hawaii	$51,223	$65,050	$81,726	$99,353	$120,254	68%
Idaho	$46,042	$58,785	$76,764	$97,451	$118,538	96%
Illinois	$51,656	$66,045	$85,296	$106,806	$134,083	79%
Indiana	$44,463	$55,315	$69,813	$88,855	$109,354	73%
Iowa	$48,277	$60,091	$74,686	$92,020	$109,550	78%
Kansas	$46,247	$57,739	$73,015	$91,112	$109,949	80%
Kentucky	$40,583	$52,765	$68,216	$87,071	$105,596	76%
Louisiana	$42,347	$53,835	$71,008	$90,917	$113,160	84%
Maine	$49,785	$61,333	$76,632	$93,999	$112,490	80%
Maryland	$59,939	$78,291	$100,865	$125,949	$159,045	91%
Massachusetts	$60,603	$76,417	$97,649	$123,170	$155,805	72%
Michigan	$50,044	$62,834	$79,525	$99,138	$118,614	80%
Minnesota	$54,804	$67,768	$85,322	$105,451	$126,438	73%
Mississippi	$38,829	$49,946	$64,688	$82,977	$101,341	86%
Missouri	$45,922	$58,459	$75,639	$95,099	$115,433	83%
Montana	$40,704	$51,635	$65,692	$82,910	$102,315	65%
Nebraska	$47,089	$59,594	$75,751	$93,924	$111,688	79%
Nevada	$42,768	$54,220	$70,352	$88,385	$108,661	69%
New Hampshire	$53,475	$66,591	$85,935	$107,417	$134,756	82%
New Jersey	$59,067	$75,447	$97,851	$125,288	$162,291	85%
New Mexico	$49,380	$65,828	$83,970	$105,387	$128,733	106%
New York	$55,104	$70,592	$92,746	$120,947	$150,760	73%
North Carolina	$50,706	$64,370	$82,717	$103,739	$127,278	97%
North Dakota	$42,411	$53,469	$68,886	$86,600	$105,256	52%
Ohio	$47,509	$59,916	$76,583	$96,133	$117,999	77%
Oklahoma	$42,798	$54,864	$70,826	$89,500	$109,863	80%
Oregon	$51,302	$64,679	$82,397	$102,271	$123,631	75%
Pennsylvania	$50,055	$62,442	$80,010	$100,515	$124,613	77%
Rhode Island	$57,231	$70,291	$88,804	$109,341	$132,642	74%
South Carolina	$43,103	$56,643	$73,508	$93,042	$114,556	89%
South Dakota	$43,717	$51,417	$61,866	$74,966	$88,778	60%
Tennessee	$43,003	$54,527	$70,780	$89,868	$110,509	78%
Texas	$51,879	$66,145	$85,813	$108,627	$138,367	96%
Utah	$45,260	$59,072	$77,492	$98,616	$123,445	82%
Vermont	$47,384	$57,955	$75,828	$96,210	$117,770	71%
Virginia	$60,262	$75,537	$98,292	$124,823	$156,982	99%
Washington	$64,653	$84,876	$110,020	$134,788	$161,901	102%
West Virginia	$41,908	$54,605	$71,626	$91,065	$110,309	90%
Wisconsin	$46,539	$56,828	$71,024	$88,377	$106,268	63%
Wyoming	$44,717	$55,562	$69,528	$86,034	$104,226	57%

	10th Percentile	25th Percentile	50th (median) Percentile	75th Percentile	90th Percentile	% Greater than Overall Median Wage
United States	$51,635	$66,321	$86,852	$111,379	$142,692	89%
Albuquerque	$53,750	$69,825	$88,131	$108,623	$131,293	109%
Atlanta	$53,096	$68,207	$88,914	$112,543	$141,269	90%
Austin	$54,648	$68,316	$89,042	$112,591	$141,846	86%
Baltimore	$58,870	$76,684	$99,544	$127,127	$160,696	92%
Boise	$47,622	$60,937	$78,964	$100,369	$123,125	92%
Boston	$62,288	$78,616	$100,972	$127,899	$161,543	70%
Buffalo	$46,440	$56,837	$71,441	$90,137	$110,154	60%
Charleston	$46,779	$62,154	$79,735	$99,137	$120,008	90%
Charlotte	$53,128	$67,453	$87,617	$110,821	$135,935	94%
Chicago	$52,513	$67,135	$87,090	$109,876	$138,376	76%
Cincinnati	$48,866	$61,701	$79,430	$100,755	$125,728	78%
Cleveland	$46,447	$58,423	$74,772	$95,025	$116,219	66%
Colorado Springs	$56,438	$72,418	$92,552	$114,334	$139,485	99%
Dallas	$54,977	$69,299	$88,778	$111,256	$140,045	89%
Denver	$59,947	$74,988	$96,121	$121,163	$152,063	79%
Des Moines	$54,136	$67,191	$82,725	$100,326	$117,895	79%
Detroit	$55,487	$68,466	$86,405	$106,952	$126,202	81%
Hartford	$56,727	$70,516	$88,494	$109,677	$138,546	63%
Houston	$53,018	$69,577	$90,438	$115,866	$149,631	93%
Huntsville	$58,383	$75,392	$96,227	$122,090	$144,294	91%
Indianapolis	$50,087	$61,625	$77,698	$98,630	$120,669	78%
Kansas City	$49,322	$62,137	$79,369	$99,344	$119,734	76%
Las Vegas	$45,051	$57,343	$75,716	$95,562	$117,605	85%
Los Angeles	$55,347	$71,882	$94,141	$120,584	$152,651	83%
Memphis	$41,408	$53,223	$69,483	$88,939	$108,194	77%
Miami	$43,863	$56,545	$75,754	$99,357	$131,047	84%
Milwaukee	$47,493	$58,292	$73,149	$91,000	$109,656	58%
Minneapolis	$57,103	$70,549	$88,981	$109,874	$133,958	68%
Nashville	$46,569	$57,509	$73,384	$93,225	$114,829	69%
New Orleans	$44,756	$57,418	$76,590	$97,251	$122,422	90%
New York City	$60,834	$77,375	$102,561	$133,997	$167,029	80%
Oklahoma City	$45,931	$58,598	$75,010	$93,797	$114,390	78%
Omaha	$50,594	$63,573	$80,875	$99,054	$116,866	80%
Orlando	$47,477	$59,953	$77,966	$100,733	$128,082	98%
Philadelphia	$56,470	$70,402	$90,222	$113,615	$142,276	79%
Phoenix	$50,161	$63,641	$83,175	$104,854	$128,920	85%
Pittsburgh	$50,364	$61,960	$78,564	$99,115	$122,835	72%
Portland	$53,448	$67,324	$85,769	$106,438	$128,340	67%
Providence	$54,719	$67,414	$85,786	$106,553	$129,881	73%
Raleigh	$54,800	$69,593	$89,085	$110,053	$134,115	88%
Sacramento	$56,195	$71,558	$90,482	$112,389	$140,585	75%
Salt Lake City	$47,439	$61,275	$79,700	$100,846	$125,922	75%
San Antonio	$50,946	$63,451	$79,907	$99,686	$124,712	90%
San Diego	$60,198	$76,599	$97,925	$122,395	$150,950	86%
San Francisco	$73,118	$93,540	$121,079	$151,491	$182,394	82%
San Jose	$78,340	$99,604	$128,492	$159,933	$191,360	71%
Seattle	$70,384	$91,858	$117,028	$141,459	$169,790	92%
St. Louis	$49,707	$62,783	$81,017	$101,960	$123,325	79%
Tampa	$45,910	$58,712	$77,512	$98,280	$123,640	84%
Trenton	$60,778	$74,498	$94,560	$117,267	$149,077	65%
Washington DC	$67,452	$84,966	$109,424	$137,220	$169,593	68%

TECH GROSS DOMESTIC OR REGIONAL PRODUCT
(in billions)

Rank	State	2020 est.
	United States	$1,989.4
1.	California	$519.5
2.	Texas	$152.7
3.	New York	$135.2
4.	Washington	$121.1
5.	Massachusetts	$97.1
6.	Florida	$77.7
7.	Virginia	$66.6
8.	Pennsylvania	$58.7
9.	New Jersey	$58.0
10.	Illinois	$57.0
11.	Georgia	$55.8
12.	Colorado	$54.0
13.	North Carolina	$48.9
14.	Maryland	$44.7
15.	Michigan	$37.1
16.	Ohio	$34.9
17.	Arizona	$34.1
18.	Minnesota	$31.8
19.	Oregon	$27.2
20.	Wisconsin	$22.5
21.	Missouri	$22.4
22.	Utah	$20.1
23.	Connecticut	$19.3
24.	Tennessee	$18.1
25.	Indiana	$16.2
26.	Alabama	$14.5
27.	South Carolina	$12.7
28.	New Hampshire	$11.2
29.	Kansas	$10.2
30.	Iowa	$9.8
31.	New Mexico	$9.2
32.	District of Columbia	$9.0
33.	Kentucky	$8.0
34.	Louisiana	$7.9
35.	Nevada	$7.6
36.	Idaho	$7.2
37.	Nebraska	$6.8
38.	Oklahoma	$6.8
39.	Delaware	$4.8
40.	Arkansas	$4.2
41.	Mississippi	$3.8
42.	Rhode Island	$3.8
43.	Hawaii	$3.4
44.	Maine	$3.4
45.	Vermont	$2.6
46.	West Virginia	$2.5
47.	Montana	$2.3
48.	South Dakota	$2.2
49.	North Dakota	$2.2
50.	Alaska	$2.0
51.	Wyoming	$1.0

TECH GDP/GRP AS A PERCENT OF TOTAL GDP/GRP
(in billions)

Rank	State	Total Tech GRP est.	Total GDP/GRP	Tech as a Percent
	United States	$1,989.4	$18,899.6	10.5%
1.	Washington	$121.1	$539.1	22.5%
2.	California	$519.5	$2,751.0	18.9%
3.	Massachusetts	$97.1	$536.6	18.1%
4.	Colorado	$54.0	$359.7	15.0%
5.	New Hampshire	$11.2	$80.9	13.8%
6.	Virginia	$66.6	$491.9	13.5%
7.	Maryland	$44.7	$367.2	12.2%
8.	Oregon	$27.2	$224.1	12.1%
9.	Utah	$20.1	$174.6	11.5%
10.	Arizona	$34.1	$335.1	10.2%
11.	Georgia	$55.8	$549.6	10.1%
12.	New Mexico	$9.2	$90.6	10.1%
13.	New Jersey	$58.0	$579.3	10.0%
14.	Idaho	$7.2	$75.5	9.5%
15.	North Carolina	$48.9	$519.4	9.4%
16.	Minnesota	$31.8	$340.7	9.3%
17.	Texas	$152.7	$1,718.2	8.9%
18.	New York	$135.2	$1,534.0	8.8%
19.	Vermont	$2.6	$31.6	8.3%
20.	Pennsylvania	$58.7	$711.2	8.3%
21.	Florida	$77.7	$994.5	7.8%
22.	Michigan	$37.1	$479.0	7.7%
23.	Missouri	$22.4	$293.9	7.6%
24.	Illinois	$57.0	$771.7	7.4%
25.	Wisconsin	$22.5	$306.2	7.3%
26.	Delaware	$4.8	$67.2	7.1%
27.	Alabama	$14.5	$204.9	7.1%
28.	Connecticut	$19.3	$274.1	7.0%
29.	Kansas	$10.2	$147.6	6.9%
30.	Rhode Island	$3.8	$54.6	6.9%
31.	District of Columbia	$9.0	$133.3	6.8%
32.	Nebraska	$6.8	$105.2	6.5%
33.	Iowa	$9.8	$161.2	6.1%
34.	South Carolina	$12.7	$217.8	5.8%
35.	Ohio	$34.9	$607.2	5.8%
36.	Maine	$3.4	$61.6	5.5%
37.	South Dakota	$2.2	$41.4	5.3%
38.	Tennessee	$18.1	$341.6	5.3%
39.	North Dakota	$2.2	$42.8	5.0%
40.	Indiana	$16.2	$323.2	5.0%
41.	Montana	$2.3	$47.5	4.8%
42.	Nevada	$7.6	$161.7	4.7%
43.	Alaska	$2.0	$46.7	4.4%
44.	Kentucky	$8.0	$194.6	4.1%
45.	Hawaii	$3.4	$82.9	4.1%
46.	Arkansas	$4.2	$112.0	3.8%
47.	Oklahoma	$6.8	$179.6	3.8%
48.	Mississippi	$3.8	$101.9	3.7%
49.	West Virginia	$2.5	$69.3	3.6%
50.	Louisiana	$7.9	$227.8	3.5%
51.	Wyoming	$1.0	$36.7	2.8%

TECH GROSS REGIONAL PRODUCT
(in billions)

Rank	Metro Area	2020 est.
	United States	$1,989.4
1.	San Jose	$196.2
2.	San Francisco	$158.2
3.	New York City	$153.9
4.	Seattle	$113.2
5.	Los Angeles	$94.6
6.	Boston	$91.6
7.	Washington DC	$80.7
8.	Dallas	$66.7
9.	Chicago	$51.8
10.	Atlanta	$50.7
11.	Philadelphia	$41.3
12.	San Diego	$38.3
13.	Austin	$37.9
14.	Denver	$34.8
15.	Houston	$29.2
16.	Minneapolis	$28.2
17.	Phoenix	$27.4
18.	Portland	$24.8
19.	Detroit	$24.1
20.	Baltimore	$23.9
21.	Miami	$23.2
22.	Raleigh	$18.1
23.	Tampa	$16.3
24.	Pittsburgh	$14.8
25.	Orlando	$14.0
26.	St. Louis	$13.9
27.	Kansas City	$13.0
28.	Charlotte	$12.6
29.	Salt Lake City	$11.0
30.	Indianapolis	$9.3
31.	Milwaukee	$9.1
32.	Sacramento	$8.8
33.	Cincinnati	$8.0
34.	Nashville	$7.9
35.	San Antonio	$7.5
36.	Huntsville	$7.2
37.	Cleveland	$7.1
38.	Albuquerque	$6.1
39.	Hartford	$5.5
40.	Providence	$5.2
41.	Las Vegas	$4.9
42.	Boise	$4.7
43.	Colorado Springs	$4.5
44.	Omaha	$4.4
45.	Trenton	$4.0
46.	Buffalo	$3.8
47.	Charleston	$3.2
48.	Des Moines	$2.8
49.	New Orleans	$2.7
50.	Oklahoma City	$2.6
51.	Memphis	$2.5

TECH GRP AS A PERCENT OF TOTAL METRO GRP
(in billions)

Rank	Metro Area	Total Tech GRP	Total GDP/GRP	Tech as a Percent
	United States	$1,989.4	$18,899.6	10.5%
1.	San Jose	$196.2	$327.6	59.9%
2.	Seattle	$113.2	$389.6	29.1%
3.	San Francisco	$158.2	$557.6	28.4%
4.	Huntsville	$7.2	$27.2	26.5%
5.	Austin	$37.9	$149.5	25.3%
6.	Raleigh	$18.1	$82.7	21.9%
7.	Boston	$91.6	$443.8	20.6%
8.	San Diego	$38.3	$229.2	16.7%
9.	Portland	$24.8	$156.3	15.9%
10.	Washington DC	$80.7	$509.5	15.8%
11.	Denver	$34.8	$220.3	15.8%
12.	Albuquerque	$6.1	$40.5	15.0%
13.	Atlanta	$50.7	$373.1	13.6%
14.	Boise	$4.7	$36.1	13.2%
15.	Dallas	$66.7	$511.0	13.1%
16.	Baltimore	$23.9	$188.2	12.7%
17.	Colorado Springs	$4.5	$36.4	12.4%
18.	Salt Lake City	$11.0	$91.8	11.9%
19.	Minneapolis	$28.2	$254.7	11.1%
20.	Phoenix	$27.4	$257.2	10.6%
21.	Kansas City	$13.0	$123.4	10.5%
22.	Orlando	$14.0	$134.6	10.4%
23.	Pittsburgh	$14.8	$142.7	10.4%
24.	Trenton	$4.0	$39.0	10.3%
25.	Tampa	$16.3	$158.9	10.2%
26.	Philadelphia	$41.3	$407.8	10.1%
27.	Detroit	$24.1	$239.8	10.0%
28.	Los Angeles	$94.6	$943.6	10.0%
29.	Milwaukee	$9.1	$95.6	9.5%
30.	New York City	$153.9	$1,627.3	9.5%
31.	St. Louis	$13.9	$160.5	8.7%
32.	Chicago	$51.8	$635.3	8.2%
33.	Charlotte	$12.6	$163.0	7.7%
34.	Omaha	$4.4	$57.8	7.7%
35.	Indianapolis	$9.3	$121.9	7.6%
36.	Charleston	$3.2	$42.9	7.5%
37.	Miami	$23.2	$340.7	6.8%
38.	Providence	$5.2	$79.0	6.6%
39.	Sacramento	$8.8	$134.7	6.5%
40.	Buffalo	$3.8	$61.5	6.3%
41.	Nashville	$7.9	$128.1	6.2%
42.	San Antonio	$7.5	$121.6	6.2%
43.	Des Moines	$2.8	$46.2	6.1%
44.	Cincinnati	$8.0	$133.0	6.0%
45.	Cleveland	$7.1	$122.8	5.8%
46.	Houston	$29.2	$525.8	5.6%
47.	Hartford	$5.5	$107.1	5.2%
48.	Las Vegas	$4.9	$113.8	4.3%
49.	New Orleans	$2.7	$72.5	3.7%
50.	Oklahoma City	$2.6	$71.1	3.6%
51.	Memphis	$2.5	$71.0	3.6%

Sources: EMSI | U.S. Bureau of Economic Analysis | CompTIA

APPENDIX TABLES – E
INDUSTRY SECTOR COMPARISONS

Comparison of tech industry sector to the other 21 top-level sectors tracked by the U.S. Bureau of Economic Analysis. Note: there is a degree of overlap in that tech spans multiple industry sectors. 1=1st in size and so on.

State	Tech Sector Jobs Change Rank 2019-20	Tech Sector Jobs Change YoY Rank 2020-21	Tech Sector Economic Impact Rank 2020	Metro Area	Tech Sector Jobs Change Rank 2019-20	Tech Sector Jobs Change YoY Rank 2020-21	Tech Sector Economic Impact Rank 2020
United States	1	3	3	United States	1	3	3
Alabama	2	5	6	Albuquerque	1	7	2
Alaska	9	3	7	Atlanta	3	7	1
Arizona	4	7	3	Austin	1	2	1
Arkansas	1	9	11	Baltimore	2	4	2
California	2	2	1	Boise	16	10	2
Colorado	1	4	1	Boston	1	3	1
Connecticut	6	5	6	Buffalo	5	6	8
Delaware	14	21	6	Charleston	1	6	4
District of Columbia	2	3	4	Charlotte	3	6	5
Florida	3	7	6	Chicago	7	5	6
Georgia	1	8	3	Cincinnati	3	5	7
Hawaii	6	15	10	Cleveland	7	6	7
Idaho	15	9	3	Colorado Springs	3	8	2
Illinois	7	4	7	Dallas	3	6	2
Indiana	3	5	7	Denver	1	3	1
Iowa	9	8	7	Des Moines	4	8	7
Kansas	1	5	6	Detroit	15	15	3
Kentucky	2	10	10	Hartford	3	7	7
Louisiana	7	8	11	Houston	4	11	9
Maine	3	2	9	Huntsville	2	2	1
Maryland	2	3	2	Indianapolis	4	5	7
Massachusetts	1	3	1	Kansas City	1	4	5
Michigan	11	5	6	Las Vegas	5	10	11
Minnesota	5	9	5	Los Angeles	1	9	3
Mississippi	2	9	11	Memphis	2	16	11
Missouri	1	4	5	Miami	5	9	7
Montana	3	6	10	Milwaukee	12	11	4
Nebraska	2	6	7	Minneapolis	5	10	3
Nevada	5	9	11	Nashville	3	9	9
New Hampshire	1	2	2	New Orleans	1	7	12
New Jersey	3	6	5	New York City	1	4	4
New Mexico	1	6	2	Oklahoma City	10	20	11
New York	1	4	5	Omaha	2	10	5
North Carolina	3	3	4	Orlando	1	10	1
North Dakota	3	7	10	Philadelphia	1	3	5
Ohio	5	4	8	Phoenix	3	8	2
Oklahoma	4	13	11	Pittsburgh	2	3	3
Oregon	2	4	3	Portland	2	4	1
Pennsylvania	1	3	6	Providence	5	8	8
Rhode Island	6	4	6	Raleigh	20	3	1
South Carolina	2	7	8	Sacramento	15	9	6
South Dakota	3	5	8	Salt Lake City	4	4	2
Tennessee	2	10	8	San Antonio	4	7	5
Texas	1	5	4	San Diego	1	3	2
Utah	2	5	3	San Francisco	1	1	1
Vermont	8	8	5	San Jose	1	1	1
Virginia	1	3	3	Seattle	1	1	1
Washington	1	2	1	St. Louis	2	6	5
West Virginia	3	7	11	Tampa	5	7	2
Wisconsin	1	4	5	Trenton	3	10	5
Wyoming	5	9	14	Washington DC	1	3	3

METHODLOGY

CLASSIFICATION SYSTEMS AND CHANGES OVER TIME

Cyberstates utilizes the North American Industrial Classification System (NAICS) to define the tech industry. The NAICS is a hierarchical system, with six-digit numbers assigned to the most specific industries. The NAICS is constructed around the concept of production and is able to reflect advances in technology, including many new service-oriented businesses. Economic units with similar production processes are classified in the same industry.

The original Cyberstates definition of technology was based on the Standard Industrial Classification (SIC) system. It has evolved as the U.S. government officially converted to the NAICS in 1997. NAICS was devised by the United States, Canada, and Mexico to allow industry analysis across all three nations. NAICS codes are revised periodically to reflect the emergence of new industry sectors or sub-sectors. Accordingly, the Cyberstates' NAICS definition of the tech industry has evolved over the years to reflect these changes.

Consequently, the data in this report may not be entirely comparable with previous reports. Additionally, government labor market sources do occasionally enact backward revisions to the data, which may affect year-over-year comparisons, especially with percent changes. The wage data is presented as current dollars, meaning the figures are for the given year and not adjusted for inflation.

NET TECH EMPLOYMENT

The tech workforce consists of two primary components. Introduced to Cyberstates for 2018, net tech employment is a single metric that encompasses both components, making it easier to describe the tech workforce. The foundation is the set of technology occupation professionals working in technical positions, such as IT support, network engineering, software development and related roles. Many of these professionals work for technology companies (47 percent), but many others are employed by organizations across every industry sector or government entity in the U.S. economy (53 percent).

The second component of the discussion consists of the business professionals employed by technology companies. These professionals play an important role in supporting the development and delivery of the technology products and services used throughout the economy. Thirty-four percent of the net tech employment total consists of tech industry business professionals. See page 5 of this report for more details on the concept of Net Tech Employment.

TECH INDUSTRY DEFINITION

There are a number of considerations when developing a definition of the technology industry. In some cases, NAICS codes do not perfectly reflect industry dynamics. This can be especially challenging in times of rapid innovation, when new tech sectors emerge in a short period of time. More recently, the degree to which technology has become core to so many industry sectors poses new questions. For example, a technology platform designed to facilitate the online sale of goods may have traditionally been viewed as a retailer, although given the intense use of technology, an argument could be made to classify it as a technology firm.

Conceptually, Cyberstates focuses on the sectors involved in making, creating, enabling, integrating, or supporting technology, whether as a product or service. At this time, Cyberstates does not include industry sectors categorized primarily as users of technology.

TECH OCCUPATION DEFINITION

For occupation-level analysis, Cyberstates utilizes the Standard Occupational Classification (SOC) System, which is a standard used by federal agencies to classify workers into occupational categories. See following page. The occupations covered by Cyberstates are broadly categorized into core information technology (IT) positions and then engineering, repair, technician, and assembly positions. In total, 50 distinct SOCs are used to define the tech occupations found across every industry sector of the economy.

WORKFORCE CHARACTERISTICS AND DIVERSITY INDEX

The U.S. Bureau of Labor Statistics (BLS) tracks labor market composition across several demographic and firmographic characteristics. By race and ethnicity, the BLS segments data by seven top-level categorizations. Described here: https://www.bls.gov/opub/reports/race-and-ethnicity/2019/home.htm. To measure overall race and ethnicity characteristics within the tech workforce, this report uses a metric called Simpson's Diversity Index. This index weights two key facets of race and ethnicity within the workforce – richness and evenness (or think of it as depth and breadth) and reflects it in a single metric. See page 10 of this report for more details.

CompTIA is responsible for all content contained in this report. Any questions regarding Cyberstates should be directed to CompTIA Research & Market Intelligence staff at research@comptia.org.

NAICS and SOCs are standard taxonomies developed by and used across government statistical programs. NAICS and SOCs are updated on regular cycles, but because of the pace of change in technology, government taxonomies do tend to lag the market. Additionally, the blurring of lines in technology means there are more gray areas in classification systems. See government sites for more details on NAICS and SOCs.

INDUSTRY CLASSIFICATION BY NAICS (North American Industry Classification System)

IT/Tech Services
423430, 541511, 541512, 541513, 541519, 611420

Telecommunications, Internet Services and Data Hosting
517311, 517312, 517410, 517911, 517919, 518210, 519130

Software
511210

Manufacturing: Computer, Peripheral and Communications Equipment
334111, 334112, 334118, 334210, 334220, 334290, 334310

Manufacturing: Semiconductors and Electronic Components
333242, 334412, 334413, 334416, 334417, 334418, 334419

Manufacturing: Measuring, Control Instruments, Optical Media, and Space Systems
334510, 334511, 334512, 334513, 334514, 334515, 334516, 334517, 334519, 334613, 334614, 336414, 336415, 336419

Technician, Engineering, Repair, Maintenance, R&D and Testing
811211, 811212, 811213, 811219, 541330, 541380, 541713, 541714, 541715

OCCUPATION CLASSIFICATION BY SOC (Standard Occupational Classification)

Information Technology (IT) Occupations
11-3021, 15-1111, 15-1121, 15-1122, 15-1131, 15-1132, 15-1133, 15-1134, 15-1141, 15-1142, 15-1143, 15-1151, 15-1152, 15-1199, 15-2098

Other Technician, Engineering, Installer, Repairer and Maintenance
11-9041, 17-2011, 17-2031, 17-2061, 17-2071, 17-2072, 17-2112, 17-2131, 17-2141, 17-2199, 17-3021, 17-3023, 17-3024, 17-3026, 17-3027, 17-3029, 27-4011, 27-4012, 27-4014, 43-9011, 49-2011, 49-2021, 49-2022, 49-2091, 49-2092, 49-2093, 49-2094, 49-2095, 49-2096, 49-2097, 49-2098, 51-2021, 51-2028, 51-4011, 51-4012

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